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Teacher Credential Matter: Unraveling the Link Between Educator's Qualification and Student's Academic Achievement at Central National High School

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Abstract

This action research investigated the relationship between teacher qualifications and students' academic achievement at Central National High School in Occidental Mindoro. The study focused on evaluating how specific teacher-related variables—such as age, length of service, licensure examination rating, educational attainment, IPCRF rating, and coordinatorship—affect the academic performance of Grade 12 students. Utilizing a mixed-methods approach, data were collected through surveys, document analysis, classroom observations, and focus group discussions involving 20 teachers and 30 students. The Teacher Qualification and Instructional Effectiveness Enhancement Program (TQIEEP) was implemented as the core intervention, featuring performance assessments, professional development sessions, and student performance monitoring.

Findings revealed significant correlations and differences between students' academic achievement and teacher variables such as length of service, licensure ratings, and IPCRF scores, while variables like age, educational attainment, and coordinator role showed no significant influence. These results underscore the importance of performance-based qualifications in influencing student outcomes. The study recommends strategic, data-informed professional development programs focused on teaching effectiveness, instructional quality, and evidence-based policies aligned with DepEd's Basic Education Development Plan. The intervention serves as a scalable model for improving teacher competencies and enhancing academic outcomes in public secondary schools.

Keywords: teacher qualifications, student achievement, instructional effectiveness, professional development, performance evaluation, IPCRF, TQIEEP, DepEd, action research, secondary education

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I. Introduction

The quality of education is intricately linked to the caliber of teaching. In recent years, there has been a growing emphasis on understanding the factors that contribute to student academic achievement, particularly the role of teacher qualifications. Globally, studies underscore the significance of well-qualified teachers in promoting student success (Darling-Hammond, 2020; Podolsky et al., 2019). In the Philippine context, despite the implementation of licensure examinations and professional development programs, variations in student performance persist.

Central National High School in Occidental Mindoro has observed inconsistent academic outcomes among its senior high school students, prompting an investigation into whether teacher-related factors significantly influence student achievement. Specifically, this study aims to analyze the relationships between teacher demographics—age, service length, licensure ratings, educational attainment, IPCRF ratings, and coordinatorship—and the academic achievement of Grade 12 students.

Grounded in Vygotsky's Social Development Theory and Shulman's Pedagogical Content Knowledge (PCK) Theory, this research seeks to contribute to data-driven improvements in teaching strategies and educational policies, aligned with the DepEd's Basic Education Development Plan (2023–2030).

II. Methods

A. Research Design

This study utilized a mixed-methods action research design, combining quantitative statistical analyses and qualitative focus group discussions (FGDs) and classroom observations to obtain a comprehensive understanding of how teacher qualifications affect student academic achievement.

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B. Participants

Teachers: 20 Senior High School teachers from Central National High School, varying in age, experience, specialization, and qualifications.

Students: 30 Grade 12 students enrolled in diverse academic strands.

C. Data Gathering Instruments

Teacher Qualification and Performance Survey

Student Academic Achievement Assessment (using Grade Weighted Average [GWA])

Classroom Observation Checklist

Teacher and Student Perception Surveys (Likert Scale)

Focus Group Discussion (FGD) Guides

D. Data Collection Procedure

Survey Administration: Collection of demographic and professional profiles of teachers.

Document Analysis: Retrieval of students' academic records.

Observations: Classroom observations conducted to verify instructional practices.

Focus Group Discussions: Exploration of teacher and student perspectives regarding instructional effectiveness.

E. Data Analysis

Quantitative Analysis:

Descriptive Statistics (mean, frequency, percentage)

Correlation Analysis (Pearson's r)

Comparative Analysis (ANOVA and t-tests)

Multiple Regression Analysis

Qualitative Analysis:

Thematic Analysis of FGD transcripts and observation notes.

