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Research Article

The Professional and Personal Development of Private and Public Senior High School Teachers

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ABSTRACT

This study examined the professional and personal development of private and public senior high school teachers in Jones, Isabela, Philippines. Using a descriptive survey design, 60 teachers completed questionnaires assessing their demographic profiles, 21st-century competencies, and personal and professional capabilities. The results showed high proficiency across most areas, with no significant differences between private and public school teachers. Educational attainment positively impacted professional capabilities. Teachers demonstrated strong skills in classroom management, communication, and creating a respectful learning environment. However, areas for improvement include supporting learners and adapting to technological changes. These findings highlight the importance of ongoing professional development to enhance teaching practices and student outcomes. Key implications include the need for collaborative learning experiences, technology integration, and curriculum design that incorporates real-world applications. The recommendations emphasize personalized professional development programs, reassessing assessment methods, and creating inclusive learning environments. This study contributes to understanding teacher development in the Philippine context, particularly by comparing the private and public sectors. This underscores the critical role of teacher motivation and enthusiasm in fostering student engagement. Future research should explore the long-term impacts of professional development initiatives and examine rural-urban disparities in teacher capabilities. Overall, the study advocates for a holistic transformation of educational practices to better equip teachers to meet 21st-century challenges and improve students' learning experiences.

Keywords: *21st-century skills, Continuing professional development (CPD), Educational reforms, Philippine education policies, Rural-urban disparities, Teacher professional development, Teacher quality*

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Introduction

The professional development of senior high school teachers in the Philippines is governed by Republic Act No. 7836, the Philippine Teachers Professionalization Act of 1994. This legislation mandates standards and licensure examinations to ensure that teachers maintain professional competencies in private and public educational settings. Continuing professional development (CPD) is essential for improving teachers' skills and knowledge for career advancement. However, CPD engagement remains low, especially among higher-ranked teachers, with challenges including personal issues and limited participation in program planning (Tulo & Lee, 2022). Research engagement among teachers is generally positive because they recognize its connection to teaching practices. Educational reforms have shaped the professional landscape, aiming to adopt student-centered teaching methods and require continuous learning. However, classroom management remains challenging, with ongoing needs for resources and development opportunities (Joong et al., 2019). Technology integration varies in education, with teachers encouraged to incorporate technological pedagogical content knowledge to meet changing education standards (Morales et al., 2021) and prepare for the fourth industrial revolution.

Republic Act Nos. 4670 and 10533 play a significant role in shaping teachers' professional lives in the Philippines. The Magna Carta for Public School Teachers (RA 4670) seeks to enhance teachers' status by improving working conditions and career development opportunities. However, its implementation faces challenges, akin to the Magna Carta for Public Health Workers, where benefits are not fully realized owing to limited resources and enforcement (Carpio et al., 2021). RA 10533, the Enhanced Basic Education Act, emphasizes curricular reforms and professional development, requiring in-service training and curriculum alignment with 21st-century skills within the K-12 framework (Magallanes et al., 2022). While RA 4670 provides a framework for teachers' welfare, RA 10533 transforms education to address modern challenges. Teacher quality is vital in tackling the educational challenges faced by Filipino students, as evidenced

by their below-average PISA science scores. A study revealed a strong correlation between graduates' grade averages and their performance in the Licensure Examination for Teachers, underscoring the importance of academic preparedness (Amanonce and Maramag, 2020). Teacher support and a positive disciplinary climate enhance student achievement, especially among those from low socioeconomic backgrounds. Teacher support and cognitive activation methods facilitate student learning (Liu et al., 2024), whereas strong teacher-student relationships are predictive of science literacy (Kang, 2020). International frameworks such as UNESCO and the Philippine Professional Standards for Teachers stress the continuous development of teaching standards. These frameworks highlight teacher participation, principal commitment, and school responsibility as factors that influence student performance (Call, 2018). Rural–semi-urban disparities in Jones affect educational resources and teacher development, similar to the digital divide in Chinese primary education, where rural educators exhibit lower technology proficiency because of limited resources (Li, 2024). Studies have revealed educational inequalities in STEM fields across rural and urban areas of South Africa and Colombia, with limited access hindering development in Mathematics, Science, Engineering, and Technology. Learning centers and makerspaces have been proposed to address these disparities (Ntsanwisi, 2024; Avendano-Uribe et al., 2022). Rural special education teachers face challenges in accessing professional development opportunities, with U.S. regional service agencies serving as vital resources (Toman & Maag, 2024). Research gaps exist regarding the professional development outcomes of private and public senior high school teachers. Studies have examined factors affecting professional development but rarely address private-public distinctions. Research emphasizes the impact of constructive professional development on chemistry education (Dwyer 2018) and the role of leadership in public education quality (Chalikias et al. 2020). Spanish studies highlight factors contributing to variability in professional development without correlating them with school types (Hernández-Ramos and Martínez-Abad, 2023).

Teacher identity among English teachers evolves with professional development, yet this has been mainly explored in singular contexts rather than comparing the private and public sectors (Chien, 2019). The co-design model for curriculum planning benefits professional development, although its implementation across different schooling systems remains unexplored (Kelly et al., 2019). Professional development initiatives for culturally relevant pedagogy in Indigenous schools in Nepal show potential for tailored growth, but these findings are context specific (Upadhyay and Sadykova, 2024). The direct comparison of professional development experiences between private and public high school teachers remains underexplored, possibly due to the varying resources, policies, and opportunities in these environments. This study addresses this research gap by investigating the professional and personal development of private and public senior high school teachers in the Municipality of Jones, Isabela. Despite legal provisions, research on how these statutes affect teachers' growth across sectors is limited. This study evaluated teacher development through demographic profiles, 21st-century teacher characteristics, capabilities, and challenges. By examining factors such as age, gender, education, performance, experience, and training, this study aims to comprehensively understand teacher development. The study also explored personal attributes such as caring and emotional maturity, alongside professional skills in content knowledge and classroom management. This study seeks to illuminate the differences between private and public school teachers to inform policy and improve educational practices.

Methods

Research Design

The study adopted a descriptive-survey design to capture a clear "snapshot" of how Senior High School teachers in Jones, Isabela experience their own growth and development. A structured questionnaire, carefully drafted from the literature and pre-tested with peer educators, was used to gather quantitative data on respondents' demographic profiles, 21st-century competencies, and personal and

professional capabilities of the respondents. To strengthen the validity, unstructured follow-up interviews were conducted with a subset of participants, allowing the researcher to cross-check and enrich the survey findings. In total, 60 teachers (equally drawn from private and public schools) completed the survey, and their responses were numerically coded using a five-point Likert scale. Descriptive statistics (means, weighted means, and frequency distributions) were computed to answer each research question and highlight areas where targeted professional support may be needed in the future.

Research Locale

This study was conducted in the Municipality of Jones, a 4th-class municipality in the province of Isabela, Philippines. Jones comprises ten barangays and is home to both public and private Senior High Schools that implement the K-12 curriculum's academic and technical-vocational tracks. The public respondents were drawn from Jones National High School's SHS department, which serves over 800 learners across all grade levels, while the private cohort attended St. Mary's Academy-Jones, an institution noted for its focus on STEM and humanities. As a primary agricultural community, Jones presents a mix of rural and semi-urban learning environments with varying levels of access to digital resources and professional development opportunities. This locale offers an ideal context for comparing how institutional settings (public vs. private) and resource availability influence teachers' perceptions of their professional and personal growth.

Research Participants

The study surveyed 60 Senior High School teachers currently teaching in the Municipality of Jones, Isabela—30 from the public Jones National High School and 30 from the private St. Mary's Academy-Jones. Participants were selected through stratified random sampling to ensure equal representation across the academic and technical-vocational tracks. To qualify, each teacher needed at least one year of full-time SHS teaching experience and to provide informed consent. The sample spanned a range

of ages (23–55), civil statuses, and highest educational attainments (from bachelor's to master's degrees), reflecting the diversity of the local teaching force. All respondents completed the structured questionnaire during school hours, with anonymity and confidentiality being strictly maintained.

Research Instrument

Data were collected using a researcher-designed, structured questionnaire developed after a thorough review of the existing literature on 21st-century teacher competencies and personal/professional growth frameworks. The instrument comprises four sections: Part I elicits respondents' demographic and professional profiles (age, gender, civil status, educational attainment, position, performance rating, years of experience, and in-service training attended); Part II lists characteristics of a 21st-century educator (e.g., technological literacy, reflective practice, socio-emotional awareness) for participants to rate their level of agreement on a five-point Likert scale; Part III presents specific personal (caring, teacher–student relationship, classroom environment, emotional maturity, appreciative attitude) and professional attributes (content knowledge, planning, classroom management, assessment skills, communication, motivation, equity) for self-assessment; and Part IV asks respondents to identify and rate the severity of challenges they face in developing these capabilities. The draft questionnaire was reviewed helplessly a reviewed by two subject-matter experts for content validity, pilot-tested with ten SHS teachers outside the study area, and refined based on feedback. Reliability analysis yielded Cronbach's α coefficients above 0.80 for each multi-item scale, indicating high internal consistency.

