

Professional Standards and Core Competencies of Math Teachers in Relation to Selected Variables

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ABSTRACT

This study determined the professional standards and core competencies of Senior High School Mathematics teachers based on the Individual Performance Commitment and Review Form (IPCRF) and examined their associations with selected demographic variables as a basis for an intervention program. A descriptive-correlational research design was employed involving 113 Senior High School Mathematics teachers from five schools in one Schools Division in the Negros Island Region during the school year 2026–2027. Data were obtained using the standardized IPCRF and a core competency assessment. Results showed that the teachers demonstrated an outstanding level of professional standards and a very satisfactory level of core competencies. Professional standards showed no significant relationship with age, length of service, or educational attainment, but a significant relationship was found with sex. Similarly, core competencies were significantly related to sex, but not to age, length of service, or educational attainment. The findings provide an empirical basis for developing targeted professional development and intervention programs to sustain teacher excellence and strengthen core competencies.

Keywords: Professional Standards; Core Competencies; Senior High School Teachers; Teacher Performance; Demographic Variables

INTRODUCTION

Research on teacher performance consistently indicates that professional standards and behavioral competencies are multidimensional constructs shaped by the interaction of individual, professional, and organizational conditions. Studies on teacher competencies emphasize the importance of self-efficacy, professionalism, collaboration, self-management, and related behavioral competencies in supporting effective professional practice (Bantoc & Yazon, 2023; Bardach et al., 2022). At the same time, research on teacher performance suggests that competence cannot be understood solely through demographic characteristics because professional learning, organizational support, motivation, and workplace conditions may also be relevant to teachers' performance and professional behavior (Kanya et al., 2021; Collie, 2021; Kraft et al., 2021).

Within the Philippine educational context, teacher performance is formally assessed through systems aligned with the Philippine Professional Standards for Teachers and the Department of Education's performance management mechanisms. Existing Philippine studies generally report high or very satisfactory levels of teacher performance and professional competence, while also identifying variations across selected teacher characteristics (Gacusan & Calangi, 2022; Matibag & Banayo, 2021; Saibudin et al., 2022). However, the literature does not consistently demonstrate that demographic characteristics alone explain differences in teacher performance. Rather, the evidence points toward a more complex relationship in which professional development, organizational support, teacher characteristics, and workplace experiences may operate together.

This pattern reveals an important gap. Although previous studies have examined teacher performance, behavioral competencies, demographic characteristics, and professional standards separately or in combination, fewer studies have translated competency assessment findings into a concrete intervention framework specifically



responsive to identified competency needs among Senior High School Mathematics teachers. The present study therefore focuses on the descriptive level of professional standards and core competencies and examines their statistical associations with selected demographic characteristics. The findings are intended not to establish causal relationships but to identify evidence-based areas that may be prioritized in professional development and intervention planning.

METHODOLOGY

This study employed a descriptive-correlational research design to determine the professional standards and core competencies of Senior High School teachers and examine their relationships with selected demographic variables. The descriptive component was used to describe the teachers' profile, professional standards, and core competencies, while the correlational component was used to determine the significant relationships among the variables without manipulating the study conditions.

The respondents of the study were 113 Senior High School Mathematics teachers from five schools in one Schools Division in the Negros Island Region during the school year 2026–2027. Since the study covered the entire population of qualified Senior High School Mathematics teachers in the identified schools, total enumeration was employed. This allowed all eligible teachers in the identified schools to participate in the study.

Data were gathered using two instruments. The first instrument was the standardized Individual Performance Commitment and Review Form (IPCRF) of the Department of Education, which was used to assess professional standards. The IPCRF covered five Key Responsibility Areas with thirteen performance objectives. The second instrument was the core competency assessment, which measured six competency areas represented by five indicators each, for a total of 30 indicators. The instrument used a five-point rating scale: 5 – Outstanding, 4 – Very Satisfactory, 3 – Satisfactory, 2 – Unsatisfactory, and 1 – Poor. The core competency assessment was used to obtain a systematic measure of the respondents demonstrated competency levels based on the competency indicators included in the instrument.

Before administration, the core competency assessment underwent content validation to establish the relevance and appropriateness of its indicators to the competencies being measured. The items were reviewed by qualified experts in education, teacher performance assessment, and research methodology. The validators examined the instrument in terms of relevance, clarity, appropriateness, and alignment with the intended competency domains. The content validity of the instrument was determined using the Content Validity Ratio (CVR), with the resulting item-level and overall values reported in the final manuscript. Items that did not meet the prescribed criterion were revised or removed before the final administration.

The IPCRF is a standardized performance management instrument adopted by the Department of Education. Because the study utilized the existing official IPCRF records rather than modifying the instrument, no researcher-developed validation was undertaken for the IPCRF. Its use in the study was limited to the authorized performance indicators contained in the official records. For the core competency assessment, the researcher administered the instrument to the respondents following the approved data-gathering procedures.

Prior to data collection, the researcher secured the necessary permissions from the Schools Division Superintendent and the concerned school heads. The study procedures were explained clearly to the prospective respondents before participation. Participation was voluntary, and respondents were informed of the purpose of the study, the nature of the information to be collected, their right to decline participation, and their right to withdraw without penalty. Informed consent was obtained before data collection.

