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Developing Educational Competencies of Future Psychologist-Teachers with SACERS Scale

Abstract

Introduction. The research explores the potential of integrating the School-Age Care Environment Rating Scale (SACERS) into pre-service teacher education programmes to enhance future psychologist-teacher competencies in diagnostic evaluation, monitoring, instructional practice, and professional development: methodology and Methods. A mixed method approach was adopted, involving 110 undergraduate students assigned to either an experimental group (n=50) or a control group (n=60). Approximately four weeks later, the experimental group conducted guided assessments of authentic educational settings using the SACERS scale, while the control group followed traditional curricula without exposure to practical evaluation activities. *Results. SACERS*-based training significantly improved students' competencies in diagnosing and evaluating the school environment. *Scientific Novelty*. This research demonstrates that validated instruments like SACERS are effective tools in teacher education, supporting the development of professional competencies and encouraging reflective teaching practices. *Practical Significance.* The approach offers a measurable model for embedding environmental assessment in teacher training, fostering reflective and analytical skills aligned with national and international standards.

Keywords: pedagogical psychologists, school environment assessment, SACERS scale, competencies, education.

Introduction. Contemporary educational research underscores the critical role of the school environment in shaping academic outcomes, social conduct, emotional resilience, and holistic development. A well-structured, safe, and inclusive learning setting not only facilitates cognitive development but also supports students' moral, psychological, and physical growth (Lee et al., 2025). In alignment with these global insights, Kazakhstan's educational policy reforms increasingly prioritize cultivating environments that promote safety, inclusivity, and personal development as foundational conditions for effective teaching and learning.

In today's schools, pedagogical psychologists play a key role in creating healthy learning environments (Sasson et al., 2022). They assess the school's overall atmosphere, identify areas for improvement, and present strategies to build a more positive and inclusive space for students and administrative staff. Their knowledge is especially important for understanding how physical environments, social connections, and psychological aspects interact to influence the educational process (Smaoui et al., 2025). The need for professional psychologists capable of evaluating and improving school settings is growing as classrooms become increasingly multicultural (Fielding et al., 2025).

The state's strategic focus on fostering safe and supportive educational spaces is articulated through various national initiatives, notably the "Comfortable School" program (Gvozdikova & Bryantsev, 2024). This initiative aims to promote

the development of educational institutions that meet modern standards of safety, comfort, and inclusiveness. These programs reflect a growing recognition of the need to cultivate future psychologist teachers who possess not only technical expertise but also the evaluative and empathetic capacities required to conduct nuanced assessments of school environments, ensuring they can meaningfully contribute to the emotional, social, and developmental well-being of every student (Assylbekova et al., 2024).

Enhancing the quality of school environments requires specialized professional skills that address the complexities inherent in educational settings. As noted by Chen et al., (2022), the effective assessment and improvement of learning environments depend on practitioners' ability to integrate cognitive insights with practical application, allowing them to respond effectively to diverse school dynamics. Future psychology teachers must develop competencies that go beyond theoretical understanding, including practical skills in observation, measurement, and analysis. Sukenti & Tambak (2020) emphasize that intentional development of these competencies during pre-service training is essential for preparing educational professionals to critically engage with and adapt to the multifaceted and evolving demands of contemporary learning environments (Yasa, 2022).

Assessing the school environment SACERS scale requires psychologists to evaluate dimensions such as safety, interpersonal relationships, infrastructure, resources, and emotional support systems. This demands proficiency in applying standardized, evidence-based tools and in interpreting results to inform targeted interventions (Ivanova & Vinogradova, 2018). As the educational structure increasingly focuses on a comprehensive, student-centered approach, the emerging role of pedagogical psychologists requires a sophisticated understanding of fields such as environmental psychology, educational principles, and sociology. Their success is reliant not only on their broad knowledge across disciplines but also on their capacity to engage with teachers, administrators, students, and parents to include significant transformation in educational environments (Helmer et al., 2024). Developing these professional skills entails more than just learning technical methods. It involves nurturing ethical perceptiveness, analytical reasoning, and the ability to adapt evaluation approaches to different teaching situations. While (Sukirlan et al., 2020) highlights the importance of training initiatives that integrate real-world, practice-oriented assessment experiences. Such experiential learning ensures that emerging psychologist-teachers possess not only theoretical knowledge but also the essential practical skills to navigate and improve diverse school environments (Effendi & Sahertian, 2023).