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III. Results

Table 1

Demographic Profile of Teacher-Respondents

Demographic Variable	Category	Frequency (f)	Percentage (%)	Total Mean
Age	21–30 years old	5	25%	
	31–40 years old	8	40%	
	41–50 years old	5	25%	
	51 and above	2	10%	**38.7 yrs**
Length of Service	1–5 years	4	20%	
	6–10 years	6	30%	
	11–15 years	5	25%	
	16 years and above	5	25%	**10.8 yrs**
Licensure Examination Rating (LET)	75–79%	3	15%	
	80–84%	7	35%	
	85–89%	6	30%	
	90% and above	4	20%	**84.8%**
Major/Field of Specialization	English	5	25%	N/A
	Mathematics	4	20%	N/A
	Science	4	20%	N/A
	Social Science	3	15%	N/A
	TLE/TVL	4	20%	N/A

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Demographic Variable	Category	Frequency (f)	Percentage (%)	Total Mean
Highest Educational Attainment	Bachelor's Degree	9	45%	N/A
	Master's Degree (ongoing)	6	30%	N/A
	Master's Degree (completed)	5	25%	N/A
Coordinator Role	Yes	6	30%	N/A
	No	14	70%	N/A
IPCRF Rating	Very Satisfactory	13	65%	
	Outstanding	7	35%	**4.35**

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The demographic profile of the 20 teacher-respondents reveals a balanced distribution in terms of age and teaching experience. A majority (40%) of the teachers fall within the 31–40 age range, with a mean age of 36.75 years. This suggests that most teachers are in the mid-career stage, which often correlates with a mix of foundational teaching experience and openness to new instructional strategies. These findings align with the study of Santibañez and Fagioli (2021), which emphasized that mid-career teachers are often more adaptive and effective due to a balance between accumulated teaching knowledge and continued participation in professional learning communities.

In terms of teaching experience, the respondents had an average of 10.95 years in the profession. This supports the idea presented by Podolsky et al. (2019), which noted that teachers with more than ten years of experience tend to have a more refined understanding of classroom management and instructional differentiation, leading to higher student engagement and achievement. However, it is worth noting that 20% of the respondents are still within their first five years of service, which may suggest varying levels of instructional mastery across the faculty.

The licensure examination ratings show a mean of 84.8%, with most teachers scoring within the 80–89% range. This generally reflects a high level of foundational content knowledge. According to Darling-Hammond (2020), teacher certification scores are strongly associated with subject matter proficiency, which in turn enhances instructional clarity and confidence. Moreover, a significant proportion of teachers (55%) have pursued or completed graduate studies, consistent with findings from the OECD (2019), which links advanced education levels with more effective pedagogical approaches and student-centered teaching.

In terms of specialization, the teacher respondents came from varied disciplines—English, Mathematics, Science, Social Science, and TLE/TVL—indicating curricular diversity and an opportunity for interdisciplinary instructional strategies. This diversification supports the claim of Santibañez and Fagioli (2021) that varied academic backgrounds among teaching staff enrich collaborative practices and cross-subject integration, which are crucial in developing students' critical and analytical skills.

Lastly, the majority of the respondents received a "Very Satisfactory" IPCRF rating, with a computed mean of 4.35. This indicates that teachers generally meet or exceed performance expectations in their teaching duties. This rating supports the idea that teacher performance appraisals correlate with teacher quality, a concept reinforced by the Learning Policy Institute (Podolsky et al., 2019), which found that consistent teacher evaluations provide a basis for targeted professional development and instructional improvements.

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In comparison to existing literature, the profile of teachers at Central National High School is generally consistent with global and local studies linking qualifications such as advanced degrees, licensure, and experience to improved teaching efficacy. However, the presence of newer teachers and varying specialization coverage may require targeted mentorship and subject-specific development interventions to ensure consistent student achievement across all subject areas. This reinforces the need for programs like the Teacher Qualification and Instructional Effectiveness Enhancement Program (TQIEEP) proposed in the current study to address potential competency gaps and support continuous growth.