To protect confidentiality, respondent names and other directly identifying information were not included in the research dataset. Each respondent was assigned a code for data processing and analysis. Individual IPCRF information was accessed only with the required authorization and was handled solely for the stated research purpose. Electronic files were stored in password-protected storage, while physical documents, when applicable, were kept in a secure location accessible only to authorized research personnel. Results were reported in aggregate form so that individual teachers could not be identified from the tables or narrative findings.

The researcher observed applicable institutional research ethics requirements and relevant data-privacy principles in the collection, storage, processing, and reporting of the information. The collected data were used exclusively for the purposes stated in the approved research protocol and were not disclosed to unauthorized persons.

For data analysis, Frequency and percentage were used to summarize the respondents' demographic characteristics. Mean and standard deviation were used to describe the level of professional standards and core competencies. The appropriate inferential test was selected based on the measurement level and distribution of the variables. For ordinal demographic variables such as age group, length of service, and educational attainment, Goodman-Kruskal's Gamma was used to assess ordinal association when its assumptions were satisfied. For comparisons involving two groups, such as sex, an appropriate two-group nonparametric test was used when the outcome was treated as an ordinal or non-normally distributed score. Chi-square tests of independence were used only when both variables were categorized and the expected cell frequencies met the assumptions of the test. All statistical tests were evaluated at the 0.05 level of significance. Effect sizes were also reported to indicate the magnitude of statistically significant findings..

RESULTS AND DISCUSSIONS

Demographic Profile of Respondents

Table 1. Frequency and Percent Distribution of the Demographic Profile of Respondents.

Profile	Category	f	%
Age			
	20-25 years old	2	1.77
	26-30 years old	12	10.62
	31-35 years old	22	19.47
	36-40 years old	25	22.12
	41-45 years old	18	15.93
	46-50 years old	15	13.27
	51-55 years old	14	12.39
	55 years old and up	5	4.42
	Total	113	100.00
Sex			
	Male	23	20.35
	Female	90	79.65
	Total	113	100.00
Length of Service			
	0-3 years	26	23.01
	4-10 years	27	23.89

	10 years and up	60	53.10
	Total	113	100.00
Educational Attainment			
	Bachelor's Degree	72	63.72
	Master's Degree	39	34.51
	Doctor's Degree	2	1.77
	Total	113	100.00

Table 1 presents the demographic profile of the 113 teachers in terms of age, sex, position, length of service, and educational attainment. These characteristics provide a general description of the respondents and offer useful context for understanding the succeeding analyses of the study.

In terms of age, the largest group is 36–40 years old, with 25 teachers (22.12%), followed closely by 22 (19.47%) aged 31–35. Those aged 41–45 account for 18 (15.93%), while 15 (13.27%) are 46–50 years old. Fourteen teachers (12.39%) fall within the 51–55 age bracket, and five (4.42%) are 55 and above. Meanwhile, younger teachers are less represented with 12 (10.62%) are 26–30 years old, and only two (1.77%) are 20–25 years old. This shows that the teaching workforce is concentrated in mid-career stages, with fewer younger entrants, suggesting stability but also potential challenges in generational renewal.

This is similar with the findings of Baesa-Alfelor and Ocampo (2023), who found that teachers in Philippine educational institutions were predominantly in their early and middle adulthood, indicating an active and productive teaching workforce.

In terms of sex, out of 113 respondents, 90 (79.65%) are female and 23 (20.35%) are male. This highlights a clear gender imbalance, with women dominating the teaching profession. This pattern reflects national trends in education, where teaching is often female-dominated, and aligns with studies emphasizing women’s persistence in academic and professional roles compared to men.

The result supports the findings of Baesa-Alfelor and Ocampo (2023), who likewise reported that female teachers consistently outnumber male teachers across the Philippine education system.

In terms of length of service, more than half of the respondents, with 60 teachers (53.10%) have served for 10 years or more, indicating a workforce rich in experience. Twenty-seven teachers (23.89%) have 4–10 years of service, while 26 (23.01%) are relatively new with 0–3 years. This distribution reflects a strong presence of seasoned educators, which can benefit institutional stability and mentoring, though the smaller proportion of new teachers may raise concerns about sustaining future workforce renewal.

This aligns with the study of Llego (2022), who noted that many Filipino educators remain in the profession for more than a decade, creating a workforce rich in experience and stability. This long tenure contributes positively to mentoring and institutional continuity, as seasoned teachers provide guidance to colleagues and maintain consistent practices within schools.

In terms of educational attainment, the majority of respondents hold a bachelor’s degree with 72 teachers (63.72%), while 39 teachers (34.51%) have completed a master’s degree. Only two teachers (1.77%) hold a doctorate. This shows that while most teachers meet the basic qualification standards, fewer pursue advanced graduate studies. The limited number of doctoral degree holders highlights the need for stronger incentives and support for higher-level professional development.

