



INVESTIGATING THE PEDAGOGICAL COMPETENCIES AMONG INTERNATIONAL SCHOOL GEOGRAPHY TEACHERS

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This study investigates the pedagogical competencies of geography teachers working in international schools, with a specific focus on how these competencies relate to teaching experience and the Post Graduate Diploma in Education (PGDE) qualification. Grounded in Shulman's (1986) Pedagogical Content Knowledge (PCK) framework, the research explores the relationship between Subject Content Knowledge (SCK), pedagogical skills, and instructional adaptability in diverse learning environments. A survey-based research design was employed, and data were gathered by administering a questionnaire. Using a purposive sampling technique, 74 geography teachers were selected who teach years 7 to 13 at 25 international schools that are part of The International Schools of Sri Lanka (TISSL) for the study. The study employed one-way ANOVA to determine whether the pedagogical competencies of geography teachers varied significantly with their years of teaching experience and PGDE qualification. The results revealed that there is no significant difference in the mean of the geography teachers' pedagogical competencies versus their teaching experience levels ($F = 8.94$, $p = 0.450$). Additionally, the results revealed a significant difference in the mean values of geography teachers' pedagogical competencies compared to PGDE Qualification ($F = 94.555$, $P < 0.001$). The findings indicate that years of teaching experience do not significantly influence overall pedagogical competency. While experience tends to strengthen Subject Content Knowledge, it lacks a direct correlation with key pedagogical dimensions such as differentiated instruction, classroom management, and the ability to address diverse learner needs. In contrast, teachers who hold a PGDE demonstrate significantly higher pedagogical competencies. These educators exhibit greater effectiveness in managing multicultural classrooms and adapting instructional strategies to accommodate various learning styles, suggesting that formal pedagogical training enhances the integration of content and pedagogy in meaningful ways. The study highlights the crucial role of formal teacher education programmes, such as the PGDE, in developing pedagogical content knowledge and enhancing instructional quality. It recommends that international schools should place greater emphasis on pedagogical qualifications in their hiring and professional development practices. Additionally, ongoing training and reflective learning opportunities are essential for equipping teachers, regardless of their experience levels.

Keywords: Geography teachers, international schools, pedagogical competencies, PGDE qualification, teaching experience

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INTRODUCTION

Teaching is a profession that requires both strong content knowledge and pedagogical expertise. Research on Pedagogical Content Knowledge (PCK) has gained prominence as it is recognised as a crucial factor for quality teaching and meaningful learning. Shulman (1987), who first introduced the concept, defined PCK as the integration of content and pedagogy that enables teachers to effectively organise, present, and adapt subject matter to meet the diverse interests and abilities of students (Halim et al., 2014). In addition, the growth of international education has created increasingly complex teaching environments characterised by cultural diversity, varying curriculum standards, and globalised learning objectives in recent decades. Geography, as a school subject, is uniquely positioned to address such global complexities through the development of spatial thinking, environmental awareness, and intercultural understanding. However, delivering high-quality geography instruction in international schools requires more than subject expertise. It demands robust pedagogical competencies that enable teachers to adapt content and instruction to meet the diverse needs of learners. Pedagogical competency, particularly in geography, involves the ability to communicate abstract and spatially oriented content in a manner that resonates with students from varied cultural and academic backgrounds (Lambert & Morgan, 2010). This is especially relevant in international schools, where curricula such as the International Baccalaureate (IB) or Edexcel International necessitate pedagogical agility and curriculum fluency. Despite these challenges, much of the existing literature on teacher competency focuses on national school systems (Darling-Hammond, 2000; Hattie, 2009), leaving a gap in our understanding of teacher preparedness and effectiveness within international educational contexts. This study addresses that gap by investigating the pedagogical competencies of geography teachers working in international schools and examining how these competencies correlate with their educational qualifications and years of teaching experience. Drawing on Shulman's (1986) concept of Pedagogical Content Knowledge (PCK), the research underscores the importance of teachers not only knowing their subject matter but also possessing the pedagogical skills necessary to transform that knowledge into comprehensible and engaging instruction for diverse learners. The results of this study will be valuable to school leaders, teacher educators, and policymakers seeking to enhance teaching quality in global education settings. Furthermore, the study offers a foundation for future comparative research between national and international school systems, enriching the broader conversation on teacher effectiveness and subject-specific pedagogy. Hence aim of the study is to



investigate the pedagogical competencies of geography teachers in international schools, focusing on how these competencies are influenced by their teaching experience and possession of a Postgraduate Diploma in Education (PGDE) qualification. The following objectives are also formulated:

To examine the relationship between teachers' years of teaching experience and their pedagogical competencies.

