International Journal of Evaluation and Research in Education (IJERE)
Vol. 14, No. 4, August 2025, pp. 3148~3161
ISSN: 2252-8822, DOI: 10.11591/ijere.v14i4.33541

Psychological and pedagogical conditions for the formation of the image of the future special educator

Gulshat Koshzhanova[1], Kairat Ibragim[2], Mukhamejan Tusseyev[3], Arzu Gurbanova[4]
[1]Department of Special Pedagogy, Kazakh National Pedagogical University named after Abay, Almaty, Kazakhstan
[2]Department of Pedagogy, Shymkent University, Shymkent, Kazakhstan
[3]Department of Pedagogy, Central Asian Innovation University, Shymkent, Kazakhstan
[4]Department of Languages and Literature, Central Asian Innovation University, Shymkent, Kazakhstan

Article Info

Article history:

Received Nov 6, 2024
Revised May 20, 2025
Accepted Jun 2, 2025

Keywords:

Inclusive education
Professional competency development
Psychological and pedagogical conditions
Special education
Special educational needs
Teacher image
Teacher preparation

ABSTRACT

In contemporary educational paradigms, the formation of a positive image of teachers plays a crucial role in students' learning. However, the psychological and pedagogical conditions that contribute to the formation of the professional image of teachers have not been sufficiently investigated. The use of innovative teaching methods and effective communication strategies, are key to improving the professional image of teachers and can significantly improve teacher training in higher education institutions. The objective of this study is to investigate the impact of psychological and pedagogical factors on the professional image of special educators, assess the effectiveness of innovative teaching methods in the training process of teachers. The study was experimental in nature and employed a mixed-methods approach, incorporating both quantitative and qualitative data collection methods, including interviews and surveys. The experiment involved 200 participants (180 students and 20 teachers), randomly selected from three universities in Kazakhstan. The results indicated that innovative teaching methods significantly improved teachers' perceptions of their professional image, evidenced by an increase in the average score of participants from 68.5 to 85.4 ($p<0.001$). Data analysis also revealed a positive correlation between the teacher's image and factors such as the use of interactive technologies and communication strategies.

Corresponding Author:

Kairat Ibragim
Department of Pedagogy, Shymkent University
Jibek Joly, 131, Shymkent, Kazakhstan
Email: ibragimkairat@onmail.com

1. INTRODUCTION

In today's world, the development of inclusive education (IE) has become one of the primary challenges for many countries [1], [2]. Special education requires tailored, individualized preparation to support individuals with learning difficulties, as well as those with communication, behavioral, or developmental disorders, enabling them to enhance their learning and performance skills [3]. Particular attention is given to the training of specialists who work with children with special educational needs [4], [5]. Forming a professional image of future educators is a complex task that demands a deep understanding of pedagogy and psychology and the development of qualities such as empathy, adaptability, and communication skills to effectively engage with students, colleagues, and parents [6].

On the international stage, the preparation of teacher-experts faces numerous challenges. One such challenge is the insufficient development of professional values and skills for interacting with children with

special needs. Researchers note that educational programs struggle to provide future specialists with an adequate level of training in IE [4], [7]. Teachers must be equipped with clear expectations regarding their roles and responsibilities to implement IE practices in schools and maintain a sustainable professional status through continuous learning [8].

Furthermore, there is a pressing need to focus on the formation of the teacher's image, particularly in the context of ongoing interactions with various participants in the educational process [8], [9]. The professional image encompasses not only technical knowledge and skills but also how teachers are perceived by students, parents, and colleagues [6]. In an era marked by the rapid proliferation of digital technologies and social media, where every action or decision made by a teacher can be subject to public scrutiny, cultivating a positive professional image becomes increasingly crucial.

There are additional factors contributing to this issue. For instance, in recent years, the number of children with special educational needs has risen; however, approximately 20% of teachers oppose inclusion, while only 8% are staunch advocates for it [10]. Although these children require special support, this situation creates additional pressure on education systems and professionals in the field. It underscores the necessity for more qualified specialists and a reevaluation of current teacher training models [11]. Moreover, there is a noticeable lack of research focused on the psychological and pedagogical conditions that could aid in the successful formation of the special educator's image. Existing studies predominantly concentrate on teaching methods or technical training for teachers, while issues surrounding their personal and professional image remain peripheral to the academic discourse [12], [13]. This work addresses the imbalance in prior research by comprehensively examining the psychological and pedagogical conditions essential for shaping the image of future special education teachers. Thus, this study aims to fill this gap in the academic literature by highlighting aspects that could significantly impact the formation of a teacher's professional image.

The preparation of teachers remains a significant issue in Kazakhstan. There is a lack of a coherent and well-organized strategy in the country's pedagogical universities for training future teachers in IE. This encompasses the development of inclusive curricula, professional teacher training, specialized courses, and the creation of educational programs [14], [15]. This article presents original research on how psychological and pedagogical conditions can influence the image of future special educators, considering the limitations of previous studies within the context of Kazakhstan's education system. The practical significance of this research lies in the formulation of recommendations for improving teacher preparation programs with a focus on psychological and pedagogical aspects. This contributes to enhancing the quality of educational programs in Kazakhstan and other countries.

2. LITERATURE REVIEW

Contemporary research emphasizes the significance of teachers' personal characteristics in the process of their professional preparation and the formation of their image. Several studies highlight the necessity for changes in teacher training programs, which should place greater emphasis on developing the personal qualities of educators, as this directly impacts their interactions with students with special needs and their professional authority. Ukrainian authors note that the successful preparation of special educators requires not only knowledge and skills but also the cultivation of a professional image, which encompasses qualities such as empathy, tolerance, and adaptability [16], [17]. Kazakh researchers stress that a teacher's reflexivity, as a professionally significant personal resource with a multi-component structure, is inherently indicative of their professional image [18].