This supports the study of Llego (2022), who highlighted that while a majority of educators hold bachelor's degrees, only a smaller proportion advance to master's or doctoral levels. This limited pursuit of higher-level qualifications highlights the need for stronger incentives, institutional support, and clearer career progression pathways to encourage teachers to engage in advanced professional development.

Level of Professional Standards of Teachers

Table 2. Level of Professional Standards of Teachers.

Profile	Category	Mean	SD	Interpretation
Age				
	20-25 years old	4.37	0.17	Very Satisfactory
	26-30 years old	4.63	0.18	Outstanding
	31-35 years old	4.71	0.23	Outstanding
	36-40 years old	4.78	0.15	Outstanding
	41-45 years old	4.58	0.30	Outstanding
	46-50 years old	4.68	0.22	Outstanding
	51-55 years old	4.63	0.28	Outstanding
	55 years old and up	4.61	0.31	Outstanding
Sex				
	Male	4.55	0.32	Outstanding
	Female	4.70	0.20	Outstanding
Length of Service				
	0-3 years	4.61	0.22	Outstanding
	4-10 years	4.73	0.19	Outstanding
	10 years and up	4.67	0.26	Outstanding
Educational Attainment				
	Bachelor's Degree	4.64	0.26	Outstanding
	Master's Degree	4.72	0.20	Outstanding
	Doctor's Degree	4.75	0.02	Outstanding
As a Whole		4.67	0.24	Outstanding

Legend: (4.500 – 5.000)-Outstanding; (3.500 – 4.499)-Very Satisfactory; (2.500 – 3.499)-Satisfactory; (1.500 – 2.499)-Unsatisfactory; (1.000 –

Table 2 presents the level of professional standards of Senior High School teachers when grouped according to their age, sex, length of service, and educational attainment.

In terms of age, teachers aged 36–40 years old achieves the highest performance rating ($M=4.78$, $SD=0.15$), interpreted as outstanding, followed closely by those aged 31–35 ($M=4.71$, $SD=0.23$) and 46–50 ($M=4.68$, $SD=0.22$), which are also interpreted as outstanding. Teachers aged 26–30 ($M=4.63$, $SD=0.15$), 51–55 ($M=4.63$, $SD=0.28$), 55 and above ($M=4.61$, $SD=0.31$), and 41–45 ($M=4.58$, $SD=0.26$) also performed at an outstanding level. The youngest group, aged 20–25, scored slightly lower ($M=4.37$, $SD=0.17$), which is interpreted as very satisfactory. The descriptive results show differences in mean professional standards ratings across age groups; however, these differences should not be interpreted as evidence that professional standards increase with age or experience. The inferential analysis indicated no statistically significant association between age and professional standards.

This confirms the findings of Gacusan and Calangi (2022), who emphasized that mid-aged teachers consistently demonstrated outstanding performance ratings in their IPCRF evaluations, showing that professional standards are most stable during these years. Similarly, Andres et al. (2021) found that teachers averaging 37 years old were highly adaptable to rapid changes in the academic environment, reflecting their ability to maintain professional standards despite external pressures. Likewise, Kanya et al. (2021) further confirmed that competence and organizational culture, both of which grow with age, directly enhance teacher performance, ensuring that professional standards are consistently met.

In terms of sex, both female ($M=4.70$, $SD=0.20$) and male ($M=4.55$, $SD=0.32$) teachers achieve an outstanding level of performance, with females slightly higher on average. This means that professional standards are consistently upheld regardless of gender, with female teachers showing marginally stronger ratings in maintaining professional expectations.

This aligns with the study of Gacusan and Calangi (2022), who analyzed teacher performance across demographic profiles and found that regardless of sex, teachers achieved outstanding IPCRF scores, reflecting strong adherence to professional expectations. Their findings highlighted that female teachers tended to score marginally higher, suggesting stronger consistency in maintaining professional standards. Similarly, Saibudin et al. (2022) reported that both male and female secondary teachers in Palawan demonstrated very satisfactory to outstanding performance in IPCRF evaluations, reinforcing the idea that gender does not diminish professional competence. In addition, Matibag and Banayo (2021) emphasized that teachers' performance indicators aligned with the Philippine Professional Standards for Teachers (PPST) and were validated through IPCRF ratings, showing that both male and female teachers maintained high-quality teaching practices.

For length of service, teachers with 4–10 years ($M=4.73$, $SD=0.19$) scores the highest, interpreted as outstanding, followed closely by those with 10 years and above ($M=4.67$, $SD=0.26$) and those with 0–3 years ($M=4.61$, $SD=0.22$), also demonstrate an outstanding performance. This implies that professional standards are maintained across all career stages. However, the slightly higher rating among mid-service teachers suggests that this period may represent the optimal balance between accumulated experience and sustained professional growth.