Data Gathering Procedure

Prior to data collection, the researcher secured formal permission from the Schools Division Office of Isabela and obtained written clearance from the principals of Jones National High School and St. Mary's Academy–Jones, A

week before distribution, the researcher coordinated with department heads to schedule classroom-based administration of the questionnaires during non-instructional periods. On the appointed dates, the researcher and two trained research assistants personally briefed the participants on the purpose of the study, assured them of confidentiality, and obtained signed informed consent. Each respondent then completed a structured questionnaire on paper, which took approximately 20 minutes. To maximize the response rate, the researcher conducted two reminder visits over the following week for those who were absent or had not yet returned their questionnaire. All completed questionnaires were collected directly by the research team, checked immediately for completeness, and securely transported to the researcher's office for analysis. Finally, the data were coded, entered into statistical software, and prepared for analysis according to standard data management protocols.

Ethical Considerations

This study adhered to the ethical standards for human subject research. Approval was obtained from the Schools Division Office of Isabela and the institutional review boards of Jones National High School and St. Mary's Academy–Jones. Participants received information sheets detailing the study's purpose, procedures, risks, and benefits, with an emphasis on voluntary participation. Written informed consent was obtained before questionnaire administration, with the right to withdraw at any time. To protect confidentiality, no personal identifiable information was recorded; the questionnaires were coded with random IDs and stored separately from the consent forms. Completed instruments were secured in locked cabinets, and electronic data were password-protected and accessible only to authorized personnel. The findings were reported in aggregate form to prevent individual disclosure. All procedures complied with the Philippine Health Research Ethics Board and Magna Carta for Public School Teachers guidelines.

Result and Discussion

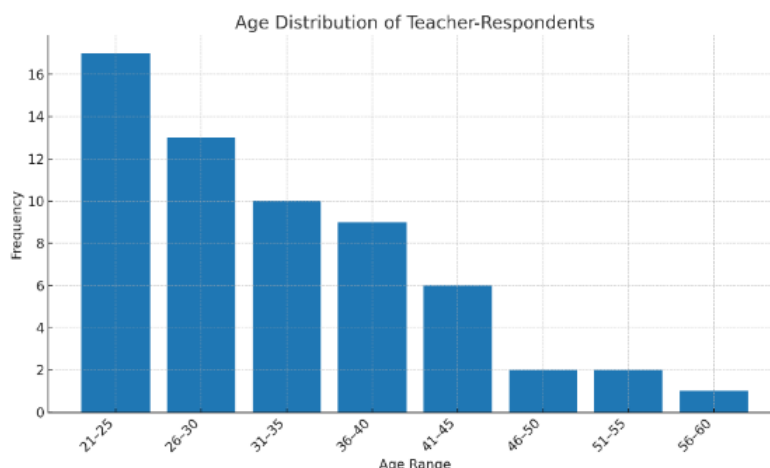


Figure 1 Respondents as to Age

Age brackets: 21-25 (28.30%) and 26-30 (21.70%), while older groups over 50 are underrepresented. Younger teachers (21-30) bring fresh perspectives but may need support to enhance their teaching competencies owing to their limited experience. Professional development programs are crucial for providing the necessary skills (Hilton et al., 2015). Teachers aged 31-45 may require leadership training as they take on more responsibilities, although stagnation can occur without advancement op-

portunities (Yan et al., 2021). A small percentage of teachers over 50 years old face challenges in adapting to modern technologies and maintaining motivation, with burnout being a common concern (Xu et al., 2022). Professional development programs involving administrators can provide support and influence career choices (Xu et al., 2024). Age-specific professional development can enhance the learning environment, benefiting both teachers and their students.

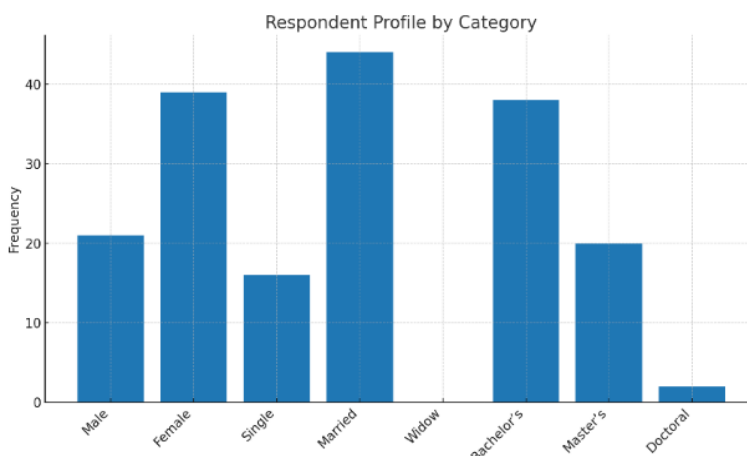


Figure 2. Respondent Profile

The 60 senior high school teachers who participated in this study were predominantly female (65%), with males comprising 35%. In terms of civil status, nearly three-quarters of the respondents were married (73.3%), just over one-quarter were single (26.7%), and

none were widowed. Regarding academic qualifications, most teachers held a bachelor's degree (63.3%), a substantial portion had completed a master's degree (33.3%), and a small minority had a doctoral degree (3.3%). To-

gether, these demographics suggest a workforce that is largely female, experienced in

family responsibilities, and well-qualified, with the majority possessing graduate.

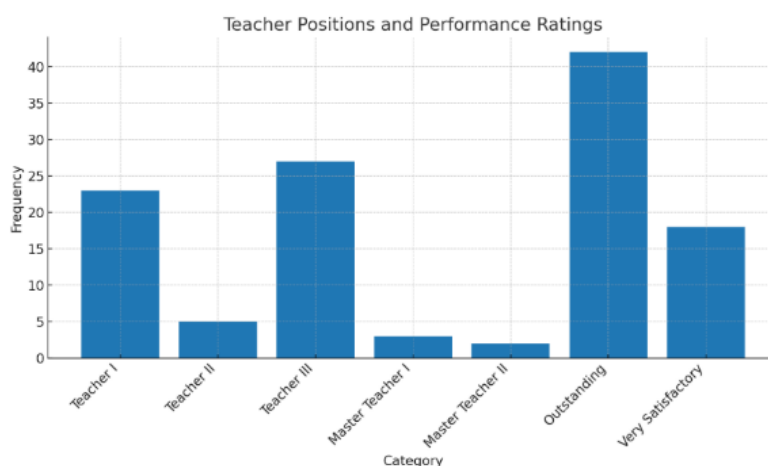


Figure 3: Position and Ratings

The combined bar graph shows that among the 60 respondents, the majority occupy the mid-level teaching ranks—with 27 teachers (45%) at the Teacher III level and 23 (38.3%) at Teacher I—while fewer hold Teacher II (5; 8.3%), Master Teacher I (3; 5.0%), or Master Teacher II (2; 3.3%) positions. In terms of performance ratings, an overwhelming 42 teachers (70%) were rated “Outstanding,” compared with 18 (30%) rated “Very Satisfactory.” This

visualization highlights two key patterns: first, that most senior high school teachers in Jones, Isabela are clustered at the Teacher I and III levels rather than advanced master-teacher ranks; and second, that a strong majority consistently achieve the highest performance rating, suggesting broadly effective teaching practices despite the relatively low representation of master teacher positions.

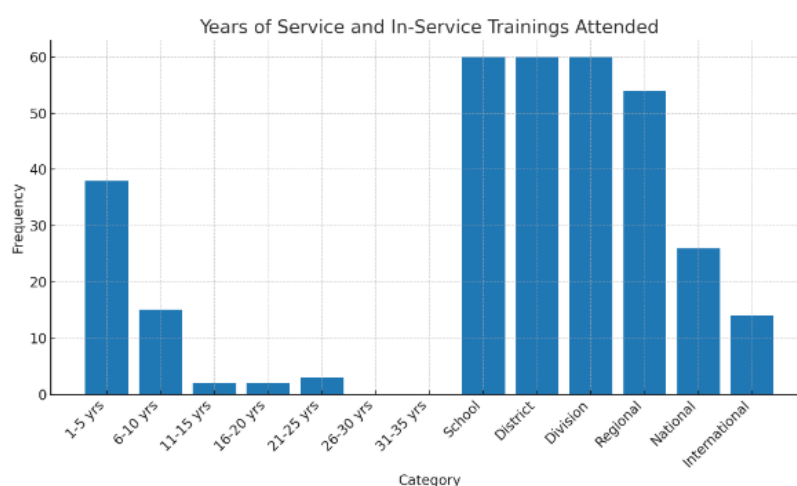


Figure 4: Years of Service and Trainings Attended

The bar graph illustrates two key aspects of our teacher respondents: their years of service and the level of in-service training they have attended. On the left side, it shows that most teachers (63.3%, $n = 38$) have relatively short

tenures of 1–5 years, followed by 25.0% ($n = 15$) with 6–10 years of experience; far fewer have served longer, with only 3.3% each in the 11–15 and 16–20-year bands, 5.0% in 21–25 years, and none beyond 25 years. On the right

side, nearly universal participation in local training is revealed: all 60 respondents (100%) attended school-, district-, and division-level workshops, 90.0% (n = 54) attended regional training, while fewer ventured to national (43.3%, n = 26) and international (23.3%, n =

14) events. Together, these patterns suggest a relatively young workforce that is highly engaged in foundational, locally available professional development, with decreasing participation as the training scope widens beyond the regional level.