Furthermore, Swedish authors concluded that participation in professional image training led teachers to adopt a more positive attitude toward IE [2]. However, there needs to be more consistency in the strategies for preparing teacher specialists across different countries. The concept of sustainable learning fits into a broad spectrum of motivations, goals, and objectives to find solutions to emerging problems based on presented challenges [7], [19], [20]. Research conducted in Ukraine indicates that the faculty of higher educational institutions primarily focuses on working with students of normative development and often overlooks the specific learning difficulties faced by students with disabilities [21]. Additionally, the level of knowledge among educators regarding key regulatory documents, elements of the IE environment, and typical challenges in implementing an inclusive approach within university education is heterogeneous—resulting in a compromised image of teachers in society. Nevertheless, faculty members have shown a willingness to acquire the skills necessary to establish an IE environment in higher education institutions [22]. Belgian researchers confirmed that professional development for teachers regarding evidence-based IE practices is crucial for the successful implementation of IE, which in turn enhances teachers' experiences and their image in the eyes of parents, students, and colleagues [4].

There is also a need for research on methods and practices that can successfully contribute to the formation of a teacher's image. Insufficient attention is paid to the psychological and pedagogical conditions that play a critical role in shaping a teacher's professional identity. Existing studies have predominantly

focused on quantitative analysis methods, which limit the understanding of more complex and subjective aspects of image formation, such as personality traits, emotional intelligence, and interactions with the environment [23]. Learning management systems, educational platforms, social media channels, and mobile learning platforms have been applied and analyzed through statistical methods using electronic data obtained from online surveys and activity reports from the learning platform [24], [25].

IE for students with disabilities has been a global movement for at least 30 years [26]. The implementation of information and communication technologies (ICT) in education has significantly altered the teaching and learning processes in recent years [3]. In post-digital learning environments, digital learning is expected to be integrated and inseparable from daily educational activities, interactions, and experiences [27]. The rapid proliferation of ICT has led to substantial social, political, and financial changes, also impacting education as it has become an integral part of the modern educational process [28].

A study conducted in Turkey revealed that augmented reality technology assists students with special educational needs in reducing behavioral issues, becoming more independent, and developing skills necessary for successful societal integration [29]. The use of augmented reality provides substantial benefits for these children by enabling them to gain practical experience [29]. This underscores the role of social educators who employ innovative methods to enhance students' knowledge acquisition. Greek researchers have also highlighted the importance of augmented reality in teaching children with special educational needs, noting its potential to improve the effectiveness of knowledge and skill acquisition through interactive and adaptive environments [3]. Thus, the utilization of ICT by special educators enhances their professional image among students and parents.

In summary, the literature related to the development of a future special educator's professional image reveals numerous contradictions and gaps. The psychological and pedagogical conditions influencing this process have yet to be adequately addressed, and contemporary approaches to teacher training only sometimes reflect the real need for the development of their personal and professional qualities. This research aims to address these issues by focusing on the conditions that facilitate the successful development of a special educator's professional image.

3. PROBLEM STATEMENT

The motivation for this research lies in the necessity to enhance the quality of training for future special educators, which is intrinsically linked to the development of their professional image. In the context of increasing demand for educators qualified to work with children with special needs, both the development of professional skills and the creation of conditions conducive to the formation of a positive image play a crucial role in the effectiveness of teachers' pedagogical activities. This study is grounded in psychological and pedagogical concepts related to the formation of a teacher's professional image, including the theory of professional identity and the model of professional competence development, which have been formulated within the realms of educational and social sciences [30], [31].

The research methodology is based on the application of the concept of professional image formation [31]. The research method aims to explore the psychological and pedagogical conditions that influence the process of shaping a teacher's image during their professional training. The objective of this study is to investigate the impact of innovative teaching methods on the formation of the professional image of future special educators. Thus, the research tasks are as:

i) To examine the influence of psychological and pedagogical factors on the professional image of special educators.
ii) To assess the effectiveness of innovative teaching methods in the preparation of educational personnel within educational organizations.
iii) To develop recommendations for optimizing the training of expert educators with an emphasis on the formation of their professional image.

4. METHOD

4.1. Study design

The study was experimental and employed a mixed methodology that incorporated both quantitative methods—specifically observation and a questionnaire—and qualitative data collection methods, such as interviews. A survey of students was conducted for quantitative analysis, aiming to identify perceptions of professional image and the factors influencing its formation. The qualitative component of the research included semi-structured interviews with practicing educators working in the field of IE, with the objective of clarifying research findings and gaining a deeper understanding of the psychological and pedagogical conditions involved in the formation of a professional image.

The questionnaire and interview questions were developed and administered by a research team composed of experienced educators and education methodologists who possess extensive knowledge regarding the formation of teachers' professional images. The team conducted a preliminary analysis of the literature and prior research to identify key aspects that should be included in the data collection tools. The questionnaire and interview questions are provided in Appendix. The observation method was utilized to assess the behavior and interactions of students and instructors within the learning process. This approach allowed for documentation of how the employed teaching methods and interactions influence the perception of the teacher's professional image.

4.2. Sampling

A total of 200 individuals participated in the study, comprising 180 students and 20 practicing educators. Participants were randomly selected from three pedagogical universities in Kazakhstan: Abai Kazakh National Pedagogical University, Kazakh National Women's Pedagogical University, and Karaganda State University named after E.A. Buketov. All students were enrolled in the "special pedagogy" program and were in their second or third year of study. For the qualitative component of the research, 20 practicing educators with work experience ranging from 5 to 20 years were selected. These educators possess practical experience that enables a better understanding of the influence of psychological and pedagogical conditions on the formation of professional identity.

Selection criteria for participants included being enrolled (for students) or employed (for educators) in the field of special education, as well as maintaining academic achievements at or above an average level (for students). Exclusion criteria involved students who were not connected to special education or who had interrupted their studies for any reason during the academic year. The average age of the students was 21 years, with 65% of participants being female and 35% male. This group was selected because second and third-year students have already acquired foundational knowledge in their profession and are in the process of developing their professional identity, as seen in Table 1.