Saibudin et al. (2022) confirmed the results as they revealed that teachers with 6–10 years of service achieve very satisfactory to outstanding ratings, reflecting their balance of experience and engagement. The same with Kanya et al. (2021), who emphasized that competence and organizational culture sustain high performance across service lengths, but mid-service teachers particularly excel in applying professional standards consistently. Also, Gacusan and Calangi (2022), found that mid-career teachers demonstrated outstanding ratings in their IPCRF evaluations,

In terms of educational attainment, teachers with doctoral degrees ($M=4.75$, $SD=0.02$) achieves the highest performance, followed by those with master's degrees ($M=4.72$, $SD=0.20$) and bachelor's degrees ($M=4.64$, $SD=0.26$), all at an outstanding level. This means that the consistent outstanding ratings across all groups in professional standards are upheld regardless of degree level, reflecting the strong commitment of teachers to

maintain excellence in their roles. However, although teachers with higher educational attainment obtained slightly higher descriptive mean scores, the inferential analysis did not show a statistically significant association between educational attainment and professional standards. Therefore, the descriptive differences should be interpreted cautiously.

This is similar to the findings of Aquino et al. (2021), who found that teachers with doctoral degrees demonstrated stronger leadership practices and consistently outstanding performance, reflecting advanced preparation in professional expectations. Moreover, Kanya et al. (2021) showed that teacher competence, often enhanced by graduate studies, directly improves performance, ensuring that professional standards are met at higher levels. Gacusan and Calangi (2022) also reported that teachers holding master's and doctoral degrees consistently achieve outstanding ratings.

Finally, when taken as a whole, senior high school teachers scored ($M=4.67$, $SD=0.24$), interpreted as outstanding, confirming that across age, sex, position, length of service, and educational attainment, the teaching force consistently demonstrates high levels of professional standards.

This conforms with the findings of Gacusan and Calangi (2022), who conducted a demographic analysis of teacher performance based on IPCRF ratings and found that across age, sex, length of service, and educational attainment, teachers consistently achieved outstanding scores, reflecting their competence and adherence to professional standards. Similarly, Saibudin et al. (2022) examined secondary school teachers' job satisfaction and performance in Palawan and reported that IPCRF results showed teachers performing at very satisfactory to outstanding levels, confirming their strong commitment to professional expectations. In addition, Matibag and Banayo (2021) highlighted that teachers' performance indicators aligned with the Philippine Professional Standards for Teachers (PPST) and were validated through IPCRF ratings, demonstrating that senior high school teachers maintained high-quality teaching practices and professional accountability.

Level of Core Competencies of Teachers

Table 3. Level of Core Competencies of Teachers.

Profile	Category	Mean	SD	Interpretation
Age				
	20-25 years old	4.60	0.20	Outstanding
	26-30 years old	4.55	0.32	Outstanding
	31-35 years old	4.43	0.35	Very Satisfactory
	36-40 years old	4.44	0.40	Very Satisfactory
	41-45 years old	4.41	0.44	Very Satisfactory
Table 3 Continuation.				
	46-50 years old	4.39	0.53	Very Satisfactory
	51-55 years old	4.49	0.38	Very Satisfactory
	55 years old and up	4.42	0.50	Very Satisfactory
Sex				
	Male	4.28	0.40	Very Satisfactory

	Female	4.49	0.39	Very Satisfactory
Length of Service				
	0-3 years	4.60	0.26	Outstanding
	4-10 years	4.43	0.34	Very Satisfactory
	10 years and up	4.38	0.46	Very Satisfactory
Educational Attainment				
	Bachelor's Degree	4.48	0.33	Very Satisfactory
	Master's Degree	4.39	0.50	Very Satisfactory
	Doctor's Degree	4.27	0.75	Very Satisfactory
As a Whole		4.45	0.40	Very Satisfactory

Legend: (4.500 – 5.000)-Outstanding; (3.500 – 4.499)-Very Satisfactory; (2.500 – 3.499)-Satisfactory; (1.500 – 2.499)-Unsatisfactory; (1.000 – 1.499)-Poor

Table 3 presents the level of core competencies of Senior High School teachers when grouped according to age, sex, length of service, and educational attainment.

When grouped by age, teachers aged 20–25 years old achieves the highest rating ($M=4.60$, $SD=0.20$), interpreted as outstanding, suggesting that younger teachers exhibit strong core competencies early in their careers. Teachers aged 26-30 years old also performed well ($M=4.55$, $SD=0.32$), rated outstanding, though slightly lower than the youngest group. Meanwhile, teachers aged 31–35 ($M=4.43$, $SD=0.35$), 36–40 ($M=4.44$, $SD=0.40$), 41–45 ($M=4.41$, $SD=0.44$), 46–50 ($M=4.39$, $SD=0.53$), 51–55 ($M=4.49$, $SD=0.38$), 55 and up ($M=4.42$, $SD=0.50$), all scored within the very satisfactory range. This suggests that while younger teachers excel in behavioral competencies, older groups maintain consistent but slightly lower ratings.

This aligns with the findings of Piquero (2024), who found that teachers rated themselves highly in professionalism and self-management, with competencies such as result focus strongly linked to performance, showing that younger teachers often demonstrate enthusiasm and adaptability early in their careers. However, Cruzos (2022) reported that senior high school teachers excelled in teamwork and service orientation, but age was not a significant factor, suggesting that competencies are maintained across age groups even if younger teachers show stronger initial ratings.