Table 1 Characteristics of a 21st Century Teacher

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Facilitates and inspires student learning and creativity so that all students achieve in the global society.	4.82	FA	4
2. Enables students to maximize the potential of their formal and informal learning experiences	4.81	FA	5
3. Facilitates learning in multiple modalities.	4.38	FA	10
4. Works as effective members of learning teams	4.34	FA	11
5. Uses the full range of digital-age tools to improve student engagement and achievement	4.12	A	12
6. Works with their students to co-create new learning opportunities.	4.58	FA	8
7 Uses data to support student learning and program improvements.	4.57	FA	9
8. Be lifelong learners	4.89	FA	1
9. Flexible and friendly and aware of their students' needs for future career development	4.78	FA	7
10. Develops and enhances students' capability to tolerate and adjust in any field and to make a positive thinker and develop humanity and moral values.	4.80	FA	6
11. A greater need to know my students and their mindsets. There seems to be a greater social dichotomy in students' willingness to accept the value of education and there is a need to understand and work with that difference to be effective.	4.83	FA	3
12. A greater need to be creative in developing curriculum that has value in and of itself to as many students as possible	4.86	FA	2
Average Weighted Mean	4.66	Fully Agreed to	

The 21st-century educators reflect a shift towards student-centered teaching and learning. Studies have emphasized creative skills, critical thinking, and problem-solving as essential components of modern education. Educators must integrate diverse resources to prepare students for an increasingly technological world (Gyurova, 2020). Technologies such as artificial intelligence, virtual reality, and augmented reality enable personalized learning and support competency development (Benvenuti et al., 2023). Google Classroom integration is significant for 21st-century learning, although gaps remain in training educators to utilize these technologies.

Professional learning and pedagogical integration are necessary to harness the

advantages of technology (Martin, 2021). Problem-solving strategies in mathematics education promote 21st-century skills, with educators using heuristic methods to address real-world challenges (Szabo et al., 2020). The interdisciplinary approach in teacher education enhances teaching skills and content knowledge among preservice teachers, benefiting primary students' learning (Santaolalla et al., 2020). Blended project-based learning aligned with 21st-century skills enhances higher-order thinking among pre-service teachers (Hujatusnaini et al., 2022). Creating translanguaging spaces in Content and Language Integrated Learning courses promotes leadership and cross-cultural awareness in bilingual education (Itoi, 2024).

Table 2 Extent of Proficiency of Respondents along Personal Capabilities (Caring)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Cares about their students to bring the best of each one to encourage learning.	4.90	VP	2
2. Showing care includes listening to the students, not only when they are in the classroom, but also about their lives and/or personal problems.	4.92	VP	1
3. Good listeners, paying attention to, and showing understanding through tenderness and patience.	4.85	VP	4
4. Show kindness, gentleness, and encouragement	4.73	VP	5
5. Listen to the students' arguments and help and/or indicate to them how to resolve their problems and are willing to talk about their personal lives and experiences respecting the confidentiality issues.	4.87	VP	3
Average Weighted mean	4.86	Very Proficient	

The concept of teachers' caring capabilities is critical for fostering positive student outcomes in education. Studies have explored the dimensions and impacts of teacher caring behavior across contexts. One study developed a scale to measure Chinese university teachers' caring behavior in online teaching, identifying inclusiveness, support, and conscientiousness as key factors consistent with teacher care as a multi-dimensional construct. The study shows that these caring behaviors positively influence students' academic performance, motivation, engagement, self-efficacy, belonging, and mental health (Zhao et al., 2023). Research on student-teacher relationships in higher education has emphasized the development of caring relationships through initial meetings, where

teachers establish foundations through personality and approach. Mutual trust, respect, and adaptability deepen this relationship and enhance the educational experience (Pranjić, 2021). In high schools, a qualitative study found that successful student-teacher relationships are characterized by authentic care, which is crucial for student engagement and performance. This study emphasizes the need to prepare teachers to implement caring relationships for student success (Ransom, 2019). A multilevel study found that school leadership, teacher cooperation, and supportive school ethos predict higher levels of perceived teacher caring, suggesting that these features promote quality student-teacher relationships (Ramberg et al., 2018).

Table 3 Extent of Proficiency of Respondents along Personal Capabilities (Knowing the Students Individually)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Knows the students individually and give them individual attention and develop productive relationships with their students.	4.83	VP	1
2. Treats their student with respect and expect the same in return, enhancing the students learning progress.	4.78	VP	3
3. Have significant effect on behavior and performance in the classroom, and in their learning process	4.72	VP	4
4. Adaptable to students' situations, honest, trustworthy, encouraged	4.81	VP	2
Average Weighted mean	4.79	Very Proficient	

The findings in Table 3 highlight teachers' high proficiency in knowing students individually and fostering productive relationships, as indicated by a weighted mean of 4.83, suggesting an exceptional capability in personalizing interactions and effectively engaging with students. This proficiency plays a critical role in building trust and meaningful teacher-student relationships, which are pivotal for student engagement and motivation (Wang and Yuan, 2024; Blackwell et al., 2020; Wang et al., 2024). Teachers' adaptability and trustworthiness rank second, with a mean of 4.81, underscoring their ability to respond to varying student needs and establish a trustworthy environment, which is crucial for fostering positive educational outcomes (Brake, 2019). Treating

students respectfully ranked third at 4.78, reflecting teachers' commitment to maintaining a respectful classroom atmosphere, which is integral to nurturing students' social and emotional development (Aspelin et al., 2021). Moreover, the significant effect teachers have on classroom behavior and learning, ranked fourth with a mean of 4.72, aligns with previous findings on relational competence and its impact on educational engagement (Aspelin et al., 2021). Overall, the average weighted mean of 4.79 across these proficiency areas emphasizes the comprehensive and effective role that teachers play in cultivating a supportive and engaging learning environment (Akram and Li, 2024).

Table 4 Extent of Proficiency of Respondents along Personal Capabilities (Teacher-Students Relationship)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Demonstrate interest in students' lives beyond the classroom, using a wide variety of strategies to interact with them outside the class, and the educational institution.	4.38	VP	5
2. Encourages students to perform their best in the classroom	4.78	VP	4
3. Social interactions between the teacher and students encourage students learning and achievement	4.82	VP	2
4. A strong relationship with the students helps to decrease discipline problems.	4.86	VP	1
5. Knowing the students and having a teaching-student relationship with them creates a warm classroom and learning environment.	4.79	VP	3
Average Weighted Mean	4.73	Very Proficient	

The table shows the data on teacher-student relationships in senior high schools. Strong teacher-student relationships positively impact student outcomes, influencing academic achievement, emotional engagement, and discipline. These relationships enhance student outcomes by fostering a supportive learning environment that is crucial for academic success and social-emotional development (Kincade et al., 2020). High-quality student-teacher relationships (STRs) improve academic achievement and student engagement while reducing disruptive behaviors and drop-out risks. Schools that implement systematic

programs to improve STRs can enhance outcomes through universal strategies (Kincade et al., 2020). Teacher emotional intelligence influences student outcomes, as emotionally intelligent teachers are more engaged and self-efficacious, positively affecting students' academic performance (Wang, 2022). The quality of early caregiving and teacher-student relationships predict adolescent academic achievement (Magro et al., 2022). High-expectation relationships motivate students and create an environment conducive to learning (Sarraf et al., 2020). In classrooms with 'difficult' students, positive teacher-student relationships can moderate

social-emotional and achievement outcomes, although large numbers of students with psychosocial difficulties challenge even skilled teachers (Dietrich et al., 2020). Teacher encouragement maintains student engagement, particularly among students with ADHD. Student-teacher conflicts negatively impact emotional engagement and academic outcomes,

suggesting that conflict-reduction interventions can improve results (Rushton et al., 2019). Positive teacher-student relationships are essential for creating a supportive educational environment that enhances students' academic achievement, emotional engagement, and discipline.

Table 5 Extent of Proficiency of Respondents along Personal Capabilities (Classroom Environment)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Classroom climate to be one of the key factors affecting students' achievement, although, on the contrary, it has been a strong prediction of students' aggression.	4.78	VP	2
2. Having an optimal relationship with the students helps to create a warm and safe classroom environment so that students can achieve their potential, as they feel safe and confident to attempt new tasks and participate	4.89	VP	1
3. Creates a warm classroom environment where students feel comfortable, and have a sense of belonging, as the environment is conducive to learn.	4.65	VP	3
Average Weighted Mean	4.77	Very Proficient	

The evaluation of teacher respondents' proficiency in personal classroom capabilities highlights significant aspects of effective classroom management. The highest-rated aspect was the creation of optimal student relationships (4.89), which is crucial for fostering a warm classroom environment. This is supported by findings that emphasize the importance of establishing a positive classroom climate to enhance student engagement and success (Reddy et al., 2020). Recognizing the impact of classroom climate on achievement (4.78) further underscores this, aligning with research that illustrates how a conducive learning environment directly correlates with improved student outcomes (Kokkinou and Kyriakides, 2022; Reddy et al., 2020). Additionally, creating an environment conducive to learning

(4.65) is vital, providing a foundation for effective teaching practices and student achievement (Tian, 2023). The average weighted mean of 4.77 indicates a very high level of proficiency, reflecting teachers' overall adeptness in effectively managing classroom environments. This proficiency is essential as it contributes to both the effective delivery of curriculum content and the maintenance of classroom order, which are integral to successful educational outcomes (Reddy et al., 2020; Tian, 2023). The findings of this evaluation demonstrate the pivotal role of high proficiency in managing classroom environments. By fostering positive relationships, understanding the classroom climate, and creating conducive learning conditions, teachers can significantly enhance students engagement and achievement.