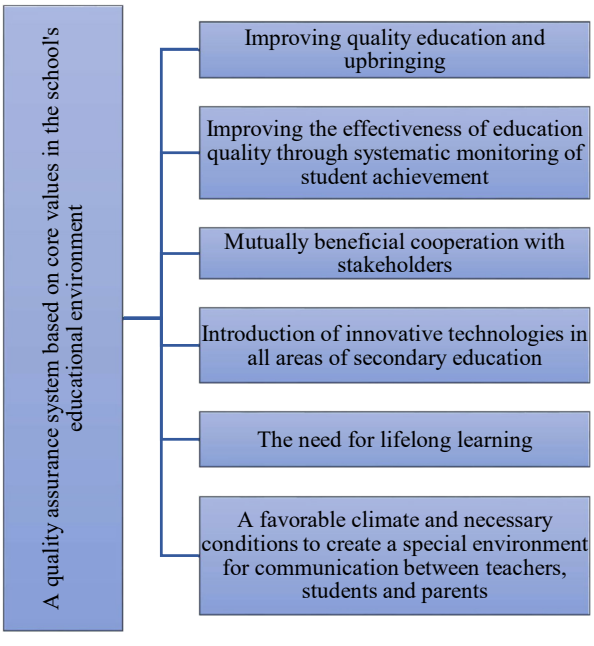
In the era of globalization, educational frameworks worldwide are undergoing significant changes, driven by advances in technology, cultural interactions, and the rising interdependence of communities (Suhardiman et al., 2024). These international phenomena impact teaching methods, curriculum development, and evaluation techniques, highlighting the need to equip learners for a complicated and interwined world. Modern educational models are placing greater emphasis on nurturing skills like critical analysis, innovative thinking, and understanding among future psychologists (Shen et al., 2024). Concepts such as holism, humanism, and planetary responsibility underpin new curricula aimed at fostering global citizens capable of navigating and contributing positively to an interconnected world (Buchan et al., 2024).

The development of global thinking has become essential in contemporary education. Global thinking encompasses intercultural awareness, adaptability, and ethical responsibility, attributes that are increasingly prioritized in education systems worldwide (Aidarov et al., 2020). To foster these competencies, schools are implementing interdisciplinary and integrative teaching models that encourage learners to connect knowledge across domains and engage with global challenges. Educational organizations employ progressive strategies, including interdisciplinary, meta-disciplinary, and synergistic approaches, as well as integrated

curriculum design. These methods enable students to make connections across subject areas, address global challenges critically, and contribute responsibly to both local communities and the broader global society (Bolukbasi et al., 2025).

Figure 1

A quality assurance system based on core values in the school's educational environment



Furthermore, the curriculum design now emphasizes the importance of interdisciplinary and integrative teaching methods. The concept of synergy involves integrating various fields to develop a unified understanding, which is key to this method. It motivates learners to examine intricate issues from diverse viewpoints, developing holistic thinking and the ability to address problems that are essential in the current interconnected world.

Providing educational psychologists with trustworthy tools is crucial for analysing academic settings. The SACERS scale provides an organized framework for assessing safety, facilities, connections, and the comfort atmosphere of schools, supporting evidence-based skills among future specialists (Taşcıoğlu, 2021). The SACERS scale serves as an important tool for generating reliable, data-driven insights that inform strategic improvements in educational processes. Its application in training programs equips future psychologist-teachers with essential skills in environmental diagnostics, including systematic observation, data collection, analytical reasoning, and interpretive synthesis (Jfa et al., 2018). Integrating the SACERS scale into training cultivates critical assessment skills and fosters collaboration with educators, enhancing the ability to generate practical, evidence-based recommendations. It also promotes a systematic understanding of how environmental and social factors shape educational outcomes. By supporting ongoing monitoring and adaptive planning, SACERS scales prepares future psychologist teachers to lead continuous improvements in school climate, aligned with evolving educational needs.