In terms of sex, male teachers scored ($M=4.28$, $SD=0.40$), while female teachers scored slightly higher ($M=4.49$, $SD=0.39$). Both groups are interpreted as very satisfactory, though female teachers demonstrate marginally stronger behavioral competencies.

This indicates that both male and female teachers demonstrate strong core competencies in the workplace. The minimal difference between the two groups suggests that behavioral competence is not strongly influenced by sex but is instead shaped by professional training, workplace culture, and organizational expectations. Teachers of both sexes appear to exhibit comparable levels of professionalism, cooperation, and adherence to workplace norms.

This aligns with the findings of Schaufeli (2021), who emphasized that work engagement and professional behavior in educational settings are more strongly associated with job resources and organizational support than demographic variables such as sex.

When considering length of service, teachers with 0–3 years of experience scored the highest ($M=4.60$, $SD=0.26$), interpreted as outstanding, indicating that newer teachers demonstrate strong behavioral competencies early in their careers. Those with 4–10 years ($M=4.43$, $SD=0.34$) and 11 years and up ($M=4.38$, $SD=0.46$) both scored very satisfactory, suggesting that competencies remain consistent but do not necessarily increase with longer service.

This aligns with the findings of Klassen et al. (2021), who reported that teacher behavioral competence evolves throughout the career span and is influenced by experience, professional support, and workplace engagement rather than tenure alone. Similarly, Skaalvik and Skaalvik (2021) emphasized that teacher behavior and motivation may fluctuate depending on workload, stress levels, and organizational support.

In terms of educational attainment, teachers with a bachelor’s degree ($M=4.48$, $SD=0.33$), master’s degree ($M=4.39$, $SD=0.50$), and doctor’s degree ($M=4.27$, $SD=0.75$) all scored within the very satisfactory range. This highlights that the highest academic qualification do not correspond to the highest competency rating, as doctoral degree holders scored the lowest among the groups.

The findings indicate that teachers consistently demonstrate strong core competencies regardless of educational attainment, implying that behavioral competencies are also shaped by institutional culture, experience, and continuous professional development rather than academic qualifications alone.

This is supported by Kraft et al. (2021), who emphasized that teacher effectiveness and professional behavior are more strongly influenced by continuous learning opportunities and school support systems than by formal academic attainment alone.

Taken as a whole, the teachers obtained a very satisfactory level of core competencies ($M = 4.45$, $SD = 0.40$). The result indicates that the respondents generally demonstrated the expected behavioral competencies, although the overall rating did not reach the outstanding category. This finding is consistent with previous research reporting that teachers generally demonstrate strong professional and behavioral competencies while still having areas that can be strengthened through continuing professional development (Gacusan & Calangi, 2022; Saibudin et al., 2022). The convergence of these findings suggests that high competency ratings do not necessarily eliminate the need for sustained professional development, particularly when specific competency domains remain below the highest performance level.

This is similar to the study of Gacusan and Calangi (2022), who analyzed teacher performance across demographic profiles and found that while teachers consistently demonstrated competence in professional standards, their behavioral competencies were often rated very satisfactory, indicating room for improvement. Similarly, Saibudin et al. (2022) reported that secondary teachers in Palawan achieved very satisfactory to outstanding ratings in IPCRF evaluations, with behavioral competencies reflecting strong professionalism but not always reaching the highest level. Furthermore, Matibag and Banayo (2021) emphasized that teachers’ performance indicators aligned with the Philippine Professional Standards for Teachers (PPST), and IPCRF ratings showed that while instructional and technical competencies were often outstanding, behavioral competencies tended to be rated slightly lower, suggesting the need for continuous professional development.

Relationship between Professional Standards of Teachers and their Age

Table 4a. Relationship between Professional Standards of Teachers and their Age.

Age	Test Statistics (G)	p-value	Decision for H_0	Interpretation
20-25 years old	-0.091	0.569	Fail to Reject H_0	Not Significant
26-30 years old				
31-35 years old				



36-40 years old				
41-45 years old				
46-50 years old				
51-55 years old				
55 years old and up				

Table 4a presents the relationship between the professional standards of senior high school teachers and their age. The Gamma coefficient test result ($G = -0.091$, $p = 0.569$) shows that the p-value is greater than the 0.05 level of significance. As a result, the null hypothesis (H_0) is not rejected. This means that there is no significant relationship between the professional standards of teachers and their age. This implies that age alone does not strongly influence the professional standards performance of senior high school teachers. Instead, other factors such as teaching experience, professional development, and educational attainment may play a more substantial role in shaping their professional competence.

This is similar to the results of Gacusan and Calangi (2022), who found that teachers across different age groups consistently achieved very satisfactory to outstanding IPCRF ratings, showing that age was not a predictor of professional standards performance. Their analysis emphasized that competence was more closely related to professional development and organizational culture. Additionally, Saibudin et al. (2022) reported that secondary teachers in Palawan maintained high levels of professional standards regardless of age, with IPCRF results reflecting strong adherence to expectations across all groups.

Relationship between Professional Standards of Teachers and their Sex

Table 4b. Relationship between Professional Standards Teachers and their Sex.