Table 6 Extent of Proficiency of Respondents along Personal Capabilities (Reflection of an Appreciative Attitude)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1.Willingness to be flexible, to be direct or indirect as the situation demands	4.75	VP	2
2. Evidenced by nods, comments, smiles, etc. in acknowledging people's success	4.67	VP	4
3.Gets along very well with superiors, colleagues, pupils, parents, and public officials	4.58	VP	6
4. Is neat and pleasing in appearance	4.77	VP	1
5. Learner supportive	4.55	VP	7
6. Dresses and grooms appropriately	4.66	VP	5
7. Has clear, pleasant, and modulated voice	4.73	VP	3
Average Weighted Mean	4.67	Very Proficient	

The table shows the teacher-respondents' proficiency in personal capabilities related to appreciative attitudes. "Neat and pleasing appearance" ranked highest (4.77), followed by "willingness to be flexible" (4.75) and "clear, pleasant voice" (4.73). Other highly rated qualities included acknowledging success, appropriate dressing, and stakeholder relations. "Learner supportive" scored the lowest (4.55). The overall mean of 4.67 indicates very proficient personal capabilities, reflecting an appreciative attitude. The data revealed an overarching positive assessment of teachers' abilities, with high rankings in appearance, flexibility, and voice qualities. These attributes align with

findings emphasizing teachers' personal capacities to foster effective learning environments (Shodiye and Ogbuanya, 2024). The emphasis on appropriate dressing and stakeholder relations demonstrates an awareness of the professional image in educational settings (Shodiye and Ogbuanya, 2024). A lower "learner supportive" score indicates an area for development in supporting student needs (Tekin, 2023 ; Kırkıç and Çetinkaya, 2020). The mean score of 4.67 confirms teachers' high proficiency, supporting studies linking teacher self-efficacy with professional capabilities (Kartal, 2020 ; Siddiqua, 2019).

Table 7 Extent of Proficiency of Respondents along Professional Capabilities (Content Knowledge)

	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Useful content knowledge responses to spontaneous and demanding students questioning	4.80	VP	3
2. Effective communication of content knowledge is a hallmark of good teachers	4.82	VP	2
3. Enhances learning and achievement.	4.85	VP	1
Average Weighted Mean	4.83	Very Proficient	

The proficiency of teacher respondents in terms of their professional capabilities, particularly content knowledge, significantly impacts student learning and achievement. This is

reflected in statements related to teacher content knowledge effectiveness, where enhancing learning was rated the highest, with a weighted mean of 4.85. Effective communication of

content knowledge (weighted mean 4.82) and responding to student questioning (weighted mean 4.80) underscore teachers' vital role in fostering learning. Research shows that teacher content knowledge alone does not predict student achievement; rather, pedagogical skills, instructional quality, and decision-making mediate this relationship (Blömeke et al., 2022). The integration of pedagogical content knowledge enables teachers to design effective lessons that influence learning outcomes. Teachers' proficiency in integrating writing content and pedagogical knowledge affects student writing skills development, necessitating

ongoing professional development (Mantei and Kervin, 2020).

Professional development improves teachers' pedagogical content knowledge, enhancing student learning in interdisciplinary science (Yang et al., 2018). Studies suggest that systematic reflection on teaching practices develops pedagogical content knowledge among student teachers (Nilsson & Nilsson, 2019). While content knowledge is crucial, its effectiveness in promoting student achievement depends on its integration with pedagogical strategies, highlighting the importance of professional development and reflective teaching practice.

Table 8 Extent of Proficiency of Respondents along Professional Capabilities (Good Planning)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Lesson plan makes the content and the session interesting and involving.	4.83	VP	4
2. Good planning facilitates clear explanations, and it provides a wide range of resources suitable for students' needs.	4.87	VP	2
3. Give meaning to the subject by facilitating relevant material to the students wherever possible, and by finding means to stimulate interest in it.	4.85	VP	3
4. Good planning ensures that lessons include periods where students are allowed to have discussion in open or close groups or in pairs	4.89	VP	1
5. Can qualitatively do more with the same amount of time" However, good planning also implies classroom management and organization to achieve learning.	4.80	VP	5
Average Weighted Mean	4.84	Very Proficient	

The data highlighting teacher-respondents' proficiency in planning capabilities reflect high competence across multiple dimensions of lesson planning. This aligns with research on effective lesson planning and its implications for teaching effectiveness. Lesson planning plays a critical role in the effectiveness of instruction. Studies on prospective mathematics teachers underscore the importance of lesson study programs in improving planning skills through collaboration and feedback (Fitriati et al., 2023). Research shows that effective lesson planning encourages teachers to refine their teaching methods, and that integrating professional knowledge with planning develops effective teaching practices. Preservice teachers guided

by the Lesson Analysis and Plan Template better connect theoretical knowledge with practical planning (Zaragoza et al., 2021). The CODE-PLAN model emphasizes the cognitive demands of lesson planning, including content transformation and task creation (König et al., 2021). High proficiency rates in facilitating discussions, explaining content, and using relevant materials suggest that teachers effectively utilize these frameworks. The emphasis on engaging lessons and classroom management aligns with lesson plan implementation studies (Akmal et al., 2022). These findings highlight the importance of professional development and curriculum planning models, which im-

prove teaching quality and adaptability to modern learning demands (Kelly et al., 2019), fostering continuous growth and maintaining high proficiency in planning.

Table 9. Independent-Samples t-Tests Comparing Public vs. Private Teachers

Variable	Group	n	Mean	SD	t(df)	p	Cohen's d
Personal Capabilities	Public	30	4.87	0.12	1.12 (58)	.27	0.29
	Private	30	4.84	0.15			
Professional Capabilities	Public	30	4.75	0.18	0.45 (58)	.65	0.12
	Private	30	4.72	0.20			

The professional and personal development of senior high school teachers in both the private and public sectors is influenced by factors such as institutional support, pedagogical methods, and scholarly activities. Table 9 provides insights into a comparative analysis between public and private teachers regarding their personal and professional capabilities. Independent-samples t-tests revealed no significant differences in personal capabilities ($t(58) = 1.12$, $p = .27$, Cohen's $d = 0.29$) and professional capabilities ($t(58) = 0.45$, $p = .65$, Cohen's $d = 0.12$) between groups. These findings suggest that both groups reported similar developmental levels. Incorporating frameworks from the existing literature can enhance development in this sector. Studies have shown that scholarly activities can augment professional growth, as demonstrated in graduate medical

education, where residents in structured scholarly programs increased their research output (Wood et al., 2018). A workshop model for systematic review protocols has proven effective in engaging healthcare staff in scholarly activity (Tsujiimoto et al., 2021). Learning environments that encourage real-world experiences can enhance teachers' professional capabilities (Hägg and Gabrielsson, 2019). Studies indicate that socio-emotional security correlates positively with academic engagement and success, suggesting similar benefits in professional teaching contexts (Dias et al. 2024). While the measured capabilities showed negligible differences, integrating targeted interventions may enhance both personal and professional development among teachers, benefiting the educational ecosystem.

Table 10. One-Way ANOVA for Professional Capabilities by Educational Attainment

Source	SS	df	MS	F	p	η^2
Between Groups	0.56	2	0.28	3.92	.026	0.12
Within Groups	4.06	57	0.071			
Total	4.62	59				

Note: indicates a small but significant effect of educational attainment on professional capabilities ($\eta^2 = 0.12$), with post hoc tests revealing higher means for doctoral-degree holders.

The professional and personal development of senior high school teachers significantly influences their classroom effectiveness and student outcomes. Educational attainment shapes teachers' professional competencies through higher education levels linked to increased pedagogical capabilities and content knowledge (Balta et al., 2022). A professional development program for high school physics teachers demonstrated gains in pedagogical expertise, showing improved implementation of

dialogic instructional practices compared to traditional teaching methods (Balta et al., 2022). Professional development encompasses personal growth through Self-Determination Theory, which emphasizes professional well-being through competence, autonomy, and relatedness (Even-Zahav et al., 2022). Program effectiveness varies by structure and delivery method, with collaborative "teacher-led PD" models improving both teacher outcomes and student achievement through integrated,

adaptable approaches (Balta and Eryilmaz, 2019). Educational attainment significantly affects teachers' professional capabilities, with

doctoral qualifications associated with enhanced capabilities, according to One-Way ANOVA analyses (Otten et al., 2022).

Table 11 Extent of Proficiency of Respondents along Professional Capabilities (Classroom Management and Organization)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Manages and organizes the classroom	4.78	VP	2
2. Preferences to create an optimistic and warm learning environment for all the students and enhance learning.	4.73	VP	3
3. Takes time in the beginning of the year and especially on the first day to school to establish classroom management, classroom organization and expectations for students' behavior	4.80	VP	1
Average Weighted Mean	4.78	Very Proficient	

The evaluation of classroom management proficiency, based on weighted means, reflects a high level of skill among teacher respondents in managing their classrooms and creating positive learning environments. Specifically, the ability to manage and organize the classroom received a weighted mean of 4.78, ranking second highest. The statement regarding taking time at the beginning of the year to establish management strategies received the highest weighted mean of 4.80. These figures suggest that thoughtful initial investment in classroom setup and management practices is highly effective (Juta and Wyk, 202 with an average

weighted mean of 4.78, teachers demonstrated a very proficient level in classroom management and organization, which aligns with the findings in the current literature that emphasize the importance of effective classroom management practices (Nagro et al., 2020). Techniques such as creating warm learning environments and establishing clear behavioral expectations have been recognized as crucial components of classroom success (Habibi et al., 2018). These methods help mitigate disruptive behaviors and enhance student-teacher relationships (Obispo et al., 2021).