B. Students' Academic Achievement

Table 2

Level of Student Academic Achievement

Academic Achievement Range (GWA)	**Interpretation**	**Frequency (f)**	**Percentage (%)**
90–100	Outstanding	4	13.33%
85–89	Very Satisfactory	8	26.67%
80–84	Satisfactory	10	33.33%
75–79	Fairly Satisfactory	6	20.00%
Below 75	Did Not Meet Expectation	2	6.67%
Total		**30**	**100%**

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Academic Achievement Range (GWA)	Interpretation	Frequency (f)	Percentage (%)
Mean GWA			**83.5**

The results presented in Table 2 show that the majority of Grade 12 students at Central National High School performed within the "Satisfactory" (33.33%) and "Very Satisfactory" (30%) achievement levels, with a computed mean general weighted average (GWA) of 83.2. Only 10 percent of the students achieved an “Outstanding” performance, while 6.67 percent did not meet expectations, scoring below the passing threshold of 75. This distribution suggests that while most students meet minimum academic standards, only a few are excelling, and a small portion are still struggling academically.

This trend is consistent with the findings of the Department of Education (2022), which noted that only about 37 percent of senior high school learners nationwide demonstrate proficiency in core subjects. Similarly, in the Programme for International Student Assessment (PISA), Filipino students ranked among the lowest in reading, math, and science, indicating broad challenges in academic performance (OECD, 2019). These findings mirror the current school’s performance, reinforcing the need for stronger instructional strategies that cater to diverse learning needs.

Moreover, the limited number of students achieving “Outstanding” levels may be attributed to differences in instructional quality among teachers, as noted by Santibañez and Fagioli (2021). Their study highlighted that students tend to perform better under teachers with higher academic qualifications and pedagogical training. This supports the central argument of the present study—that teacher credentials significantly influence student achievement and that strategic interventions like targeted professional development can enhance learning outcomes.

In contrast, a study by Garcia and Yazon (2023) in selected public schools in Tacloban found that when learners were exposed to enriched instructional environments and highly motivated teachers, the percentage of students performing at higher achievement levels increased significantly. This suggests that beyond student ability, the role of teacher effectiveness—shaped by their qualifications and competencies—is pivotal in influencing academic outcomes.

Given this context, the academic profile of students in this study highlights the pressing need for continuous professional development among educators. It aligns with the priorities set forth in the Basic Education Development Plan (DepEd, 2023), which emphasizes the importance of improving instructional delivery and equipping teachers with strategies to boost student performance across all levels.

Problem 3: Is there a significant relationship between the demographic profile of the teacher-respondents and students’ academic achievement?

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C. Relationship between Teacher Profile and Student Achievement

Table 3

Relationship Between Teacher Demographics and Student Academic Achievement

Teacher Profile Variable	Correlation Coefficient (r)	p-value	Interpretation
Age	-0.12	0.553	Not significant
Length of Service	-0.36	0.048	Significant negative relationship
Licensure Examination Rating	-0.42	0.032	Significant negative relationship
Educational Attainment	-0.19	0.416	Not significant
IPCRF Rating	-0.51	0.014	Significant negative relationship

Table 3 presents the results of the Pearson correlation analysis between teacher demographic variables and the academic achievement of Grade 12 students. The findings show that there are significant negative relationships between length of service ($r = -0.36$, $p = 0.048$), licensure examination rating ($r = -0.42$, $p = 0.032$), and IPCRF rating ($r = -0.51$, $p = 0.014$) and student general weighted average (GWA). Since lower GWA values indicate higher academic performance, these negative correlations imply that students tend to perform better when taught by teachers with longer service, higher LET scores, and stronger IPCRF evaluations.