Table 1. Information on participant distribution

Participant category	Quantity	Percentage of the total number of participants (%)
Total number of participants	200	100
Students	180	90
Instructors	20	10
Gender distribution		
– Females	130	65
– Males	70	35
Average age of students	21 years	—
Educational institutions		
– Abai Kazakh National Pedagogical University	75	37.5
– Kazakh National Women's Pedagogical University	55	27.5
– E.A. Buketov Karaganda State University	50	25

4.3. Procedure

The study comprised three main stages: a preliminary test, experimental training, and a post-test. Each of these stages was meticulously planned and executed, taking into account the specific features of the training program and the educational objectives. Prior to the commencement of the experimental training, a preliminary assessment was conducted to ascertain the baseline knowledge, skills, and competencies of the students, as well as their understanding of the professional profile of a teacher (see Appendix). The assessments were administered in person on the university premises, with all participants informed about the objectives and conditions of the testing. The duration of the exam was set at 45 minutes. The testing was conducted by faculty members specializing in special education who also participated in the training.

Following the preliminary assessment, the students were divided into control and experimental groups (EG), with 90 participants in each. The EG underwent instruction based on a specially designed program aimed at shaping the image of future teachers. This program includes a series of lectures and practical sessions over a 12-week period, conducted twice a week, each lasting 90 minutes. The program will cover the following topics: i) fundamentals of professional ethics for educators; ii) image as an element of professional identity; iii) communication strategies in the educational environment; iv) the role of psychological support in educators' professional activities; and v) visual imagery and nonverbal communication when working with children with special educational needs.

The courses are conducted by leading educators in the fields of psychology and special education, along with invited experts in public communications. The EG employed innovative teaching methods that incorporated the use of digital platforms and interactive applications. These methods facilitated the

development of professional competencies among future teachers and contributed to shaping their professional image through modern technologies.

As part of the experimental training, various platforms and applications were utilized for the students in the EG. The Moodle platform served as the primary learning environment for posting course materials, assignments, additional resources, and forum discussions. Students could access materials, engage in discussions, and pose questions to instructors at their convenience. Seminars were conducted via Zoom, where multimedia presentations, videos, and interactive polling tools such as Mentimeter and Kahoot were employed. Padlet was utilized as a collaborative tool for group brainstorming, allowing students to create visual maps of a teacher's image, highlighting important aspects such as appearance, communication skills, and professional ethics.

Students also utilized Canva for presentations and materials that reflect the professional image of a teacher; here, they created their portfolios, which included resumes, examples of effective communication techniques, and recommendations for personal image development. This application helped enhance visual and presentation skills, vital components of a teacher's profession. Each subject within the program incorporated practical assignments, the completion of which was monitored through Moodle, with evaluations provided by the instructors. Regular short surveys conducted via Google Forms were employed to measure intermediate outcomes and track progressive stages of learning. The integration of innovative teaching methods enabled students in the EG to deepen their professional training through the use of novel tools and methodologies, making the learning experience more effective and interactive.

In contrast, the control group followed a traditional program that did not include any specific components aimed at developing the teacher's image. At the conclusion of the 12-week training period, a final assessment was administered. This assessment was conducted in person in the same classrooms as the preliminary test. The testing process involved similar tasks. The assessments also lasted 45 minutes and were administered by the same instructors as in the initial phase.

4.4. Research tools

The research instruments included a questionnaire and interviews. These tools enabled a comprehensive approach to data collection, which contributed to obtaining reliable results and a deeper understanding of the factors influencing the formation of teachers' professional image. The student survey was designed using a 5-point Likert scale (1=strongly disagree; 5=strongly agree) to assess various factors influencing the formation of a professional image. The Cronbach's alpha coefficient for evaluating the internal consistency of this questionnaire yielded a value of 0.88, indicating a high level of reliability for the instrument. In the qualitative analysis of interviews, thematic analysis was employed to identify key trends and synthesize findings. All interviews were recorded and transcribed for further analysis. The transcribed data were analyzed using a coding method, with key themes and trends identified based on participants' responses. Notably, essential trends and perspectives of students were revealed, highlighting the significance of communication and technology utilization in education. The validity of the interview questions was assessed using Cronbach's alpha, which resulted in a coefficient of 0.85, further indicating high reliability.

4.5. Data analysis

Statistical analysis methods were employed for data processing, including descriptive statistics and correlation analysis, to ascertain the relationships between various psychological and pedagogical conditions and the success of professional image formation. The study data were analyzed using SPSS software (version 26.0), ensuring reliable interpretation of results and reducing the likelihood of statistical errors. Subsequently, correlation analysis was conducted to calculate the correlation coefficients between different factors and the professional image of educators. To determine significant differences between groups, student's t-test and analysis of variance (ANOVA) were utilized.

4.6. Ethical issues

The research was conducted in accordance with international ethical standards, including obtaining permission to conduct surveys and interviews from educational institutions. All participants in the study signed an informed consent form, indicating that their data would be used exclusively for scientific purposes and that confidentiality would be fully maintained. The study also considered the possibility of voluntary withdrawal from participation at any stage of the research.

4.7. Research limitations

The primary limitation of the study is the geographical location of the sample, which may restrict the generalizability of the results to other regions and countries. Additionally, it is important to consider that the research focused mainly on educators and students in the field of special education, which limits the

applicability of the findings to general educational practices. However, the sample aligns with the objectives of the study, and the results represent a significant contribution to the understanding of the psychological and pedagogical prerequisites for the formation of the professional image of teaching specialists.

5. RESULTS

Table 2 presents a comparative analysis of the results of students from the experimental and control groups before and after the experiment. The table includes the mean values (M) and standard deviations (SD), illustrating the distribution of data across the two groups. A t-test was employed to analyze the differences between the groups and to determine the statistical significance of the differences in the results. The average score of students in the EG significantly increased after participating in the teacher professional image development program ($p<0.001$). This indicates the effectiveness of innovative teaching methods and the use of digital platforms in enhancing the professional image. In contrast, the control group exhibited negligible changes ($p=0.375$), thereby confirming the necessity of specialized training to improve the understanding of professional profiles.