Table 12 Extent of Proficiency of Respondents along Professional Capabilities (Classroom Behavior)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Classroom behavior is learned and that students must clearly understand what is expected of them.	4.56	VP	3
2. The responsibility lies with the teachers to explain how and why they want them to work in that way, and to give positive feedback when students respond positively	4.87	VP	1
3. Students' misbehavior can be minimized by skillful teaching.	4.85	VP	2
Average Weighted Mean	4.76	Very Proficient	

Teachers' proficiency in managing classroom behavior is essential for creating a productive learning environment (Stevenson et al., 2020). The ability to explain expectations and

provide positive feedback is critical for promoting desirable student behavior. Survey results indicate high proficiency among teachers in these areas, with explaining behaviors and

teaching techniques being ranked highest (Stevenson et al., 2020). Research has demonstrated that effective classroom management impacts student motivation and achievement. Using multilevel structural equation modeling, studies have shown that teachers' classroom management skills directly influence student motivation and improve academic achievement in mathematics (Dijk et al., 2019). Many teacher preparation programs lack specific

coursework in behavior management, contributing to teacher stress and to attrition (Stevenson et al., 2020). Research indicates that effective classroom management relies on reinforcement strategies, positive feedback, and strong teacher-student relationships (Gunersel et al., 2023). These strategies align with teachers' reported proficiency in managing classroom behavior and fostering conducive learning environments.

Table 13 Extent of Proficiency of Respondents along Professional Capabilities (Individual Differences)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Personalize the learning for their students.	4.85	VP	3
2. Understand that students develop at different rates and that in every classroom there will be a range of student abilities and aptitudes.	4.78	VP	4
3. Modify the teaching methods to maintain a prominent level of interest, no matter what the subject is.	4.89	VP	1
4. Use their knowledge of learning processes to determine which will be most effective to help the students in their classes learning successfully.	4.75	VP	5
5. Strike the right chord with the students and have a sixth sense of those who need more help.	4.86	VP	2
Average Weighted Mean	4.83	Very Proficient	

Teachers' proficiency in addressing students' individual differences is crucial for inclusive learning environments. Studies have explored teaching practices related to this proficiency in the past. Inclusive education requires differentiated instruction (DI) strategies to meet the diverse needs of students. Research has found that pre-service teachers rated their trainers lower on DI practices, indicating a need for better training (Nketsia et al., 2024). Diverse classrooms serve as platforms for teachers' learning, particularly in social sciences, where students' varied perspectives can be utilized (Lutz et al., 2023). Critical multilingual and multicultural awareness is vital, as teachers must connect with students from dif-

ferent backgrounds to improve literacy outcomes using verbal, visual, and written aids (Smith et al., 2020). Intentional relationship building helps engage students and connect their interests to the subject matter. Creating inclusive environments by adapting resources directly influences student performance (Moreira & Talanquer, 2024). Studies have shown that pairing students with special educational needs with peers enhances social and academic inclusion (Gaitas et al., 2024). Teachers' competencies in creating inclusive classrooms involve fostering beliefs and self-efficacy to notice diversity, create meaningful interactions, and collaborate with colleagues (Vantieghem et al., 2023).

Table 14 Extent of Proficiency of Respondents along Professional Capabilities (Communication Skills)

Particulars	Teacher-Respondents	
	Wtd. Mean	Q.D.
1. Communicate clearly about course objectives, content, and testing, making sure to provide a rationale for learning material and adapt instruction to their student's level of knowledge and skill	4.86	VP
2. Take something that is complex and present it in a way that can be easily absorbed by the students, and through different verbal and non-verbal communications	4.32	VP
Average Weighted Mean	4.56	Very Proficient

The proficiency of the teacher-respondents in communication skills, measured by weighted mean scores, revealed their effectiveness in conveying information. Their ability to express course objectives, content, and assessments comprehensively received a high weighted mean score of 4.86, indicating a "Very Proficient" rating and ranking first among the assessed capabilities. The ability to simplify complex ideas using verbal and non-verbal communication received a weighted mean of 4.32, also falling under "Very Proficient." The average weighted mean for communication skills was 4.56, categorizing respondents as "Very Proficient" overall. These results

demonstrate teachers' strong communication abilities, which are essential for student outcomes. Studies have shown that good communication skills enhance the patient experience in healthcare (Joseph et al., 2018), with similar benefits in educational settings.

Research indicates that integrating communication skills improves students' retention and comprehension (Chaisriya et al., 2023). While teachers show strong foundational skills, continuous development through training remains crucial for maintaining educational quality, as supported by research (Dabrh et al., 2020).

Table 15 Extent of Proficiency of Respondents along Professional Capabilities (Teachers' Confidence)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Enthusiastic about teaching and the subject.	4.85	VP	2
2. Has an energy that almost makes them glow and they tackle each lesson with a sense of challenge, rather than routine.	4.87	VP	1
3. Show enthusiasm, and there is interaction in the classroom; the work of learning process is turned into a pleasure.	4.82	VP	3
Average Weighted Mean	4.85	Very Proficient	

The analysis of teacher proficiency focuses on teachers' confidence and enthusiasm using weighted mean scores and qualitative descriptors like "Very Proficient." This evaluation

aligns with the literature, which shows enthusiasm and energy as critical factors in teaching effectiveness. Research has demonstrated that enthusiastic teachers engage students better

and enhance learning outcomes (Kim et al., 2019). Teachers displaying high energy receive higher proficiency rankings, and enthusiasm correlates with emotional stability and motivation, which helps prevent burnout (Kim et al., 2019). The ranking of attributes in the data, with energy and enthusiasm ranked highest, demonstrates their importance in professional

capabilities. Although teacher proficiency encompasses various factors, enthusiasm remains a key predictor of teaching success. Creating environments that sustain teacher enthusiasm can improve educational outcomes and highlights the need for professional development programs that focus on maintaining enthusiasm (Kim et al., 2019).

Table 16 Extent of Proficiency of Respondents along Professional Capabilities (Motivation for Learning)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Motivating students make them to be more receptive and excited about the subject, makes them aware of the value and importance of learning, and have a better attitude to learn.	4.58	VP	3
2. Makes the students increase their academic self-concept, their interest in the subject and the desire to learn more, and therefore to have a high level of achievement	4.85	VP	1
3. Beneficial to have good sense of humor and been willing to share jokes with the students to break negative-cold barriers.	4.68	VP	2
Average Weighted Mean	4.80	Very Proficient	

Table 16 highlights the crucial role of teacher motivation in shaping students' learning experience. It evaluates teachers' capacity to inspire students, with the enhancement of students' academic self-concept and achievement ranking highest, followed by the effective use of humor in the classroom. The results indicate that teacher motivation strongly influences student motivation, with mastery-oriented practices showing a significant and positive correlation. Teachers who demonstrate interest, adaptability, and self-efficacy employ strategies that meaningfully enhance student engagement and performance. The "Very Proficient" weighted mean of 4.80 reflects the teachers' effectiveness in fostering dynamic and supportive learning environments. These findings are consistent with Anselmo et al. (2025), who

underscored that developing 21st-century skills, particularly critical thinking, relies on educators' adaptability and innovative practice. These findings align with those of Ellorin et al. (2024), who found that educators' openness to pedagogical innovations and technology integration significantly improved instructional delivery and learner engagement. Furthermore, they resonate with Anselmo and Anselmo's (2024) qualitative inquiry into *algopsychalia*, which revealed that managing the emotional and professional challenges of teaching, particularly in unfamiliar roles, is integral to sustaining motivation and effectiveness. Together, these perspectives affirm that motivated and adaptable teachers are central to creating engaging, resilient, and future-ready learning environments for students.

Table 17 Extent of Proficiency of Respondents along Professional Capabilities (Respect, Fairness and Equity)

Particulars	Teacher-Respondents		
	Wtd. Mean	Q.D.	Rank
1. Establish the right climate for effective teaching and learning	4.85	VP	2
2. Respect requires the students to know that the teacher is competent, interested in them progress and is committed	4.87	VP	1
3. Continually demonstrate respect to their students in fairness and equity regarding individual situations, age, background, ethnicity, religion, economic status, and so forth) inside or outside the classroom)	4.71	VP	3
Average Weighted Mean	4.81	Very Proficient	

Teachers demonstrate high proficiency in creating respectful and equitable learning environments through student engagement and respect for diverse student backgrounds. These findings align with the literature on equity in education. Educational equity faces challenges in online learning, as seen in Bangladesh, where disparities in technology access affect fairness (Roshid et al., 2022). Assessment

fairness remains crucial, from China's Graduate School Entrance Examination (Song, 2018) to classroom-level assessment literacy. Studies using the Fairness Barometer reveal gaps between students and teachers' perceptions of assessment fairness (Sonnleitner and Kovacs, 2020). Educational equity encompasses both access and assessment practices, with theoretical frameworks highlighting the fairness of classroom assessments (Rasooli and Deluca, 2024; Rasooli, 2023). In science education, equity requires addressing systemic inequities and creating opportunities for marginalized students through social justice frameworks (Burgess and Williams, 2022).