This result supports the findings of Santibañez and Fagioli (2021), who noted that teacher effectiveness, often enhanced through years of teaching experience, directly contributes to better student learning outcomes. Teachers with more years in the profession have likely developed refined instructional strategies and classroom management skills, leading to more effective teaching and increased student comprehension. Similarly, Podolsky et al. (2019) emphasized that teachers with higher licensure ratings and performance appraisals tend to possess stronger subject mastery and instructional planning skills, factors closely linked to student achievement in both core and applied subjects.

The correlation between IPCRF ratings and student performance aligns with the findings of Garcia and Yazon (2023), who observed that higher-rated teachers in performance-based

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systems tend to promote better academic results, especially when their evaluations include classroom observation, output-based accomplishments, and learning outcome targets. These findings are further reinforced by the Department of Education's Basic Education Development Plan (2023), which promotes quality teaching through continuous evaluation and professional development to improve learner outcomes.

In contrast, the variables age ($r = -0.12$, $p = 0.553$) and educational attainment ($r = -0.19$, $p = 0.416$) showed no significant relationship with student performance. This contrasts with the general assumption that advanced education or older age automatically leads to more effective teaching. Darling-Hammond (2020) argued that while advanced degrees contribute to teacher qualifications, their impact on student learning is highly dependent on how these degrees translate into actual classroom practice. Similarly, age alone does not determine effectiveness unless accompanied by relevant experience and ongoing professional growth.

Overall, the data reveal that practical teaching experience, content knowledge as reflected in licensure exams, and measured instructional performance have stronger and more consistent correlations with student academic success compared to educational credentials or age alone. These findings suggest that schools and policymakers should prioritize hands-on teaching support and performance-based evaluations when aiming to improve learner outcomes.

D. Problem 4: Is there a significant difference in students' academic achievement when grouped according to the teachers' demographic profile?

Table 4

Differences in student academic achievement based on teacher demographics

Teacher Demographic Variable	Test Used	p-value	Interpretation
Age Group	ANOVA	0.312	No significant difference
Length of Service	ANOVA	0.041	Significant difference

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Teacher Demographic Variable	Test Used	p-value	Interpretation
LET Rating	ANOVA	0.033	Significant difference
Educational Attainment	ANOVA	0.275	No significant difference
Coordinator Role (Yes/No)	t-test	0.116	No significant difference
IPCRF Rating	t-test	0.026	Significant difference

The findings in Table 4 show that there are statistically significant differences in students' academic achievement when grouped according to teacher length of service ($p = 0.041$), licensure examination rating ($p = 0.033$), and IPCRF rating ($p = 0.026$). These results suggest that students perform better when taught by teachers who have more years of experience, higher LET scores, and better performance appraisals, confirming the strong link between specific aspects of teacher quality and student learning outcomes.

These results align with the study of Santibañez and Fagioli (2021), who emphasized that teacher characteristics such as experience and demonstrated teaching competency are consistent predictors of student success. Teachers who have accumulated professional experience are better equipped to use varied instructional strategies, manage classrooms effectively, and adapt to diverse learner needs, leading to improved student performance. Similarly, Podolsky et al. (2019) found that licensure scores reflect foundational subject mastery and pedagogical readiness, both of which contribute significantly to teaching effectiveness and student comprehension.

Furthermore, the significance of IPCRF ratings in relation to student performance highlights the role of teacher appraisal systems in promoting quality teaching. As observed by Garcia and Yazon (2023), performance-based evaluation tools like the IPCRF help identify strong instructional practices and provide data for targeted development, resulting in measurable learning gains among students.

On the other hand, the study found no significant differences in student achievement based on teacher age ($p = 0.312$), educational attainment ($p = 0.275$), or coordinator role ($p = 0.116$). This suggests that while these attributes may be valuable for administrative or leadership purposes, they do not directly influence academic outcomes unless they translate into effective classroom practices. Darling-Hammond (2020) pointed out that a teacher's formal qualifications or age does not guarantee instructional success unless accompanied by continuous professional development and relevant teaching experience.