Table 2. Comparative analysis of initial and final scores of the experimental and control groups of students

Group	Average score on pre-test (M±SD)	Average score on post-test (M±SD)	t-value	p-value
EG	68.5±6.3	85.4±5.1	9.32	0.0001
Control group	67.2±5.9	71.8±6.0	3.15	0.375

Preliminary tests indicated that the knowledge and skills of students in both groups were comparable, with the experimental group demonstrating a slight advantage. The mean scores for the two groups were closely aligned (68.5±6.3 in the experimental group compared to 67.2±5.9 in the control group), confirming the similarity of the initial conditions. Post-training results showed significant improvements in both groups. The experimental group exhibited a more substantial gain, with a mean score of 85.4±5.1, while the control group achieved a mean score of 71.8±6.0. The experimental group, which utilized innovative teaching methods, outperformed the control group in the final examination, demonstrating the effectiveness of the proposed program. Statistical results from the t-test and p-values indicate that the improvements in both groups were not coincidental; rather, the enhancements in the experimental group significantly exceeded those in the control group, highlighting the considerable potential of innovative teaching methods for pedagogical education. Based on the analysis of data collected through the survey, conclusions were drawn and presented in Table 3. This table consolidates the results of the correlation analysis and ANOVA, illustrating the influence of four factors on the development of the teacher's professional image.

Table 3. Influence of various conditions on the formation of professional image (correlation analysis)

Factor	Correlation coefficient (r)	p-value (correlation)	Sum of squares	Mean square	F-value	p-value (ANOVA)
Communication strategies	0.72	<0.001	25.34	25.34	12.56	0.001
Visual image	0.65	<0.001	15.22	15.22	8.01	0.005
Psychological support	0.68	<0.001	18.45	18.45	9.34	0.003
Use of interactive technologies	0.75	<0.001	22.10	22.10	10.47	0.002

5.1. Communication strategies

The correlation coefficient ($r=0.72$) indicates a strong positive correlation with the professional image of the teacher. This correlation is statistically significant at $p<0.001$. The F-value=12.56 and the p-value (ANOVA)=0.001 suggest that the impact of communication strategies on the professional image is statistically significant. The majority of students reported that teachers employing various communication strategies create a more productive and engaging learning environment. This finding aligns with the high correlation coefficient ($r=0.72$), underscoring the importance of effective communication.

5.2. Visual image

The correlation coefficient ($r=0.65$) indicates a moderately strong positive correlation. The significant correlation is also reflected in a noteworthy p-value. The visual image has a substantial impact on the teacher's image, although it is somewhat weaker compared to other factors, with an F-value=8.01 and a p-value (ANOVA)=0.005. Students indicated that the teacher's visual image significantly influenced their

perceptions. For instance, approximately 65% of respondents stated that the teacher's appearance determines the level of respect and trust they receive.

5.3. Psychological support

The correlation coefficient (r)=0.68 signifies a moderately strong positive correlation. The p-value (correlation)<0.001 indicates that this correlation is statistically significant. The F-value=9.34 and p-value (ANOVA)=0.003 demonstrate that the influence of psychological support on the professional image is statistically significant. Over 70% of students believe that psychological support from the teacher enhances their motivation and willingness to learn. This is corroborated by the correlation coefficient (r=0.68), highlighting the importance of this factor.

5.4. Use of interactive technologies

The correlation coefficient (r)=0.75 indicates the strongest positive correlation among all factors. Interactive technologies have a statistically significant impact on the teacher's image, as reflected in the F-value=10.47 and the p-value (ANOVA)=0.002. Students highly value the use of interactive technologies in instruction, with over 80% of respondents considering them to make lessons more engaging and comprehensible. This is consistent with the highest correlation coefficient (r=0.75).

Thus, communication strategies and the use of interactive methods exert the strongest influence on the formation of the teacher's professional image, as indicated by high correlation coefficients (0.72 and 0.75). The teacher's ability to communicate effectively and incorporate modern methods into the educational process is particularly crucial for establishing a positive image among students and colleagues. The visual image exhibits a slightly lower correlation (0.65) but remains an important factor influencing the perception of the teacher. Psychological support also has a significant impact on the formation of the professional image, with a correlation coefficient of 0.68, underscoring the importance of the teacher's emotional and psychological engagement in interactions with students. All factors demonstrate statistically significant effects, as confirmed by p-values <0.05 in the correlation analysis and ANOVA, allowing us to assert their roles in shaping the professional image confidently.

The results of the semi-structured interviews with instructors identified four factors influencing the formation of the professional image: the role of the teacher's personal example, psychological support and feedback, the use of modern technologies, emotional intelligence, and stress management. Many participants noted that the behavior, appearance, and ethics of the instructor significantly affect students and shape their perception of the professional image. One respondent remarked:

> "*Students closely observe every step of the teacher, and it is essential not only to talk about the profession but also to demonstrate professional qualities in teaching*."

Respondents also emphasized that psychological support, especially when working with individuals requiring special education, is a crucial factor in shaping the teacher's image. noted one of the instructors.

> "*Working with such children requires immense patience and understanding, and this is directly related to the teacher's position*."

All participants confirmed that the use of modern digital platforms and interactive tools not only enhances the learning process but also influences the teacher's image as an innovative professional. Furthermore, respondents highlighted that the teacher's ability to manage emotions and stress is also vital in forming a professional image. One respondent emphasized:

> "*Teachers who can maintain composure and confidence in challenging situations are always perceived by students as true professionals*."

Figure 1, derived from the interview results, illustrates the impact of various factors on the formation of the teacher's professional image. Each factor is displayed with percentages reflecting its significance. The personal example set by the teacher plays the most substantial role in shaping the professional image, accounting for 40%. This underscores the importance of the teacher's behavior in the classroom and how it is perceived by students. This finding supports the notion that students learn not only from textbooks but also by observing their teachers. Psychological support and feedback also hold significant importance, contributing 30%. Educators emphasize that creating a safe and supportive learning environment aids students in better assimilating information and enhances their motivation. This aspect can be particularly crucial for students with special educational needs.