The concept of professional competences in pedagogical psychology has been extensively examined in the pedagogy and psychology literatures, with studies highlighting its significance for teacher education and professional practice (Mytnyk et al., 2023). Importantly, research highlights that competence development is not limited to theoretical knowledge but is strengthened through practical assessment and reflective practice, which foster deeper understanding and transferable skills. Competency-based education, as stated by

Shadan et al., (2025), is needed for integrating practical skills, such as data collection, analysis, and intervention, into curricula. This method aligns with the requirements of educational psychologists, whose success depends on applying theoretical understanding in practical settings.

The School Age Care Environment Rating Scale, developed by researchers (Mulyanti et al., 2024), provides a comprehensive model that encompasses aspects such as physical facilities, safety, social interactions, available resources, and the whole school environment. Programs that use SACERS for training have been found to enhance assessment precision, encourage critical thinking, and strengthen collaborative problem-solving skills among future professionals (Alafnan, 2025). These findings affirm the idea that training focused on practical assessments improves the skills needed for effective evaluation of the school environment.

Materials and Methods. This research adopts a mixed-method, quasi-experimental design, integrating quantitative evaluations of self–development and competency with qualitative data from student reflections and instructor observations. The experimental group has been trained using the SACERS scale, while the control group follows conventional methods. *The research focuses on the following question:* What is the impact of SACERS-based training on the competencies of future psychologists in evaluating and improving school environments? The sample included 110 undergraduate students enrolled in "Psychology of Education" and "Educational Diagnostics" courses. Participants were randomly assigned.

Table 1
Demography of participants

Group	N	Description
Experimental	50	Engaged in SACERS assessment activities in real schools
Control	60	Followed traditional coursework without a practical assessment

The Self-Development Test assesses how students perceive their own growth in motivation, cognition, and operational skills. Competency Assessment Scales: Measure the ability to observe, analyze data, interpret it, and design an appropriate intervention. The SACERS Evaluation Framework assesses school environments from multiple perspectives, including safety, relationships, infrastructure, resources, and school environments A, B, and C. Qualitative Data Collection: Reflective essays and instructor observation logs yield profound insights into students' learning methodologies and the development of future psychologist teachers' professional skills.

Results. The experimental group took the questionnaire before and after the training program, which used the SACERS scale and active assessment methods. Table 1 summarizes the answers, divided into three levels of competency: high, medium, and low.

Table 2
Building skills in assessing and measuring the school environment

№	Questionnaire Questions	High (ET)	Medium (BT)	Low (ET)	High (BT)	Medium (ET)	Low (BT)
1	How do you understand the concept of «school educational environment»? What does it include?	30.4%	47.8%	21.8%	23%	25%	52%
2	Is it necessary to evaluate the school environment? If yes, why?	32.3%	40.2%	27.5%	24%	30%	46%
3	Name and describe the course on evaluating the school environment.	37.9%	43.8%	18.3%	30%	30%	40%
4	What criteria can be used to evaluate relationships between the school staff and students?	38.2%	50.8%	11%	32%	42%	26%

5	How was your relationship with school teachers built? How did you measure it?	36.5%	40.8%	22.7%	27%	32%	41%
6	Was there any bullying among students in the school environment?	33.4%	45.9%	20.7%	22%	28%	50%

At first, a large number of students (47.8%) showed a medium level of understanding. After the training, there was a slight increase in the percentage of students with a high level of understanding, indicating they were improving in understanding the school environment.