Implication for teaching and Learning Practices

The implications for teaching and learning practices based on the findings of this study are significant: educators should consider incorporating more collaborative and interactive learning experiences to enhance student engagement and motivation. Implementing technology-based tools and platforms can facilitate

personalized learning and provide immediate feedback to students. Additionally, teachers may need to adapt their instructional strategies to accommodate diverse learning styles and preferences of students. Professional development programs should focus on equipping educators with the skills to effectively integrate new approaches into their teaching practices. Furthermore, curriculum designers should consider incorporating real-world applications and problem-solving scenarios to make learning more relevant and meaningful. Lastly, educational institutions may need to reassess their assessment methods to align with these new teaching and learning practices, potentially moving towards more project-based or portfolio-style evaluations that better reflect students' comprehensive understanding and skill development.

Conclusion

Based on the study's findings, the conclusion emphasizes several key points: collaborative and interactive learning experiences are crucial for enhancing student engagement and motivation, while technology-based tools and platforms can effectively support personalized learning and provide timely feedback. Instructional strategies should be adapted to accommodate diverse learning styles and preferences, and professional development programs should focus on equipping educators with the skills to integrate new teaching approaches. Curriculum design should incorporate real-

world applications and problem-solving scenarios to increase the relevance and meaning for students. Educational institutions may need to reassess and modify their assessment methods to better align with new teaching and learning practices, potentially shifting towards project-based or portfolio-style evaluations to more accurately reflect students' comprehensive understanding and skills development. These findings suggest the need for a holistic transformation in educational practices, emphasizing personalization, technology integration, and the practical application of knowledge.

Recommendation

Recommendations have emerged to enhance educational practices. The implementation of collaborative and interactive learning experiences can significantly boost student engagement and motivation. Integrating technology-based tools and platforms supports personalized learning and provides timely feedback to students. Adapting instructional strategies to accommodate diverse learning styles and preferences is crucial to inclusive education. Developing professional development programs that focus on equipping educators with the skills to integrate new teaching approaches is essential for successful implementation. Incorporating real-world applications and problem-solving scenarios into curriculum design increases the relevance of the curriculum for students. Reassessing and modifying assessment methods to align with new teaching and learning practices, such as project-based or portfolio-style evaluations, can provide a more comprehensive view of students' progress. Ultimately, pursuing a holistic transformation of educational practices that emphasizes personalization is recommended to create a more effective and engaging learning environment.

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References

- Abu Dabrh, A. M., Waller, T. A., Bonacci, R. P., Nawaz, A. J., Keith, J. J., Agarwal, A., Merfeld, J., Nordin, T., Winscott, M. M., Belda, T. E., Murad, M. H., Pantin, S. A. L., Steinkraus, L. W., Grau, T. J., & Angstman, K. B. (2020). Professionalism and inter-communication skills (ICS): a multi-site validity study assessing proficiency in core competencies and milestones in medical learners. *BMC Medical Education*, 20(1). <https://doi.org/10.1186/s12909-020-02290-3>
- Akmal, S., Fitriah, F., & Fadhilah, I. (2022). The challenges and strategies of Islamic school mentor teachers in implementing ELT lesson plans. *Studies in English Language and Education*, 9(3), 926–947. <https://doi.org/10.24815/siele.v9i3.23063>
- Akram, H., & Li, S. (2024). Understanding the Role of Teacher-Student Relationships in Students' Online Learning Engagement: Mediating Role of Academic Motivation. *Perceptual and Motor Skills*, 131(4), 1415–1438. <https://doi.org/10.1177/00315125241248709>
- Amanonce, J.-C. T., & Maramag, A. M. (2020). Licensure examination performance and academic achievement of teacher education graduates. *International Journal of Evaluation and Research in Education (IJERE)*, 9(3), 510. <https://doi.org/10.11591/ijere.v9i3.20614>

- Anselmo, C. T., & Anselmo, M. C. C. (2024). Algor-psychalia of Out-of-Field Teachers: A Qualitative Inquiry. *American Journal of Education and Technology*, 3(3), 1–8. <https://doi.org/10.54536/ajet.v3i3.2285>
- Anselmo, C. T., & Anselmo, M. C. C. (2024). Algor-psychalia of Out-of-Field Teachers: A Qualitative Inquiry. *American Journal of Education and Technology*, 3(3), 1–8. <https://doi.org/10.54536/ajet.v3i3.2285>
- Anselmo, C., Gante, D., Aquino, J. L., Cabrera, F., Blas, R. B., Ines, M., ... Eufenia, R. (2025). Cultivating 21st-Century Skills: A Comparative Study of Critical Thinking Development Across Higher Education Disciplines. *Journal of Interdisciplinary Perspectives*, 3(8), 105–113. <https://doi.org/10.69569/jip.2025.373>
- Aspelin, J., Jönsson, A., & Östlund, D. (2021). Pre-Service Special Educators' Understandings of Relational Competence. *Frontiers in Education*, 6. <https://doi.org/10.3389/feduc.2021.678793>
- Avendano-Uribe, B. E., Perez-Baron, J., & Ojeda-Ramírez, S. (2022). Resourcefulness, narratives, and identity in science, technology, engineering, arts and mathematics education: A perspective of makerspaces for rural communities in Colombia. *Frontiers in Education*, 7. <https://doi.org/10.3389/feduc.2022.1055722>
- Balta, N., & Eryilmaz, A. (2019). The effect of the 'teacher-led PD for teachers' professional development program on students' achievement: an experimental study. *Teacher Development*, 23(5), 588–608. <https://doi.org/10.1080/13664530.2019.1659176>
- Balta, N., Eryilmaz, A., & Oliveira, A. W. (2022). Increasing the presence of Einsteinian physics in high school: the impact of a professional development program on teacher knowledge and practice. *Teacher Development*, 26(2), 166–188. <https://doi.org/10.1080/13664530.2021.2019102>
- Benvenuti, M., Cangelosi, A., Weinberger, A., Mazzoni, E., Benassi, M., Barbaresi, M., & Orsoni, M. (2023). Artificial intelligence and human behavioral development: A perspective on new skills and competences acquisition for the educational context. *Computers in Human Behavior*, 148, 107903. <https://doi.org/10.1016/j.chb.2023.107903>
- Blackwell, J., Evans, P., Miksza, P., & Mcpherson, G. E. (2020). Student Vitality, Teacher Engagement, and Rapport in Studio Music Instruction. *Frontiers in Psychology*, 11(737). <https://doi.org/10.3389/fpsyg.2020.01007>
- Blömeke, S., Jentsch, A., Ross, N., Kaiser, G., & König, J. (2022). Opening up the black box: Teacher competence, instructional quality, and students' learning progress. *Learning and Instruction*, 79, 101600. <https://doi.org/10.1016/j.learninstruc.2022.101600>
- Brake, A. (2019). Right from the Start: Critical Classroom Practices for Building Teacher–Student Trust in the First 10 Weeks of Ninth Grade. *The Urban Review*, 52(2), 277–298. <https://doi.org/10.1007/s11256-019-00528-z>
- Burgess, T., & Patterson Williams, A. (2022). Utilizing theory to elucidate the work of creating equity for transformation within the science classroom. *Science Education*, 106(5), 1071–1083. <https://doi.org/10.1002/sce.21721>
- Call, K. (2018). Professional Teaching Standards: A Comparative Analysis of Their History, Implementation and Efficacy. *Australian Journal of Teacher Education*, 43(3), 93–108. <https://doi.org/10.14221/ajte.2018v43n3.6>
- Carpio, L. P. D., Cayabyab, H. T. F., & Te, D. M. I. T. (2021). Determining the Implementation Status of Benefits Under Magna Carta of Public Health Workers (RA 7305) in the Philippines. *Acta Medica Philippina*, 55(1). <https://doi.org/10.47895/amp.v55i1.2950>
- Chaisriya, K., Gilbert, L., & Kaeophanuek, S. (2023). The effects of integrating digital