The use of modern technologies—20%—reflects the growing significance of digital tools in education. Teachers who employ contemporary technologies are perceived as more progressive and open to innovation, positively influencing their professional image. Emotional intelligence and stress management, while less significant at 10%, do not diminish their importance. A teacher's ability to manage their emotions and remain calm in challenging situations affects their professional image; however, this aspect is not as critical as others. Thus, the results indicate that personal role models and psychological support are primary factors in shaping a teacher's professional image, while modern technologies and emotional intelligence play a secondary role. This highlights the necessity of emphasizing interpersonal aspects of education alongside technical skills. Based on the data and interview results, the following observations and recommendations were made:

i) Integrate various technologies into the educational process. To enhance teachers' professional image, teacher training programs should incorporate digital platforms and communication tools, enabling future educators to familiarize themselves with modern technologies and improve their image in the eyes of colleagues and students.
ii) Develop communication skills through practical application. To improve communication methods, practical activities should be implemented, allowing teachers to engage with their colleagues and students effectively.
iii) Enhance emotional support in educational programs. Greater emphasis should be placed on psychological well-being and stress prevention in teacher preparation programs. This approach will not only foster more professional educators but also enhance their overall competence.
iv) Cultivate the teacher's visual image. When designing lessons, attention should be given to developing visual presentation and verbal communication skills, enabling teachers to respond effectively to the unique needs of students and convey a positive professional image.

In conclusion, the study demonstrated that psychological and pedagogical characteristics, such as communication strategies, technology utilization, psychological support, and visual appearance, play a crucial role in the success of a teacher's early career.

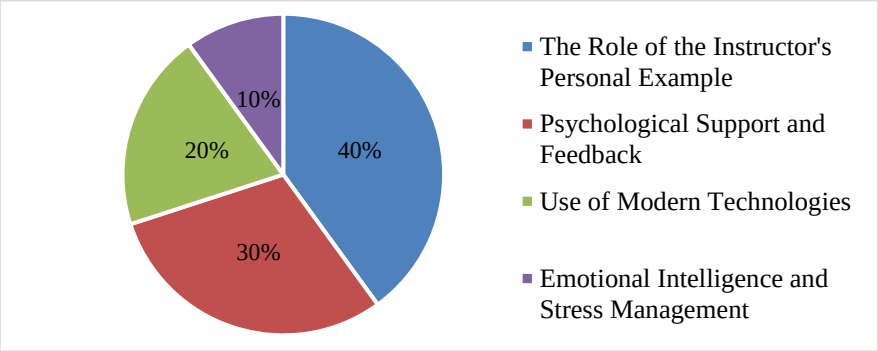


Figure 1. Factors influencing the formation of the teacher's professional image

6. DISCUSSION

Teachers play a crucial role in the lives of their students and have a significant impact on society as a whole. Special education teachers are essential in creating an inclusive and equitable learning environment for students with diverse needs [32]. Therefore, understanding the factors that influence the professional development of a teacher's image is an important issue.

This study presents quantitative data supporting the correlation between the use of technology and the enhancement of a teacher's image: 85% of students reported increased motivation when innovative tools were utilized, and 78% of teachers confirmed that these technologies aid in improving the quality of their teaching through personalized feedback. A study conducted in Turkey also indicated that students find the implementation of innovations acceptable, leading to increased satisfaction with the learning process [33]. The integration of technology is similarly positively perceived by teachers, as evidenced by research conducted by the authors in Pakistan. Their work demonstrates that teachers believe the use of technology enhances teaching practices, making them more interactive and motivating for students [34]. The findings from the Pakistani study align with the current research: 76% of teachers stated that the use of voice technologies helped them improve their teaching methods and provided new tools for engaging with students, thereby positively influencing their image among learners.

Researchers from Kazakhstan determined that the strength of students' spiritual attraction to their teacher primarily depends on the presence of a personal quality known as attraction, a term introduced by psychologists to achieve a deeper understanding of an individual's personality and artistic and communicative abilities [35]. According to this study, 67% of students indicated that the emotional engagement of the teacher, conveyed through technological means, directly affects their willingness to learn, while 70% noted the positive impact of the teacher's personal qualities, which are reflected through the use of technology, demonstrating their motivation and satisfaction with the learning process. These figures also align with the findings of a study on teachers' emotional intelligence conducted in the United Arab Emirates, which showed that emotional skills enhance students' academic performance [36]. The authors of this work also conclude that emotional intelligence significantly influences the perception of a teacher's image, as evidenced by a positive correlation between these variables ($r=0.75$, $p<0.001$).

A Spanish author asserts that students' responses to the characteristics of a "good teacher" are evaluated based on personal qualities, abilities, ethical values, and skills [37]. His research emphasizes the importance of establishing positive and caring relationships with students, fostering mutual trust, and instilling values and ethics. These aspects are reflected in the results of this study: 76% of students reported that they need emotional support from teachers, which they believe helps create a safe and nurturing learning environment, thereby enhancing the teacher's image. This data also supports the findings of Portuguese authors regarding the significance of ethical orientation in a teacher's identity, which directly and indirectly influences other components of the model [38].

An author from Uzbekistan highlights that communicative competence is an integral part of teachers' professional competence and is essential for their successful performance of professional duties [39]. In this work, the correlation coefficient ($r=0.72$) for communication skills indicates a strong positive correlation with the teacher's professional image. Other authors also assert that a teacher's professional attitude manifests in their ability to exercise self-control, expressed through a spiritual mental approach, ensuring that they always act based on moral values, and life principles, and behave in accordance with their religion and beliefs while fulfilling their duties [40].

The experimental results demonstrated a positive impact of ICT on students' motivation and emotional state, supporting previous findings regarding the significance of teacher behavior in fostering a supportive classroom environment. Furthermore, the study revealed that teachers who exhibit positive behavior and attitudes can significantly influence the emotional well-being of their students. Specifically, the phenomenon of emotional contagion, as indicated by the study results [41], suggests that happy teachers can transfer their emotions to students, encouraging positive experiences. This aligns with observations from our research on the influence of ICT on students' overall emotional state: modern technologies, when used effectively, not only enhance the learning process but also create a positive emotional context for learning, which can increase long-term engagement.