The responses show a positive trend, with more students recognizing the importance of evaluating the educational environment after training. More students now regard evaluation as helpful, indicating that more people are becoming aware of its role in helping schools progress. The students' understanding of the curriculum content related to environmental assessment also increased, with a significant rise in the number who could succinctly define relevant courses. Evaluation of teacher-student interactions: The capacity to assess relationships was enhanced, with more students applying suitable criteria post-training. Bullying detection and intervention: Awareness and the capacity to identify bullying incidents have greatly improved, evidenced by a notable increase in replies reflecting proactive detection and intervention measures.

Instructing these subjects during the formative stage profoundly influences the evolution of students' general pedagogical and professional cognitive competencies. To enhance students' general pedagogical and professional cognitive competences, we have undertaken systematic efforts in the "Cognitive direction of developing the competencies of future pedagogical psychologists in measuring and evaluating the school educational environment."

The cognitive direction "Development of the competencies of future pedagogical psychologists in measuring and evaluating the educational environment of the school" aims to enhance the skills of prospective pedagogical psychologists in their 1st to 4th years through subject matter focused on assessing and measuring the school environment. The primary objective of the experiment in this domain was to assist prospective pedagogical psychologists in improving their proficiency in measuring and evaluating the educational environment. The cognitive direction is shown in Table 3.

Table 3

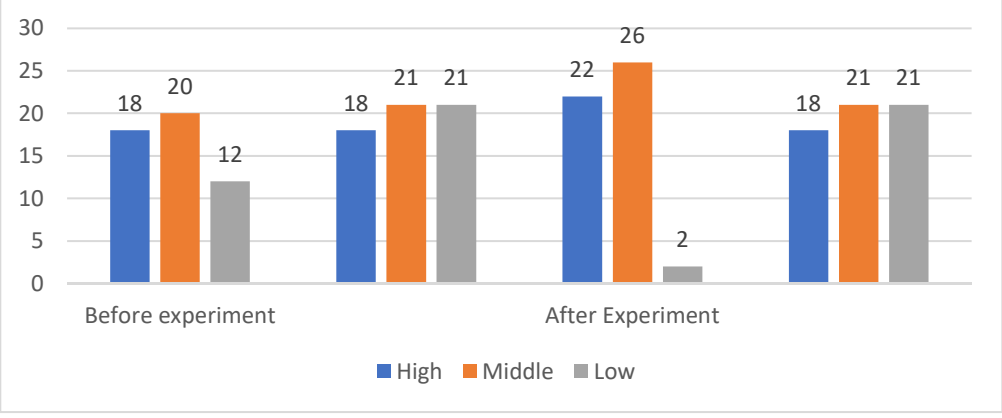
Outcomes of practical and experimental endeavors in the "cognitive" domain

Levels	Experimental group % (50 students)	Control group % (60 students)	Experimental group % (50 students)	Control group % (60 students)
	Before experiment		After experiment	
High	18 (37.2%)	18 (30.5%)	22 (44%)	18 (30.5%)
Middle	20 (41.2%)	21 (35.5%)	26 (52%)	21 (35.5%)
Low	12 (21.6%)	21 (34%)	2 (4%)	21 (34%)

Table 3 shows that the research conducted in the initial phase of the methodological program has produced favorable outcomes and validated the efficacy of the formation process. It is also clear that the dynamics of the production of research work in the first direction of the methodological program are rising, indicating that it is developing. Figure 2 shows.

Figure 2

Dynamics of competency development in the school environment evaluation



It is evident from the preceding figure that substantial progress has been achieved in developing competencies among future educational psychologists in measuring and evaluating the school's educational environment, compared with the exploratory experiment. These findings are supported by the diagnostic results used to determine the level of personal development. As a result of the survey, we note the development of knowledge regarding the competencies of future educational psychologists in measuring and evaluating the school's educational environment. According to the survey results, 36.7% of students gave correct answers.