- storytelling with metacognition strategies (DSTMC) learning model to enhance communication abilities. *Contemporary Educational Technology*, 15(2), ep416. <https://doi.org/10.30935/cedtech/12986>
- Chalikias, M., Sidiropoulos, G., L Kyriakopoulos, G., Zakopoulos, V., & Raftopoulou, I. (2020). The school principal's role as a leader in teachers' professional development: the case of public secondary education in Athens. *Problems and Perspectives in Management*, 18(4), 461–474. [https://doi.org/10.21511/ppm.18\(4\).2020.37](https://doi.org/10.21511/ppm.18(4).2020.37)
- Chien, S.-C. (2019). Toward an understanding of high school in-service English teachers' identities in their professional development. *Asia Pacific Education Review*, 20(3), 391–405. <https://doi.org/10.1007/s12564-019-09582-4>
- Dias, P., Veríssimo, L., Carneiro, A., & Duarte, R. (2024). The role of socio-emotional security on school engagement and academic achievement: systematic literature review. *Frontiers in Education*, 9. <https://doi.org/10.3389/educ.2024.1437297>
- Ellorin, F. N., Anselmo, M. C. C., Garcilian, R. B., & Anselmo, C. T. (2024). EXPLORING EDUCATORS' AND STUDENTS' PERSPECTIVES ON PEDAGOGICAL INNOVATIONS AND TECHNOLOGY INTEGRATION IN THE MODERN CLASSROOM. *Ignatian International Journal for Multidisciplinary Research*, 2(7), 607–635. <https://doi.org/10.5281/zenodo.12783319>
- Even-Zahav, A., Widder, M., & Hazzan, O. (2022). From teacher professional development to teacher personal-professional growth: the case of expert STEM teachers. *Teacher Development*, 26(3), 299–316. <https://doi.org/10.1080/13664530.2022.2052947>
- Fitriati, F., H Iksan, Z., & Rosli, R. (2023). Enhancing prospective mathematics teachers' lesson planning skills through lesson study within school university partnership program. *Journal on Mathematics Education*, 14(1), 69–84. <https://doi.org/10.22342/jme.v14i1.pp69-84>
- Gaitas, S., Sarabando, T., Alves, C., Martins, M. A., Leite, G., & Laranjeira, R. (2024). Teacher instructional arrangements for supporting social and academic needs of students with special educational needs in regular classrooms. *European Journal of Special Needs Education*, 40(3), 473–488. <https://doi.org/10.1080/08856257.2024.2380593>
- Gunersel, A. B., Mason, B. A., Wills, H. P., Caldarella, P., Williams, L., & Henley, V. M. (2023). Effective Classroom Management in Middle Level Schools: A Qualitative Study of Teacher Perceptions. *RMLE Online*, 46(8), 1–13. <https://doi.org/10.1080/19404476.2023.2252714>
- Gyurova, V. (2020). The place of research and creative skills in the training of future teachers. *Education & Self Development*, 15(3), 120–129. <https://doi.org/10.26907/esd15.3.11>
- Habibi, A., Marzulina, L., Sofwan, M., Sirozi, M., Najwan, J., Haswindy, S., Harto, K., & Mukminin, A. (2018). Investigating EFL Classroom Management in Pesantren: A Case Study. *The Qualitative Report*, 23(9). <https://doi.org/10.46743/2160-3715/2018.3117>
- Hägg, G., & Gabrielsson, J. (2019). A systematic literature review of the evolution of pedagogy in entrepreneurial education research. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 829–861. <https://doi.org/10.1108/ijeb-04-2018-0272>
- Hernández-Ramos, J. P., & Martínez-Abad, F. (2023). Professional Development among Secondary Teachers in Spain: Key Associated Factors as of PISA 2018. *Journal of Intelligence*, 11(5), 93. <https://doi.org/10.3390/jintelligence11050093>
- Hujatusnaini, N., Corebima, A. D., Gofur, A., & Prawiro, S. R. (2022). The Effect of Blended Project-based Learning Integrated with 21st-Century Skills on Pre-Service Biology Teachers' Higher-order

- Thinking Skills. *Jurnal Pendidikan IPA Indonesia*, 11(1), 104–118. <https://doi.org/10.15294/jpii.v11i1.27148>
- Itoi, K. (2024). Fostering Inclusive Learning and 21st-Century Skills: Creating Translanguaging Spaces in University Content and Language Integrated Learning Courses. *International Journal of Applied Linguistics*. <https://doi.org/10.1111/ijal.12643>
- Joong, Y. H. P., Reganit, A. R., Mangali, G., & Swan, B. (2019). Understanding the Ecologies of Education Reforms: Comparing the Perceptions of Secondary Teachers and Students in the Philippines. *International Journal of Educational Reform*, 28(3), 278–302. <https://doi.org/10.1177/1056787919857257>
- Joseph, J., Raper, S. E., & Sicoutris, C. (2018). Communication Skills Training for Surgical Inpatient Advanced Practice Providers in an Academic Health-Care System. *Journal of Patient Experience*, 7(1), 42–48. <https://doi.org/10.1177/2374373518809011>
- Juta, A., & Van Wyk, C. (2020). Classroom Management as a Response to Challenges in Mathematics Education: Experiences from a Province in South Africa. *African Journal of Research in Mathematics, Science and Technology Education*, 24(1), 21–30. <https://doi.org/10.1080/18117295.2020.1731646>
- Kang, J. (2020). Interrelationship Between Inquiry-Based Learning and Instructional Quality in Predicting Science Literacy. *Research in Science Education*, 52(1), 339–355. <https://doi.org/10.1007/s11165-020-09946-6>
- Kartal, B. (2020). Pre-service Science and Mathematics Teachers' Teaching Efficacy Beliefs and Attitudes toward Teaching: A Partial Correlation Research. *Australian Journal of Teacher Education*, 45(9), 42–61. <https://doi.org/10.14221/ajte.2020v45n9.3>
- Kelly, N., Robertson, A., Dawes, L., Kerr, J., & Wright, N. (2019). Co-design for Curriculum Planning: A Model for Professional Development for High School Teachers. *Australian Journal of Teacher Education*, 44(7), 84–107. <https://doi.org/10.14221/ajte.2019v44n7.6>
- Kim, L. E., Jörg, V., & Klassen, R. M. (2019). A Meta-Analysis of the Effects of Teacher Personality on Teacher Effectiveness and Burnout. *Educational Psychology Review*, 31(1), 163–195. <https://doi.org/10.1007/s10648-018-9458-2>
- Kincade, L., Goerdts, A., & Cook, C. (2020). Meta-Analysis and Common Practice Elements of Universal Approaches to Improving Student-Teacher Relationships. *Review of Educational Research*, 90(5), 710–748. <https://doi.org/10.3102/0034654320946836>
- Kırkıç, K. A., & Çetinkaya, F. (2020). The relationship between preschool teachers' self-efficacy beliefs and their teaching attitudes. *International Journal of Evaluation and Research in Education (IJERE)*, 9(4), 807. <https://doi.org/10.11591/ijere.v9i4.20670>
- Kokkinou, E., & Kyriakides, L. (2022). Investigating differential teacher effectiveness: searching for the impact of classroom context factors. *School Effectiveness and School Improvement*, 33(3), 403–430. <https://doi.org/10.1080/09243453.2022.2030762>
- König, J., Krepf, M., Bremerich-Vos, A., & Buchholtz, C. (2021). Meeting Cognitive Demands of Lesson Planning: Introducing the CODE-PLAN Model to Describe and Analyze Teachers' Planning Competence. *The Teacher Educator*, 56(4), 466–487. <https://doi.org/10.1080/08878730.2021.1938324>
- Li, M. (2024). Exploring the digital divide in primary education: A comparative study of urban and rural mathematics teachers' TPACK and attitudes towards technology integration in post-pandemic China. *Education and Information Technologies*,

- 30(2), 1913–1945. <https://doi.org/10.1007/s10639-024-12890-x>
- Liu, X., Hansen, K. Y., Valcke, M., & De Neve, J. (2024). A decade of PISA: student perceived instructional quality and mathematics achievement across European countries. *ZDM – Mathematics Education*, 56(5), 859–891. <https://doi.org/10.1007/s11858-024-01630-7>
- Lutz, C., Bouwens, A., & Van Goch, M. M. (2023). College Classroom Diversity as a Source of Scholarly Learning for Teachers. *College Teaching*, 73(2), 1–9. <https://doi.org/10.1080/87567555.2023.2228444>
- Magallanes, K., Lee, S., & Chung, J. Y. (2022). The Philippine Teachers Concerns on Educational Reform Using Concern Based Adoption Model. *Frontiers in Education*, 7. <https://doi.org/10.3389/educ.2022.763991>
- Magro, S. W., Roisman, G. I., Nivison, M. D., & Englund, M. M. (2022). The quality of early caregiving and teacher-student relationships in grade school independently predict adolescent academic achievement. *International Journal of Behavioral Development*, 47(2), 158–168. <https://doi.org/10.1177/01650254221137511>
- Mantei, J., & Kervin, L. (2020). Teacher knowledge and student learning: An examination of teacher pedagogies for the same writing topic across two consecutive grades. *The Australian Journal of Language and Literacy*, 43(3), 224–234. <https://doi.org/10.1007/bf03652058>
- Martin, B. A. (2021). Teachers Perceptions of Google Classroom: Revealing Urgency for Teacher Professional Learning. *Canadian Journal of Learning and Technology*, 47(1). <https://doi.org/10.21432/cjlt27873>
- Morales, M. P., Masangcay, D., Butron, B., Laureano, R., Avilla, R., & Ayuste, T. O. (2021). Technology Integration Traditions, Transitions, and Best Practices in Philippine Higher STEAM Education. *Philippine Journal of Science*, 150(5). <https://doi.org/10.56899/150.05.36>
- Moreira, P., & Talanquer, V. (2024). Exploring relationships that college instructors seek to build with intention in chemistry classrooms. *Chemistry Education Research and Practice*, 25(1), 225–241. <https://doi.org/10.1039/d3rp00198a>
- Nagro, S. A., Kennedy, M. J., & Hirsch, S. E. (2020). A Self-Led Approach to Improving Classroom Management Practices Using Video Analysis. *TEACHING Exceptional Children*, 53(1), 24–32. <https://doi.org/10.1177/0040059920914329>
- Nketsia, W., Opoku, M. P., Mprah, W. K., & Amponteng, M. (2024). Exploring the perceived knowledge of teacher educators and pre-service teachers on the differentiated instruction practices of teacher educators. *Frontiers in Education*, 9. <https://doi.org/10.3389/educ.2024.1356675>
- Ntsanwisi, S. (2024). Bridging Gaps in STEM Education: The Case for Dedicated Learning Centres in South African Townships and Rural Areas. *European Journal of STEM Education*, 9(1), 15. <https://doi.org/10.20897/ejsteme/15481>
- O’Dwyer, A. (2018). An Insight Into How a Constructivist Professional Development Program Can Influence Practice in Six High School Chemistry Classrooms. *Journal of Science Teacher Education*, 29(5), 353–377. <https://doi.org/10.1080/1046560x.2018.1457348>
- Obispo, R. T., Tindowen, D. J. C., & Magulod, G. C. (2021). Teachers’ Classroom Management Styles and Student-Teacher Connectedness and Anxiety. *International Journal of Learning, Teaching and Educational Research*, 20(5), 123–141. <https://doi.org/10.26803/ijlter.20.5.7>
- Otten, C., Nash, R., & Patterson, K. (2022). Professional development in health education for primary school teachers: A systematised review of the literature. *Professional Development in Education*, 50(5), 809–831.