The results obtained thus open new avenues for further research on issues related to the development of a teacher's professional image and underscore the necessity of developing targeted programs and methods aimed at enhancing the teacher's image within the educational system of Kazakhstan and other countries. The findings emphasize that the psychological and pedagogical requirements for shaping the future teacher's image should include the use of modern technologies, which not only improve the educational process but also contribute to the development of personal and professional qualities essential for successful teaching.

7. CONCLUSION

The investigation into the psychological and pedagogical needs for shaping the image of future teachers, aimed at ensuring meaningful outcomes, underscores the significance of various factors in this process. In the preliminary and subsequent analysis of the experimental group, the average score improved significantly from 68.5 ± 6.3 to 85.4 ± 5.1 ($p<0.001$), while the control group exhibited a smaller change from 67.2 ± 5.9 to 71.8 ± 6.0 ($p=0.375$). This highlights the challenge of implementing new teaching methods and utilizing digital platforms. Correlation analysis revealed a strong positive correlation between the professional image of teachers and communication strategies ($r=0.72$, $p<0.001$), the use of interactive technologies ($r=0.75$, $p<0.001$), perceived image ($r=0.65$, $p<0.001$), and psychological support ($r=0.68$, $p<0.001$).

The practical significance of this research lies in the development of recommendations for integrating interactive technologies into training programs, which may contribute to the formation of a positive teacher image in the future. Its scientific significance is highlighted by the emphasis on the importance of psychological and educational needs, such as emotional intelligence, stress management, and communication skills in professional training. The findings of this study may be applied in teacher education,

educational institutions, and training programs, as well as in the field of counseling psychology and education. Further research opportunities include a deeper exploration of the impact of certain new technologies on the teacher's image, as well as examining the long-term consequences of applying the developed principles to the practical actions of teachers working with students with special educational needs.

FUNDING INFORMATION

The research received no funding.

AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Gulshat Koshzhanova		✓		✓	✓				✓			✓		
Kairat Ibragim	✓			✓		✓				✓			✓	
Mukhamejan Tusseyev	✓			✓	✓		✓	✓		✓				✓
Arzu Gurbanova		✓	✓	✓		✓	✓		✓		✓			

C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

The research has no conflict of interest.

INFORMED CONSENT

The research was conducted in accordance with international ethical standards, including obtaining permission to conduct surveys and interviews from educational institutions. All participants in the study signed an informed consent form, indicating that their data would be used exclusively for scientific purposes and that confidentiality would be fully maintained.

ETHICAL APPROVAL

The research was conducted in accordance with international ethical standards of Declaration of Helsinki. The study was conducted in accordance with the ethical principles approved by the Ethics Committee of Shymkent University (Protocol No 463 of December 13, 2023).

DATA AVAILABILITY

The authors confirm that the data supporting the findings of this study are available within the article [and/or its supplementary materials].

REFERENCES

[1] N. Alzahrani, "The development of inclusive education practice: A review of literature," *International Journal of Early Childhood Special Education. Institute for Advanced Studies*, vol. 12, no. 1, pp. 68–83, 2020, doi: 10.20489/intjecse.722380.
[2] M. Holmqvist and B. Lelinge, "Teachers' collaborative professional development for inclusive education," *European Journal of Special Needs Education*, vol. 36, no. 5, pp. 819–833, 2021, doi: 10.1080/08856257.2020.1842974.
[3] A. Kapetanaki, A. Krouska, C. Troussas, and C. Sgouropoulou, "Exploiting augmented reality technology in special education: A systematic review," *Computers*, vol. 11, no. 10, p. 143, 2022, doi: 10.3390/computers11100143.
[4] A. van Mieghem, K. Verschueren, K. Petry, and E. Struyf, "An analysis of research on inclusive education: A systematic search and meta review," *International Journal of Inclusive Education*, vol. 24, no. 6, pp. 675–689, 2020, doi: 10.1080/13603116.2018.1482012.

[5] Z. Xie, M. Deng, and Z. Zhu, "From regular education teachers to special educators: The role transformation of resource room teachers in Chinese inclusive education schools," *International Journal of Inclusive Education*, vol. 28, no. 6, pp. 857–874, 2021, doi: 10.1080/13603116.2021.1968516.

[6] E. Nikula, P. Pihlaja, and P. Tapio, "Visions of an inclusive school–Preferred futures by special education teacher students," *nternational Journal of Inclusive Education*, vol. 28, no. 5, pp. 673–687, 2021, doi: 10.1080/13603116.2021.1956603.

[7] F. H. Chen, C. C. Tsai, P. Y. Chung, and W. S. Lo, "Sustainability learning in education for sustainable development for 2030: an observational study regarding environmental psychology and responsible behavior through rural community travel," *Sustainability*, vol. 14, no. 5, p. 2779, 2022, doi: 10.3390/su14052779.

[8] Z. Xie, L. F. Zhang, and M. Deng, "Self-efficacy and work motivation among inclusive education teachers in China," *International Journal of Disability, Development and Education*, vol. 71, no. 2, pp. 236–250, 2022, doi: 10.1080/1034912X.2022.2094900.

[9] T. E. Shim and S. Y. Lee, "College students' experience of emergency remote teaching due to COVID-19," *Children and Youth Services Review*, vol. 119, p. 105578, 2020, doi: 10.1016/j.childyouth.2020.105578.

[10] T. Saloviita, "Attitudes of teachers towards inclusive education in Finland," *Scandinavian Journal of Educational Research*, vol. 64, no. 2, pp. 270–282, 2018, doi: 10.1080/00313831.2018.1541819.

[11] K. M. O'Brien, S. A. Nagro, G. D. Binkert, K. Szocik, and M. Gerry, "Field experiences in special education teacher preparation: A review of the literature," *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, vol. 47, no. 1, pp. 5–25, 2024, doi: 10.1177/08884064231177662.