Sex	Test Statistics (χ^2)	p-value	Decision for H_0	Interpretation
Male	6.830	0.009	Reject H_0	Significant
Female				

Table 4b presents the relationship between the professional standards of senior high school teachers and their sex. The Chi-square test result ($\chi^2 = 6.830$, $p = 0.009$) shows that the p-value is less than the 0.05 level of significance. As a result, the null hypothesis (H_0) is rejected.

This means that there is a significant relationship in the professional standards of teachers and their sex. The analysis showed a statistically significant association between sex and professional standards scores. This finding indicates that the distribution of professional standards ratings differed according to sex in this sample; however, the correlational design does not establish that sex caused the observed difference.

This is consistent with the findings of Beg et al. (2021), who found that gender has a significant relationship with teacher evaluations, particularly in how professional standards are perceived and assessed. They found that female teachers consistently demonstrated stronger alignment with professional standards, even when biases in evaluation processes were present. This relationship suggests that gender dynamics influence not only the outcomes of teacher assessments but also the consistency with which professional standards are upheld.

Relationship between Professional Standards of Teachers and their Length of Service

Table 4c. Relationship between Professional Standards of Teachers and their Length of Service.

Length of Service	Test Statistics (G)	p-value	Decision for H_o	Interpretation
0-3 years	-0.315	0.105	Fail to Reject H_o	Not Significant
4-10 years				
10 years and up				

Table 4c presents the relationship between the professional standards of senior high school teachers and their length of service. The Gamma coefficient ($G = -0.315$, $p = 0.105$) indicates that the p-value exceeds the 0.05 threshold of significance. Therefore, the null hypothesis (H_o) is not rejected, showing that professional standards do not significantly differ across length of service groups. This emphasizes that years of service alone are not a decisive factor in shaping professional standards performance. Instead, aspects such as educational attainment, continuous professional development, and mentorship appear to have greater influence on professional competence. While tenure reflects career progression, it does not automatically translate into higher professional standards, highlighting the importance of sustained growth and qualifications beyond mere length of service.

This is similar with the findings of Gacusan and Calangi (2022), who found that teachers across varying lengths of service consistently achieved very satisfactory to outstanding IPCRF ratings, showing that tenure alone was not a decisive factor in professional standards performance. Their analysis emphasized that competence was more strongly shaped by professional development opportunities and organizational support. Similarly, Saibudin et al. (2022) reported that secondary teachers in Palawan maintained high levels of professional standards regardless of years of service, highlighting that engagement in training and professional growth mattered more than tenure. In addition, Matibag and Banayo (2021) confirmed that instructional and professional standards performance aligned with the Philippine Professional Standards for Teachers (PPST) was influenced more by educational attainment and teaching experience than by length of service, with IPCRF results showing consistent ratings across tenure groups.

Relationship between the Professional Standards of Teachers and their Educational Attainment

Table 4d. Relationship between the Professional Standards of Teachers and their Educational Attainment.

Educational Attainment	Test Statistics (G)	p-value	Decision for H_o	Interpretation
Bachelor's Degree	-0.391	0.074	Fail to Reject H_o	Not Significant
Master's Degree				
Doctor's Degree				

Table 4d presents the relationship between the professional standards of senior high school teachers and their educational attainment. The Gamma coefficient result ($G = -0.391$, $p = 0.074$) shows that the p-value is above the 0.05 level of significance. Therefore, the null hypothesis (H_o) is not rejected, indicating that professional standards do not significantly correlates with teacher's educational attainment like bachelor's, master's, or doctoral degrees. This implies that academic qualifications alone are not a decisive factor in shaping professional standards performance as teaching experience, continuous professional development, and mentorship may play a more critical role in strengthening professional competence.

This confirms the results of Gacusan and Calangi (2022), who found competence was relationally linked to other factors such as teaching experience, continuous training, and institutional support. In other words, while higher degrees reflect academic achievement, they do not automatically translate into stronger professional standards performance. Saibudin et al. (2022) reinforced this perspective by showing that professional competence among public secondary school teachers in Palawan was more strongly related to engagement in training, mentorship, and professional development activities than to degree level. Their findings highlighted that teacher who actively participated in professional growth opportunities demonstrated stronger adherence to the Philippine Professional Standards for Teachers (PPST), regardless of whether they held bachelor's or postgraduate degrees. This highlights that the relationship between educational attainment and professional standards is weak compared to the influence of mentorship and continuous development, which provide practical reinforcement of professional behaviors and instructional practices.

Relationship between Core Competencies of Teachers and their Age

Table 5a. Relationship between Core Competencies of Teachers and their Age.

Age	Test Statistics (G)	p-value	Decision for H_0	Interpretation
20-25 years old	0.082	0.504	Fail to Reject H_0	Not Significant
26-30 years old				
31-35 years old				
36-40 years old				
41-45 years old				
46-50 years old				
51-55 years old				
55 years old and up				

Table 5a presents the results of the Gamma coefficient test on the relationship between core competencies of senior high school teachers and their age. The test result ($G = 0.082$, $p = 0.504$) shows that the p-value is greater than the 0.05 level of significance. As a result, the null hypothesis (H_0) is not rejected, indicating that there is no significant relationship between the teachers' behavioral competencies and their age.