- <https://doi.org/10.1080/19415257.2022.2038233>
- Rasooli, A. (2023). Digital Module 33: Fairness in Classroom Assessment: Dimensions and Tensions. *Educational Measurement: Issues and Practice*, 42(3), 82–83. <https://doi.org/10.1111/emip.12572>
- Ramberg, J., Låftman, S. B., Modin, B., & Almquist, Y. B. (2018). School effectiveness and students' perceptions of teacher caring: A multilevel study. *Improving Schools*, 22(1), 55–71. <https://doi.org/10.1177/1365480218764693>
- Ransom, J. C. (2019). Love, Trust, and Camaraderie: Teachers' Perspectives of Care in an Urban High School. *Education and Urban Society*, 52(6), 904–926. <https://doi.org/10.1177/0013124519894973>
- Reddy, L. A., Hua, A., Kettler, R., Dudek, C., & Lekwa, A. (2020). Evaluation of Teacher Practices and Student Achievement in High-Poverty Schools. *Journal of Psychoeducational Assessment*, 38(7), 816–830. <https://doi.org/10.1177/0734282920913394>
- Santaolalla, E., Martín, O., Urosa, B., Verde, A., & Díaz, T. (2020). Interdisciplinarity in Teacher Education: Evaluation of the Effectiveness of an Educational Innovation Project. *Sustainability*, 12(17), 6748. <https://doi.org/10.3390/su12176748>
- Sarra, C., Bray, J., Jackson, C., Spillman, D., & Davis, J. (2020). High-Expectations Relationships: A Foundation for Enacting High Expectations in all Australian Schools. *The Australian Journal of Indigenous Education*, 49(1), 32–45. <https://doi.org/10.1017/jie.2018.10>
- Shodipe, O. T., & Ogbuanya, C. T. (2024). Building aspiring teachers' capabilities, professional and skill development: Auspice to quality teaching practice in technical vocational education and training institutions. *European Journal of Education*, 59(3). <https://doi.org/10.1111/ejed.12677>
- Siddiqua, A. (2019). Classroom Observation as a Tool for Professional Development. *World Journal of English Language*, 9(1), 49. <https://doi.org/10.5430/wjel.v9n1p49>
- Simel Pranjic, S. (2021). Development of a caring teacher-student relationship in higher education. *Journal of Education Culture and Society*, 12(1), 151–163. <https://doi.org/10.15503/jecs2021.1.151.163>
- Smith, P., Nigam, A., Finch, B., Karkar, T., & Varner, J. (2020). Making Visible Awareness in Practice: Literacy Educators in Diverse Classrooms. *Review of Education*, 8(2), 380–415. <https://doi.org/10.1002/rev3.3190>
- Stevenson, N. A., Vanlone, J., & Barber, B. R. (2020). A Commentary on the Misalignment of Teacher Education and the Need for Classroom Behavior Management Skills. *Education & Treatment of Children*, 43(4), 393–404. <https://doi.org/10.1007/s43494-020-00031-1>
- Szabo, Z. K., Szabo, D., Körtesi, P., Guncaga, J., & Neag, R. (2020). Examples of Problem-Solving Strategies in Mathematics Education Supporting the Sustainability of 21st-Century Skills. *Sustainability*, 12(23), 10113. <https://doi.org/10.3390/su122310113>
- Tarrayo, V. N., Hernandez, P. J. S., & Claustro, J. M. A. S. (2019). Teachers And Research Practices: Perspectives From English Language Educators In A Philippine University. *Australian Journal of Teacher Education*, 45(12), 73–90. <https://doi.org/10.14221/ajte.202v45n12.5>
- Tekin, O. (2023). The mediating role of teacher self-efficacy in predicting teachers' research attitudes. *Teacher Development*, ahead-of-print(ahead-of-print), 314–332. <https://doi.org/10.1080/13664530.2023.2201579>
- Tian, S. (2023). Research on the Quality Management System of Classroom Teaching in Higher Vocational Education. *International Journal of Information and Education Technology*, 13(6), 969–974. <https://doi.org/10.18178/ijiet.2023.13.6.1893>

- Toman, G., & Maag, J. W. (2024). A Survey of Rural Special Education Teachers' Professional Development Experiences. *Rural Special Education Quarterly*, 43(3), 150–160.
<https://doi.org/10.1177/87568705241258737>
- Tsujimoto, H., Kataoka, Y., Akazawa, M., Kumasawa, J., Kagawa, T., Imura, H., Fujiwara, T., Nagano, H., Banno, M., Hozumi, T., So, R., Ohtake, Y., Sumi, Y., Yoshioka, T., Sada, R., Matsuda, Y., Uneno, Y., Tsujino-Tsujimoto, E., Sato, Y., & Tsujimoto, Y. (2021). A model six-month workshop for developing systematic review protocols at teaching hospitals: action research and scholarly productivity. *BMC Medical Education*, 21(1).
<https://doi.org/10.1186/s12909-021-02538-6>
- Tulo, N. B., & Lee, J. (2022). Continuing Professional Development of the Teacher Education Faculty among Philippine State Universities and Colleges. *International Journal of Learning, Teaching and Educational Research*, 21(6), 324–344.
<https://doi.org/10.26803/ijlter.21.6.19>
- Upadhyay, B., & Sadykova, S. (2024). Building Science Teacher Leaders for Indigenous Schools: Lessons from a Science Professional Development Workshop in Nepal. *Education Sciences*, 14(9), 964.
<https://doi.org/10.3390/educsci14090964>
- Van Dijk, W., Gage, N. A., & Grasley-Boy, N. (2019). The relation between classroom management and mathematics achievement: A multilevel structural equation model. *Psychology in the Schools*, 56(7), 1173–1186.
<https://doi.org/10.1002/pits.22254>
- Vantieghem, W., Schelfhout, W., Van Avermaet, P., Goosen, K., & Roose, I. (2023). Education for all in action: Measuring teachers' competences for inclusive education. *PLOS ONE*, 18(11), e0291033.
<https://doi.org/10.1371/journal.pone.0291033>
- Vecaldo, R., Asuncion, J. E., & Ulla, M. (2019). From Writing to Presenting and Publishing Research Articles: Experiences of Philippine Education Faculty-Researchers*. *Eurasian Journal of Educational Research*, 19(81), 1–18.
<https://doi.org/10.14689/ejer.2019.81.9>
- Wang, L. (2022). Exploring the Relationship Among Teacher Emotional Intelligence, Work Engagement, Teacher Self-Efficacy, and Student Academic Achievement: A Moderated Mediation Model. *Frontiers in Psychology*, 12.
<https://doi.org/10.3389/fpsyg.2021.810559>
- Wang, Z., & Yuan, L. (2024). Teacher-student relationships and student engagement: The mediating effect of peer relationships. *Social Behavior and Personality: An International Journal*, 52(5), 13104E-13111E.
<https://doi.org/10.2224/sbp.13104>
- Wood, W., Hossein Zadeh Maleki, A., Mccollum, J., Riesenberg, L. A., Vetter, I. L., Kukreja, P., & Morgan, C. J. (2018). Graduate medical education scholarly activities initiatives: a systematic review and meta-analysis. *BMC Medical Education*, 18(1).
<https://doi.org/10.1186/s12909-018-1407-8>
- Yang, Y., Liu, X., & Gardella, J. A. (2018). Effects of Professional Development on Teacher Pedagogical Content Knowledge, Inquiry Teaching Practices, and Student Understanding of Interdisciplinary Science. *Journal of Science Teacher Education*, 29(4), 263–282.
<https://doi.org/10.1080/1046560x.2018.1439262>
- Zaragoza, A., Seidel, T., & Hiebert, J. (2021). Exploring preservice teachers' abilities to connect professional knowledge with lesson planning and observation. *European Journal of Teacher Education*, 47(1), 120–139.
<https://doi.org/10.1080/02619768.2021.1996558>
- Zhao, J., Yao, X., & Zhang, L. (2023). Developing and Validating a Scale for University Teacher's Caring Behavior in Online Teaching. *Education Sciences*, 13(3), 300.
<https://doi.org/10.3390/educsci13030300>

Zimmerman Nilsson, M.-H., & Nilsson, P. (2019). From Pedagogical Knowledge to Pedagogical Content Knowledge: Development in Mentor and Student-Teacher

Group Conversations. *International Journal of Learning, Teaching and Educational Research*, 18(10), 233–247. <https://doi.org/10.26803/ijlter.18.10.15>