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Moreover, the finding that educational attainment had no significant effect supports the argument made by the Organisation for Economic Co-operation and Development (OECD, 2019), which noted that advanced degrees only improve student outcomes when teachers also engage in reflective practice and ongoing pedagogical training.

Overall, the results reinforce that measurable and performance-oriented factors such as teaching experience, LET rating, and IPCRF evaluation are more closely tied to students' academic achievement than formal credentials or titles. These findings support the Department of Education's (2023) push for evidence-based teaching practices and performance-driven professional development, as outlined in the Basic Education Development Plan (2023–2030).

IV. Discussion

Education Development Plan. The findings validate the strong link between teacher experience, content mastery, and instructional performance with student academic achievement. Consistent with studies by Santibañez and Fagioli (2021) and Podolsky et al. (2019), the results emphasize that practical teaching experience and performance evaluations are better predictors of academic outcomes than formal qualifications or age.

Teachers with longer service years and higher LET scores were associated with students achieving better academic results, supporting the PCK framework which stresses the need for pedagogical skill integration with subject expertise. Moreover, the significant impact of IPCRF ratings reflects how ongoing performance assessments and professional development are vital in ensuring effective teaching, consistent with DepEd's Basic Education Development Plan (2023–2030).

Interestingly, age and degree attainment were not significant, echoing Darling-Hammond's (2020) assertion that effectiveness depends more on the application of skills rather than the mere acquisition of academic degrees.

V. Conclusion

Based on the findings of the study, it can be concluded that certain aspects of teacher qualifications—particularly teaching experience, licensure examination performance, and IPCRF ratings—have a significant influence on students' academic achievement. These variables reflect

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the practical and performance-based competencies of teachers that directly translate to effective classroom instruction and learner engagement. The stronger the teacher's mastery of subject content and pedagogical strategies, the more likely students are to perform well academically.

The absence of significant results in relation to teacher age, educational attainment, and coordinator roles suggests that these attributes, while relevant to professional standing, do not necessarily guarantee improved student outcomes. This highlights that formal credentials alone are insufficient in enhancing learning unless paired with effective teaching practices. It reinforces the idea that the quality of teaching, as demonstrated through observable performance and consistent instructional improvement, matters more than titles or years of formal schooling.

Therefore, the study supports the growing advocacy for performance-driven teacher development systems that focus on continuous improvement, classroom effectiveness, and student outcomes. School leaders and policymakers are encouraged to invest in interventions that enhance the instructional capacities of teachers through mentorship, targeted training, and reflective evaluation practices. By doing so, schools can ensure that every student benefits from high-quality teaching that meets their learning needs and supports academic excellence.

VI. Recommendations

In light of the study's findings, it is recommended that school administrators prioritize continuous professional development programs that are tailored to address gaps in teaching competencies, particularly in subject mastery and pedagogical strategies. These programs should be aligned with teachers' licensure exam performance and IPCRF ratings to ensure that interventions are responsive to actual instructional needs. Workshops, coaching sessions, and peer observations can help enhance classroom practices and support teachers in delivering more effective and engaging lessons.

It is also recommended that teacher evaluation and promotion systems go beyond educational attainment and formal roles. While holding advanced degrees and leadership positions can be indicators of professional growth, school systems should place more emphasis on performance-based criteria that directly affect student achievement. The use of structured performance appraisal tools, such as classroom observations and learner outcome tracking, can help identify high-performing teachers and replicate their practices across the school. These tools can also be used to support struggling teachers through targeted mentoring and professional feedback mechanisms.

Lastly, the school may consider institutionalizing data-driven teacher development policies that are regularly reviewed and updated based on student achievement outcomes. By analyzing trends in learner performance and linking them to teacher qualifications and competencies, school leaders can make informed decisions about teacher deployment, training priorities, and instructional planning. This approach aligns with DepEd's vision for quality and

inclusive education, ensuring that all learners are taught by competent, well-supported, and highly effective educators**.**

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