Table 4

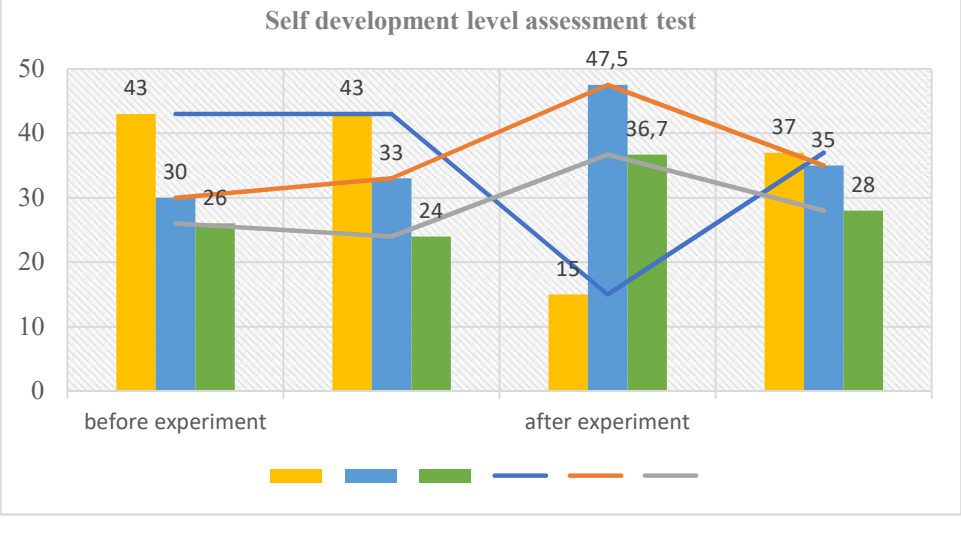
Outcomes of the assessment to ascertain the degree of personal growth

Self-development level assessment test		Experimental group before experiment	Control group	Experimental group after experiment	Control group
Level	low	43	43	15	37
	middle	30	33	47.5	35
	high	26	24	36.7	28

The dynamics of the self-development of future educational psychologists are depicted in a diagram (Figure 3).

Figure 3

The self-development dynamics of future educational psychologists



The formative experiment resulted in an increased percentage of positive indicators within the experimental group. This outcome suggests that intentional engagement in self-development and self-exploration enables future pedagogical psychologists to enhance their ability to assess and evaluate the school educational environment, thereby meeting societal expectations. Consequently, through this approach, we have identified the subsequent components of the competences required for future educational psychologists in assessing and evaluating the educational environment of the school.

Table 5

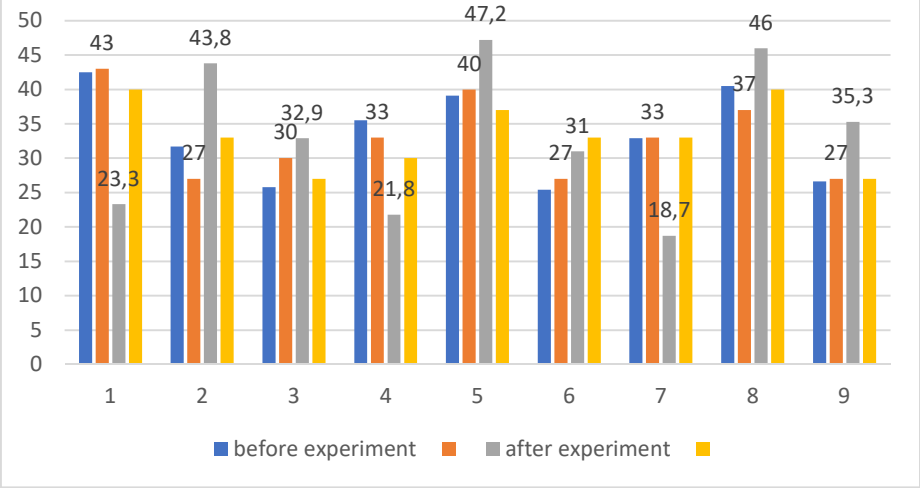
Results by components of future psychologists' competencies in evaluating the school environment