[12] M. Mendoza and J. Heymann, "Implementation of inclusive education: A systematic review of studies of inclusive education interventions in low-and lower-middle-income countries," *International Journal of Disability, Development and Education*, vol. 71, no. 3, pp. 299–316, 2022, doi: 10.1080/1034912X.2022.2095359.

[13] A. C. Rapp and A. Corral-Granados, "Understanding inclusive education–a theoretical contribution from system theory and the constructionist perspective," *International Journal of Inclusive Education*, vol. 28, no. 4, pp. 423–439, 2021, doi: 10.1080/13603116.2021.1946725.

[14] T. M. Makoelle and V. Burmistrova, "Teacher education and inclusive education in Kazakhstan," *International Journal of Inclusive Education*, vol. 29, no. 4, pp. 447–463, 2021doi: 10.1080/13603116.2021.1889048.

[15] T. M. Makoelle, "Schools' transition toward inclusive education in post-Soviet countries: Selected cases in Kazakhstan," *Sage Open*, vol. 10, no. 2, pp. 1–13, 2020, doi: 10.1177/2158244020926586.

[16] K. Miliutina, "Tolerance as a condition for the success of inclusive education," *Socialization & Human Development Journal*, vol. 5, no. 2, pp. 70–77, 2023.

[17] A. Raes, "Exploring student and teacher experiences in hybrid learning environments: Does presence matter?" *Postdigital Science and Education*, vol. 4, no. 1, pp. 138–159, 2022, doi: 10.1007/s42438-021-00274-0.

[18] O. Tapalova and N. Zhiyenbayeva, "Innovative strategies of scientific activity in educational and scientific participatory management: Electronic digital mechanisms," *Cogent Education*, vol. 11, no. 1, 2024, doi: 10.1080/2331186X.2024.2383043.

[19] C. Greenhow and A. Chapman, "Social distancing meet social media: Digital tools for connecting students, teachers, and citizens in an emergency," *Information and Learning* Sciences, vol. 121, no. 5/6, pp. 341–352, 2020, doi: 10.1108/ILS-04-2020-0134.

[20] Z. Kanetaki *et al*., "Grade prediction modeling in hybrid learning environments for sustainable engineering education," *Sustainability*, vol. 14, no. 9, p. 5205, 2022, doi: 10.3390/su14095205.

[21] H. Lopatina, N. Tsybuliak, A. Popova, O. Hurenko, and Y. Suchikova, "Inclusive education in higher education institution: Are Ukrainian faculty members' ready for it?" *Research in Education*, vol. 118, no. 1, pp. 49–72, 2024, doi: 10.1177/00345237231207721.

[22] M. Tight, "Internationalisation of higher education beyond the West: Challenges and opportunities–the research evidence," *Educational Research and* Evaluation, vol. 27, no. 3-4, pp. 239–259, 2022, doi: 10.1080/13803611.2022.2041853.

[23] M. Montenegro-Rueda and J. M. Fernández-Batanero, "Adaptation and validation of an instrument for assessing the digital competence of special education teachers," *European Journal of Special Needs* Education, vol. 39, no. 3, pp. 367–382, 2023, doi: 10.1080/08856257.2023.2216573.

[24] M. A. Almaiah, A. Al-Khasawneh, A. Althunibat, and O. Almomani, "Exploring the main determinants of mobile learning application usage during COVID-19 pandemic in Jordanian universities," in *Emerging technologies during the era of COVID-19 pandemic*, I. Arpaci, Ed., Cham: Springer, 2021, pp. 275–290, doi: 10.1007/978-3-030-67716-9_17.

[25] C. Whittle, S. Tiwari, S. Yan, and J. Williams, "Emergency remote teaching environment: A conceptual framework for responsive online teaching in crises," *Information and Learning Sciences*, vol. 121, no. 5/6, pp. 311–319, 2020, doi: 10.1108/ILS-04-2020-0099.

[26] A. M. Amor *et al*., "International perspectives and trends in research on inclusive education: A systematic review," *International Journal of Inclusive Education*, vol. 23, no. 12, pp. 1277–1295, 2018, doi: 10.1080/13603116.2018.1445304.

[27] A. Feenberg, "Postdigital or predigital?" *Springer Science and Business Media LLC*, vol. 1, no. 1, pp. 8–9, 2019, doi: 10.1007/s42438-018-0027-2.

[28] C. Troussas, A. Krouska, and C. Sgouropoulou, "Impact of social networking for advancing learners' knowledge in E-learning environments," *Education and Information Technologies*, vol. 26, pp. 4285–4305, 2021, doi: 10.1007/s10639-021-10483-6.

[29] R. Cakir and O. Korkmaz, "The effectiveness of augmented reality environments on individuals with special education needs," *Education and Information Technologies*, vol. 24, no. 2, pp. 1631–1659, 2019, doi: 10.1007/s10639-018-9848-6.

[30] S. Antera, "Professional competence of vocational teachers: A conceptual review," *Vocations and Learning*, vol. 14, no. 3, pp. 459–479, 2021, doi: 10.1007/s12186-021-09271-7.

[31] A. Fitzgerald, "Professional identity: A concept analysis," *Nursing Forum*, vol. 55, no. 3, pp. 447–472, 2020, doi: 10.1111/nuf.12450.

[32] C. Hu, C. Wang, B. Chen, and S. Li, "Examining the influence of work engagement on the relationship between self-efficacy, job satisfaction, and professional goals of special education teachers in China," *Current Psychology*, vol. 43, pp. 23729–23748, 2024, doi: 10.1007/s12144-024-06126-x.

[33] E. Gulboy and H. Denizli-Gulboy, "Evaluating augmented reality to teach science for secondary students with intellectual disability," *The Journal of Special Education*, vol. 59, no. 1, pp. 3–15, 2024, doi: 10.1177/00224669241258225.

[34] H. Akram, A. H. Abdelrady, A. S. Al-Adwan, and M. Ramzan, "Teachers' perceptions of technology integration in teaching-learning practices: A systematic review," *Frontiers in Psychology*, vol. 13, p. 920317, 2022, doi: 10.3389/fpsyg.2022.920317.

