

Teachers' Pedagogical Content Knowledge and Students' Achievement: A Correlational study at the Elementary level

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Abstract : This quantitative study explored elementary school teachers' pedagogical content knowledge and effects on grade 8 students' achievement in Punjab, Pakistan. A teacher sample (N=100) rated competencies across inquiry-focused teaching, conceptual building, interaction practices and peer collaboration promotion. A student sample (N=120) self-reported academic abilities, intrinsic motivation, help-seeking and accountability. Findings reveal teachers highly endorse learner-centric strategies, although peer interaction promotion seems less common currently. Meanwhile, significant gender disparities in self-perceived expertise emerge, favouring female over male educators across all facets measured. Additionally, teachers' knowledge positively—and significantly—correlates with student achievement overall and for both genders, highlighting the importance of professional enrichment. However, female pupils demonstrate greater confidence, drive, utilization of academic support, and ownership over learning than male counterparts. Recommendations include ongoing teacher training, targeted competency building for male students and teachers, leveraging gender peer collaboration similarities, and holistic female support amid widening divides. Sustaining instructional quality through empowering, equitable practices that nurture disadvantaged and gifted learners alike can spur systemic improvements. Ultimately, the fire line confirms the interrelations between teachers' multifaceted knowledge and student success.

Keywords : pedagogical knowledge, academic achievement, teacher gender differences, student gender differences, empowering instruction

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