Indicators	Levels	Experimental group	Control group	Experimental group	Control group
		Before testing		After testing	
		42.5		43	
Motivational	low	31.7	27	23.3	40
	middle	25.8	30	43.8	33
	high	35.5	33	32.9	27
Cognitive	low	39.1	40	21.8	30
	middle	25.4	27	47.2	37
	high	32.9	33	31	33
Procedural	low	40.5	37	18.7	33
	middle	26.6	27	46	40
	high	26.6	26.6	27	35.3

Table 5 demonstrates that the experimental group exhibited greater growth at the middle and high levels in motivational, cognitive, and procedural competencies, while the proportion of students at the low level declined significantly. In contrast, the control group experienced only modest changes, indicating that the implemented technique was effective in enhancing the competencies required for future pedagogical psychologists to assess and evaluate the school educational environment.

Figure 4

Competency outcomes of future psychologists in school environment evaluation



The graphic shows that the experimental group's performance on the components went up following the formative experiment. The results of the work performed by students on self-assigned tasks in developing the competencies of future pedagogical psychologists in measuring and evaluating the school educational environment, psychological trainings on the SACERS scale "Relationship and Interaction" conducted on various topics, and systematic work on measuring and evaluating the school educational environment in all types of pedagogical practice have shown a change in the level of development of the competencies of future educational psychologists.

Comparing Schools on the SACERS' Seven Main Aspects: The evaluation was carried out in three schools, which future pedagogical psychologists observed and researched as part of their training. This provided an authentic context for applying SACERS and analyzing the quality of the educational environment.

Table 6

Means comparison of SACERS dimensions

ID	Space Furnish	Health Safety	Activities	Interactions	Program Structure	Staff Develop	Special Needs	Overall
Sch.A	5.111	6.75	5.000	5.444	5.000	6	5.571	5.553
Sch.B	4.000	6.00	5.250	6.111	6.000	6	3.429	5.255
Sch.C	5.444	6.50	5.375	6.778	6.667	7	5.429	6.170

Table 6 shows the mean scores for each of the three schools across the seven main aspects, scored on a scale of 1 to 7, with higher scores indicating better implementation of SACERS standards as follows:

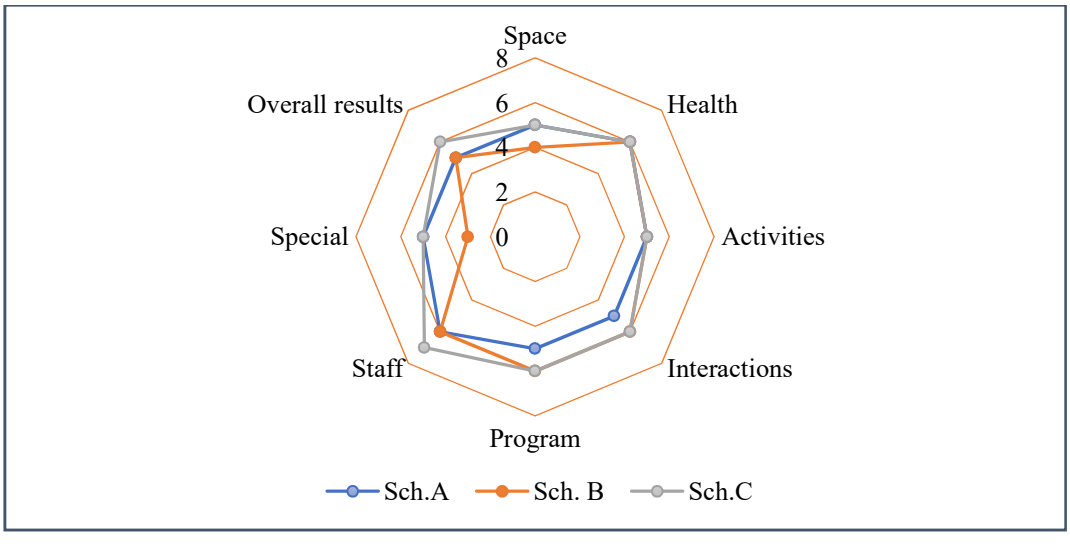
School A: demonstrates strong performance in *Health & Safety* (6.75, ranked first), and solid scores in *Furnish*, *Safety Development*, and *Special Needs*. Its weakest aspect is *Activities,* with a score of 5.000, indicating room for enhancement in activity planning and implementation.