[35] R. S. Sydykova, A. A. Yussupova, G. K. Berekeshev, T. A. Smailova, and N. T. Kuldanov, "Psychosocial foundations for pedagogical skills formation of future specialists in the special educational environment," *Journal of Intellectual Disability - Diagnosis and Treatment*, vol. 8, no. 3, pp. 485–496, 2020, doi: 10.6000/2292-2598.2020.08.03.26.

[36] O. Khassawneh, T. Mohammad, R. Ben-Abdallah, and S. Alabidi, "The relationship between emotional intelligence and educators' performance in higher education sector," *Behavioral Sciences*, vol. 12, no. 12, p. 511, 2022, doi: 10.3390/bs12120511.
[37] M. R. Buxarrais, "Teacher's ethos and moral and professional identity," in *The International Handbook of Teacher Ethos*, F. Oser, Ed., Cham: Springer International Publishing, 2021, pp. 125–143, doi: 10.1007/978-3-030-73644-6_9.
[38] M. Granjo, J. C. Silva, and F. Peixoto, "Teacher identity: Can ethical orientation be related to perceived competence, psychological needs satisfaction, commitment and global self-esteem?" *European Journal of Teacher Education*, vol. 44, no. 2, pp. 158–179, 2020, doi: 10.1080/02619768.2020.1748004.
[39] A. M. Qobilovna, "Communicative competence as a factor of teacher's professional competency," *American Journal of Social Sciences and Humanity Research*, vol. 3, no. 9, pp. 32–44, 2023, doi: 10.37547/ajsshr/Volume03Issue09-06.
[40] M. Muhammadiah, A. Hamsiah, A. Muzakki, N. Nuramila, and Z. A. Fauzi, "The role of the professional teacher as the agent of change for students," *AL-ISHLAH: Jurnal Pendidikan*, vol. 14, no. 4, pp. 6887–6896, 2022, doi: 10.35445/alishlah.v14i4.1372.
[41] S. Moskowitz, "Exploring teacher classroom behavior and wellbeing from the student perspective," *ELT Journal*, vol. 78, no. 2, pp. 189–197, 2024, doi: 10.1093/elt/ccad062.

APPENDIX

Survey questions (for students)

1. To what extent do you agree with the statement: "a teacher who effectively utilizes communication strategies forms a more positive professional image"?
    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly agree
2. How often do the instructors at your educational institution use active communication methods (group discussions, debates)?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
3. To what extent do you agree with the statement: "the use of interactive technologies (e.g., Moodle, Zoom, Canva) positively impacts the professional image of the teacher"?
    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly agree
4. Please evaluate how often teachers use digital platforms to interact with students.
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
5. How important do you consider psychological support from the teacher for the formation of a professional image?
    - Not important at all
    - Unimportant
    - Neutral
    - Important
    - Very important
6. How often do the instructors at your educational institution provide constructive feedback to support students?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always

7. How important do you believe the appearance and visual behavior of the teacher are for forming their professional image?
    - Not important at all
    - Unimportant
    - Neutral
    - Important
    - Very important
8. To what extent do the teachers at your educational institution pay attention to their appearance and nonverbal communication?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
9. How important is the teacher's ability to manage their emotions for creating their professional image?
    - Not important at all
    - Unimportant
    - Neutral
    - Important
    - Very important
10. How would you assess the level of stress management among the teachers at your educational institution?
    - Very low
    - Low
    - Average
    - High
    - Very high

Interview questions (for educators)

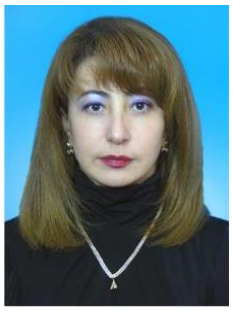
1. In your opinion, which communication skills are most important for shaping a positive professional image of a teacher? Could you provide examples from your practice?
2. What role do you believe psychological support plays in the educational process? How important is it for the teacher's image? Have you encountered situations where psychological support helped you establish more trusting relationships with your students?
3. What role do interactive technologies play in your work? How do they influence your professional image in the eyes of your students?
4. How important do you think appearance and nonverbal communication are in your profession? Which aspects of visual behavior do you consider significant for shaping your image?
5. How do you manage your emotions in challenging situations at work? Do you believe that the ability to control your emotions affects the perception of you as a professional?
6. How do you provide feedback to students? How important do you think it is for feedback to be constructive and supportive?
7. How do you cope with stress in your work? Do you think your ability to manage stress impacts your image among students?

BIOGRAPHIES OF AUTHORS

Gulshat Koshzhanova has master and doctoral degree. She works at Department of Special Pedagogy, Kazakh National Pedagogical University named after Abay, Almaty, Kazakhstan. Author's research interests include inclusive education, professional competency development, psychological and pedagogical conditions, special education, special educational needs, teacher image, and teacher preparation. She can be contacted at email: koshzhanovagul@outlook.com.

Kairat Ibragim is candidate of pedagogical sciences. He is head of the Pedagogy Department, Shymkent University, Shymkent, Kazakhstan. Author's research interests include inclusive education, professional competency development, psychological and pedagogical conditions, special education, special educational needs, teacher image, and teacher preparation. He can be contacted at email: ibragimkairat@onmail.com.

Mukhamejan Tusseyev is doctor Ph.D. He is dean of the faculty, senior lecturer of Department of Pedagogy, Central Asian Innovation University, Shymkent, Kazakhstan. Author's research interests include inclusive education, professional competency development, psychological and pedagogical conditions, special education, special educational needs, teacher image, and teacher preparation. He can be contacted at email: mtusseyev@outlook.com.



Arzu Gurbanova is candidate of pedagogical sciences. She works as associated professor at Department of Languages and Literature, Central Asian Innovation University, Shymkent, Kazakhstan. Author's research interests include inclusive education, professional competency development, psychological and pedagogical conditions, special education, special educational needs, teacher image, and teacher preparation. She can be contacted at email: arzugurbanova09@outlook.com.