The findings suggest that teachers demonstrate comparable levels of professionalism, adaptability, teamwork, and commitment regardless of their age. Although teachers from different age groups may vary in terms of teaching experience and career stage, these differences do not appear to influence the development of their core behavioral competencies. This may be attributed to the implementation of common professional standards, continuous professional development programs, and organizational practices that encourage teachers to demonstrate expected workplace behaviors. The results imply that professional values and behavioral competencies are cultivated through continuous learning and institutional support rather than age alone.

This finding is consistent with the study of Bardach et al. (2022), who concluded that teachers' professional behaviors and effectiveness are influenced primarily by psychological characteristics, professional competence, and organizational support rather than demographic variables such as age. Similarly, Collie (2021) reported that teachers' professional engagement, adaptability, and workplace behavior are more strongly associated with supportive school environments and well-being than with personal demographic characteristics. These findings emphasize the importance of sustaining professional development initiatives that strengthen teachers' behavioral competencies across all age groups.

Relationship between Core Competencies of Teachers and their Sex

Table 5b. Relationship between Core Competencies of Teachers and their Sex.

Sex	Test Statistics (χ^2)	p-value	Decision for H_0	Interpretation
Male	6.099	0.047	Reject H_0	Significant
Female				

Table 5b presents the results of the Chi-square test on the relationship between core competencies of senior high school teachers and their sex. The test result ($\chi^2 = 6.099$, $p = 0.047$) shows that the p-value is less than the 0.05 level of significance. As a result, the null hypothesis (H_0) is rejected, indicating that there is a significant correlation in teachers' behavioral competencies and their sex. The analysis indicated a statistically significant association between sex and core competency ratings. This result indicates that the distribution of competency ratings differed between the male and female groups in the present sample; however, the result does not establish a causal effect of sex on core competencies.

This contradicts the findings of Bardach et al. (2022), who found that teachers' professional behavior and effectiveness are largely influenced by psychological resources, professional competence, and school support rather than demographic characteristics. Likewise, Collie (2021) reported that teachers who experience supportive working environments and positive organizational conditions consistently demonstrate higher professional engagement and desirable workplace behaviors regardless of personal characteristics.

Relationship between Core Competencies of Teachers and their Length of Service

Table 5c. Relationship between Core Competencies of Teachers and their Length of Service.

Length of Service	Test Statistics (G)	p-value	Decision for H_0	Interpretation
0-3 years	0.216	0.172	Fail to Reject H_0	Not Significant
4-10 years				
10 years and up				

Table 5c presents the results of the Gamma coefficient test examining the relationship between teachers' core competencies and their length of service. The analysis ($G = 0.216$, $p = 0.172$) shows that the p-value is greater than the 0.05 level of significance. Consequently, the null hypothesis (H_0) is not rejected, indicating that there is no significant relationship between teacher's behavioral competencies and their length of service.

The findings suggest that both less experienced and more experienced teachers consistently exhibit the core competencies expected in the teaching profession, including professionalism, accountability, collaboration, and commitment to quality service. This may indicate that these competencies are developed through adherence to professional standards, continuous learning opportunities, and regular engagement in school-based activities rather than through the accumulation of teaching experience alone. The results further imply that teachers are able to cultivate and maintain positive workplace behaviors throughout their careers, regardless of the length of time they have been in the profession.

This finding is consistent with the study of Bardach et al. (2022), who reported that teachers' professional behaviors and effectiveness are influenced primarily by professional competence, motivation, and organizational support rather than years of teaching experience. Similarly, Collie (2021) found that supportive school environments and teachers' professional well-being contribute more substantially to positive workplace behaviors and professional engagement than demographic or career-related characteristics. These findings underscore the value of providing continuous professional development and supportive working conditions to strengthen teachers' core behavioral competencies throughout their professional careers.

Relationship between Core Competencies of Teachers and their Educational Attainment

Table 5d. Relationship between Core Competencies of Teachers and their Educational Attainment.

Educational Attainment	Test Statistics (G)	p-value	Decision for H_0	Interpretation
Bachelor's Degree	0.196	0.293	Fail to Reject H_0	Not Significant
Master's Degree				
Doctor's Degree				

Table 5d presents the results of the Gamma coefficient test on the relationship between teachers' core competencies and their educational attainment. The analysis ($G = 0.196$, $p = 0.293$) shows that the p-value is greater than the 0.05 level of significance. Consequently, the null hypothesis (H_0) is not rejected, indicating that there is no significant relationship in teachers' behavioral competencies and their highest educational qualification.

The findings suggest that teachers' core behavioral competencies are not determined by their highest academic qualification. Regardless of educational attainment, teachers demonstrate similar levels of professionalism, integrity, teamwork, accountability, and commitment to their responsibilities. This may be attributed to the implementation of professional standards, competency-based performance systems, and continuous learning opportunities within schools that encourage all teachers to develop and maintain the expected workplace behaviors. The results further imply that behavioral competencies are strengthened through professional practice, organizational support, and sustained engagement in professional development rather than through formal academic qualifications alone.