To evaluate the impact of PGDE qualifications on teachers' pedagogical competencies.

REVIEW OF LITERATURE

Shulman's (1986) theory positions Pedagogical Content Knowledge (PCK) as the special amalgam that enables teachers to transform disciplinary ideas into learnable forms; later work in geography education has operationalised this by tracing how topic-specific strategies, student conceptions and curricular representations integrate in practice (Shulman, 1986; Smit et al., 2023). Recent geography-specific syntheses indicate that the field still underutilises PCK as an explicit framework, yet portraits of effective teachers repeatedly highlight strong geographical knowledge, topic-specific strategies, and accumulated classroom experience as foundations of pedagogical competence (Smit et al., 2023). Evidence on teacher experience complements this picture across large-scale reviews; effectiveness tends to rise steeply in the first years and continues more gradually well into mid-career, especially in supportive professional environments (Kini & Podolsky, 2016; Kraft & Papay, 2014). These conditions (collaboration, feedback, coherent curricula) appear to mediate how experience is converted into richer PCK and instructional quality, suggesting that "years served" alone are insufficient without learning-conducive contexts (Kraft & Papay, 2014). In geography education, specifically, emerging studies connect teachers' knowledge, beliefs, and inquiry-oriented practices. A 2024 survey of Victorian secondary geography teachers found that self-efficacy and familiarity with inquiry predicted frequent use more strongly than years of teaching; teachers credited on-the-job learning for developing inquiry-related PCK, reinforcing Shulman's view of PCK as situated and practice-grown (Lee & Kriewaldt, 2024). Likewise, studies of pre-service geography teachers portray PCK as a developmental construct, shaped by coursework but consolidated through lesson design and enactment during the practicum (Smit et al., 2023). Educational qualifications matter too. In Sri Lankan school systems, the Postgraduate Diploma in Education (PGDE) provides structured preparation in pedagogy, assessment and supervised school practice components closely aligned with PCK development (University of Colombo, 2022). While causal evidence isolating the PGDE's impact on student outcomes is limited, programme documentation and regional evaluations position the PGDE as a key route to professional competence that can interact with teaching experience to deepen PCK. However, Van der Zee et al. (2023) highlighted the ongoing challenges in shifting from teacher-centred to learner-centred geography instruction. They



emphasised that while theoretical understanding is important, real-world teaching experience is vital in cultivating practical PCK. Koch et al. (2023) findings suggest that qualifications alone do not ensure strong PCK; instead, ongoing reflection and experience are crucial.

METHODOLOGY

The investigation employed a survey research design. Using a purposive sample technique, 74 geography teachers from Years 7–13 were chosen from 25 international schools in the TISSL group. A self-structured questionnaire was used to gather the intended responses from these teachers. Twenty statements were provided regarding the teacher's pedagogical competencies in teaching geography, focusing on their Pedagogical Content Knowledge (PCK), educational qualifications, and teaching experience. They were asked to rate their agreement or disagreement with each statement on a five-point Likert scale. A pilot study was conducted to assess the reliability and face validity of the study instrument. The Cronbach's Alpha coefficient was used to evaluate the internal consistency. The research showed that the pilot study's Cronbach's Alpha test scores exceeded 0.7. Lastly, the One-Way ANOVA test and other inferential statistical techniques were used to examine the data. Levene's test and the Shapiro-Wilk test confirmed that the test's assumptions of normality and equal variances were met. To make inferences, One-Way ANOVA and Post Hoc tests were then performed.

RESULTS AND DISCUSSION

Since the teachers' teaching experience level is a crucial factor, it is essential to identify whether there is a significant difference in geography teachers' pedagogical competencies versus the level of teaching experience. Table 1 presents the results of the assumptions test for normality and equal variances. All the assumptions were satisfied, and the one-way ANOVA test was used. According to Table 1, the Shapiro-Wilk test results indicate that the p-values for all groups are greater than the significance level ($\alpha = 0.05$). This can be concluded with a 95% confidence level that all groups' variables are distributed normally. According to Levene's test result, since the alpha level is 0.05, the p-value ($p = 0.899$) is greater than the alpha value; therefore, it can be concluded with a 95% confidence level that all groups' variances are equal.