School B: performs well in *Interactions* and *Program Structure* but lags notably in *Special Needs* with a score of 3.429, highlighting a potential gap in accommodating students with special needs.

School C: outperforms its peers across six aspects, notably scoring 7.000 in *Staff Development*, and has the highest overall score of 6.170, reflecting comprehensive implementation of SACERS standards.

Figure 5

Radar Chart of SACERS Dimension Scores Across Schools



Ranking Schools according to performance on each aspect: The best is Sch. C, ranking first for six aspects except for 'Health and Safety' (6.50 out of 7); it scored 6.170 out of 7. If we convert this score into percentages, with all seven aspects, the ideal score is 49, and the sum of the scores on each aspect is 43.193. The percentage becomes.

$$Score\ in\ \% = \frac{43.193x100}{49} = 88.148\%$$

Table 7

School results in percentages

School	%
Sch.A	79.33878
Sch. B	75.08163
Sch. C	88.14898

Sch. C has implemented the SACERS requirements at a rate of %, compared to Sch. A, whose implementation level is 79.33%, and Sch. B, with just 75.08%.

Figure 6

Comparative histogram of mean SACER scores across schools

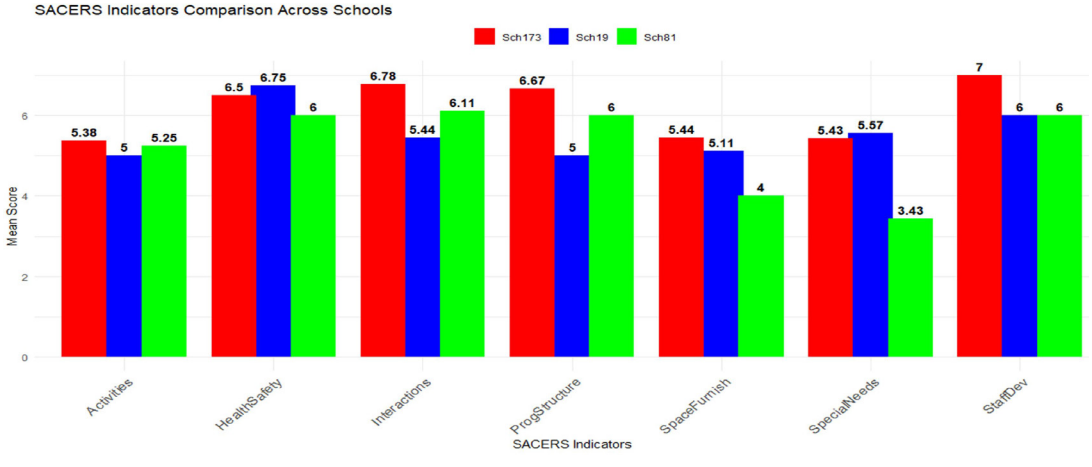


Figure 6 shows a histogram that highlights these disparities. School C is clearly in charge, as evidenced by no scores below 5, indicating that the implementation is consistently of excellent quality. On the other hand, School B has lower scores, especially in Special Needs, with some ratings in the ≤4 range. This implies that there is room for growth in some areas. The high ICC value indicates that the assessment ratings are consistent across evaluators, thereby making the conclusions more reliable. The quantitative comparison shows that School C has successfully incorporated SACERS standards at an implementation level of nearly 88%, which is better than both School A and School B.