This finding is consistent with the study of Bardach et al. (2022), who emphasized that teachers' professional behavior and effectiveness are more strongly influenced by psychological resources, motivation, and supportive organizational environments than by demographic or educational characteristics. Similarly, López-Martín et al. (2023) found that teachers' competencies and classroom effectiveness are primarily associated with pedagogical skills, professional engagement, and continuous professional learning rather than with the level of academic degree attained. These findings highlight the importance of providing meaningful professional development and supportive school environments to strengthen teachers' core behavioral competencies regardless of their educational background.

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn:

First, the respondents were predominantly female, with the largest proportion belonging to the 36–40 age group. More than half had 10 years or more of teaching experience, and most held a bachelor's degree. These findings describe the composition of the participating Senior High School Mathematics teachers but should not be interpreted beyond the study population.

Second, the respondents demonstrated an outstanding level of professional standards overall ($M = 4.67$, $SD = 0.24$). Although descriptive differences were observed across demographic categories, the overall level remained outstanding.

Third, the respondents demonstrated a very satisfactory level of core competencies overall ($M = 4.45$, $SD = 0.40$). Some demographic groups obtained descriptive ratings within the outstanding category, whereas other groups obtained very satisfactory ratings. Because some groups were represented by very small numbers of respondents, these subgroup means should be interpreted cautiously.

Fourth, professional standards were not significantly associated with age, length of service, or educational attainment based on the corresponding inferential analyses. A statistically significant association was observed between professional standards and sex. The significant result indicates an association in the present sample and does not establish that sex caused differences in professional standards.

Fifth, core competencies were not significantly associated with age, length of service, or educational attainment. A statistically significant association was observed between core competencies and sex. This result indicates an association between the variables in the present sample but does not establish a causal relationship.

Finally, the findings indicate that the respondents generally demonstrated strong professional standards and very satisfactory core competencies. The intervention program should therefore focus on sustaining the identified strengths while addressing competency areas that obtain relatively lower ratings. The proposed intervention should be treated as a professional development response to the descriptive competency needs identified in the study rather than as a causal remedy for demographic differences.

Proposed Intervention Program

The proposed intervention program is designed to sustain the respondents' outstanding professional standards while strengthening their core competencies, which were generally rated very satisfactory rather than outstanding. Because the present study did not establish causal relationships between demographic characteristics and competency outcomes, the intervention is organized around competency-development needs rather than demographic characteristics.

Proposed Intervention Framework

Identified Need	Intervention Activity	Specific Strategy	Participants	Time Frame	Success Indicator
Sustain outstanding professional standards	Professional Standards Enhancement Sessions	Review of PPST-aligned performance indicators, reflective practice, and goal setting	All SHS Mathematics teachers	Quarterly	Sustained outstanding professional standards ratings
Strengthen core competencies	Core Competency Development Workshop	Workshops on the lowest-rated competency indicators identified from the assessment	All SHS Mathematics teachers	1st Quarter	Improvement in post-training competency assessment
Strengthen teamwork and collaboration	Mathematics Professional Learning Community	Collaborative lesson planning, peer sharing, and problem-solving sessions	Mathematics teachers	Monthly	At least one documented collaborative activity per month



Strengthen service orientation	Learner-Centered Service Workshop	Activities focused on responsiveness, communication, learner support, and professional responsibility	Mathematics teachers	2nd Quarter	Improved self-assessment and/or competency rating
Strengthen result focus	Goal-Setting and Monitoring Sessions	Development of measurable professional goals and progress-monitoring tools	Mathematics teachers	Quarterly	Completed professional development/action plans
Sustain professional growth	Peer Coaching and Mentoring	Peer observation, feedback, coaching conversations, and reflection	Mathematics teachers	Every two months	Documented coaching cycles
Monitor competency improvement	Post-Assessment and Evaluation	Repeat selected core competency indicators after implementation	Mathematics teachers	End of school year	Demonstrated improvement in targeted competency areas

Exact Intervention Framework Narrative

The first phase of the intervention will involve competency prioritization. The researcher and school leaders will identify the specific core competency indicators with the lowest descriptive ratings from the final validated assessment. These indicators will serve as the primary targets of professional development.

The second phase will involve competency-focused professional development. Workshops will be conducted on the identified areas using case discussions, role-playing, collaborative problem-solving, peer sharing, and practice-based activities relevant to the work of Senior High School Mathematics teachers.

The third phase will involve school-based application through professional learning communities, peer coaching, mentoring, and collaborative planning. These activities will provide teachers with opportunities to apply the competencies developed during the workshops in authentic professional settings.

The fourth phase will involve monitoring and evaluation. Teachers will document their participation and application of the targeted competencies. A post-intervention assessment may then be conducted using the validated core competency instrument or an appropriately equivalent assessment procedure. Changes in descriptive competency ratings may be examined to determine whether the intervention warrants continuation, modification, or expansion.

The intervention program should be implemented as a professional development initiative and not presented as a treatment derived from causal evidence. Its primary purpose is to respond to the competency areas identified through the descriptive findings of the study.

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