Table 1. Shapiro-Wilk test and Levene's test for geography teachers' pedagogical competencies versus teaching experience levels

Teachers' experience levels		Shapiro-Wilk			Levene statistic	P-value
		Statistic	Count	Sig.		
Teachers' pedagogical competencies	Less than a year	1.710	3	.710	0.20	.899
	1-5 yrs.	4.310	5	.710		
	6-10 yrs.	3.170	23	.600		
	11-15 yrs.	2.510	18	.910		
	Above 15 yrs.	6.960	25	.820		

Table 2. ANOVA table for the geography teachers' pedagogical competencies versus teaching experience levels

	Sum of Squares	DF	Mean Square	F	Sig.
Between groups	9701.252	3	3233.75	8.94	.450
Within groups	25328.32	70	361.83		
Total	35029.57	73			

According to Table 2, the ANOVA result shows that the F-value is significant ($F=8.94$ / $P=0.450$). Thus, it can be concluded with a 95% confidence level that there is no significant difference in the mean of the geography teachers' pedagogical competencies versus teaching experience levels. It reveals that in all groups, the mean values are equal. Groups are categorised based on teachers' experience levels.

According to Table 3, the ANOVA result shows that the F-value is significant ($F=94.555$ / $P=0.000$) and the P value is below 0.05. Thus, it can be concluded with 95% confidence that there is a significant difference in the mean value of the geography teachers' pedagogical competencies versus PGDE Qualification. It reveals that at least one group's mean values are not equal to the other. The groups are categorised based on the teachers who have completed their PGDE qualification, who are currently pursuing it, and who have not yet completed it.



3. ANOVA table of the geography teachers' pedagogical competencies versus PGDE Qualification

	Sum of Squares	DF	Mean Square	F	Sig.
Between groups	34267.334	2.000	17133.667	94.555	.000
Within groups	12869.864	71.000	181.266		
Total	47137.198	73.000			

Table 4. Post hoc test for geography teachers' pedagogical competencies versus PGDE Qualification

(I) Status of PGDE	(J) Status of PGDE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Level Interval	
					Lower Bound	Upper Bound
Completed	Following	12.90	17.24	0.000	-7.56	11.76
	Not Completed	11.35	17.24	0.000	7.69	42.01
Following	Completed	-12.90	17.24	0.000	7.56	-11.76
	Not Completed	-8.10	17.24	0.000	8.56	72.76
Not Completed	Completed	-11.35	17.24	0.000	-7.69	-42.01
	Following	8.10	17.24	0.000	-8.56	-72.76

According to Table 4, the mean difference is significant at the 0.05 level, indicating that the pairwise comparisons based on the Tukey HSD test demonstrate substantial effects of geography teachers' PDGE qualification status on their pedagogical competencies. All p-values are below the alpha threshold of 0.05. According to the test results, there are statistically significant differences in pedagogical competencies across all groups of geography teachers with varying PGDE qualification statuses. Thus, it can be concluded with a 95% confidence level that the PDGE qualification status of geography teachers significantly influences their pedagogical competencies.



CONCLUSIONS AND RECOMMENDATIONS

The study demonstrates that there is no significant difference in pedagogical competencies between teachers with varying levels of teaching experience, ranging from less than a year to over 15 years. Despite the assumption that more experience would lead to better teaching skills, the results suggest that teaching experience does not necessarily result in better pedagogical performance. This also means that the ability to teach geography effectively does not depend solely on a teacher's experience. This result contradicts the common belief that effective teaching directly correlates with teaching experience. The study found that whether teachers had earned a postgraduate diploma in education was strongly correlated with their pedagogical competencies. Compared to those who were still pursuing their PGDE or had not yet started, teachers who had completed their PGDE demonstrated noticeably superior teaching abilities. Pedagogical training, as offered through the PGDE, significantly enhances teaching effectiveness and supports educational quality and student achievement goals.

Therefore, the following recommendations are offered in accordance with the study's findings:

1. **Strengthen Pedagogical Training Requirements in Hiring Practices:** International schools should prioritise candidates who possess formal pedagogical qualifications, such as a Postgraduate Diploma in Education (PGDE), during the recruitment process. While subject content knowledge (SCK) may improve with teaching experience, structured pedagogical training is more strongly linked to effective teaching practices, particularly in diverse classrooms.
2. **Implement Mandatory Ongoing Professional Development (PD) in PCK:** Schools should develop and mandate continuous professional development programmes specifically targeting Pedagogical Content Knowledge (PCK), aligned with Shulman's framework. These should include workshops on differentiated instruction, student-centred pedagogy, and assessment strategies, especially for experienced teachers without formal pedagogical training.
3. **Establish Mentorship Programmes focused on PCK Development:** Pairing experienced teachers with strong SCK and formally trained teachers with strong PCK in peer-mentoring schemes can help bridge the competency gap. This collaborative model can support reflective practice and foster a culture of shared pedagogical growth.



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