These results suggest that the school with the highest implementation rate, School C, likely benefits from more comprehensive and effective interventions derived from the SACERS assessment results. This alignment of high implementation with better overall scores strongly supports the premise that thorough adherence to SACERS standards facilitates the development of a safe, supportive, and well-structured school environment. The discrepancies identified in School B, particularly regarding the Special Needs aspect, underscore critical areas for targeted intervention. Addressing these weaknesses can raise overall standards and promote more inclusive and supportive school environments. After the training, students exhibited enhanced assessment and critical thinking skills, increased practical competence, and improved self-reflection. These outcomes demonstrate the effectiveness of SACERS-based training in developing the core competencies of future pedagogical psychologists.

Discussion. The results of this thorough study show how important SACERS-based

training and assessment are for helping future pedagogical psychologists enhance their skills and make schools better places to be. This research aligns with (Zhundybayeva et al., 2024), as schools with high SACERS scores show excellent and outstanding distributions of 'Staff Development', 'Program Structure', 'Interaction', and 'Activities'. The incorporation of practical, real-world assessment activities has yielded beneficial outcomes on students' comprehension, abilities, and self-esteem, which are crucial for effective evaluation and intervention in educational settings. Quantitative results show that students' skills have clearly improved following SACERS-based training.

As stated by Parczewska (2020), SACERS scores are a useful instrument for evaluating the educational surroundings of Moscow schools, but on the contrary, comprehensive assessments revealed that Polish school common rooms fail to comply with SACERS standards regarding health and safety and instructional activities. The higher percentage of students achieving high proficiency levels, as evidenced by assessment and component-specific analyses, underscores the efficacy of experiential learning methodologies in cultivating critical observation, data analysis, and intervention planning competencies. The upward trend in self-development ratings suggests that direct contact with school environments improves students' motivation, self-awareness, and professional identity- elements essential for sustained engagement and eventual career success.

Competency-based education promotes the integration of practical skills, including data collection, analysis, and intervention, into the curriculum (Kosherbayeva et al., 2024). This approach aligns with the requirements of pedagogical psychologists; its efficacy depends on applying theoretical knowledge to practical scenarios. International research suggests that assessment methods like SACERS are necessary to improve schools. For instance, a comprehensive environmental assessment can enhance school safety and inclusivity (Imanian et al., 2019). It also suggests that trained psychologists who use standard techniques may identify problems more easily and advise the best ways to fix them. Psychologists who can apply thorough and trustworthy tools to assess complicated school settings.

However, these findings indicate that assessment-driven experiential training is crucial for enhancing the professional competencies of pedagogical psychologists in the future. The findings indicate that a comprehensive assessment using reliable instruments such as SACERS can yield insights into effective intervention techniques that lead to tangible enhancements in the educational environment. The outcomes of this research corroborate the existing literature, which underscores the significance of experiential and hands-on learning for professional advancement. They also stress that these strategies can improve the school atmosphere in a way that lasts.

Conclusion. The findings indicate that integrating structured assessment methods, such as SACERS, into the curriculum substantially enhances the essential competencies of prospective psychologist-educators. Qualitative data revealed improvements in confidence, critical thinking, and reflective capacity, while quantitative results demonstrated significant gains in diagnostic, supervisory, and training abilities. These outcomes suggest that assessment-driven experiential learning is vital for bridging gaps between theory and practice in teacher preparation programs. Assigning real evaluation tasks enables the development of reflective practitioners capable of assessing and improving educational environments.

This research contributes to the development of individual competencies and informs evidence-based reflective practices in curriculum design, policymaking, and broader educational objectives. The findings support the recommendation that teacher and psychologist training programs consistently incorporate validated assessment scales, promote experiential learning, and encourage reflective practice. These measures will better equip future professionals to address the complex needs of contemporary schools, ultimately fostering healthier school communities and improved student learning outcomes.

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