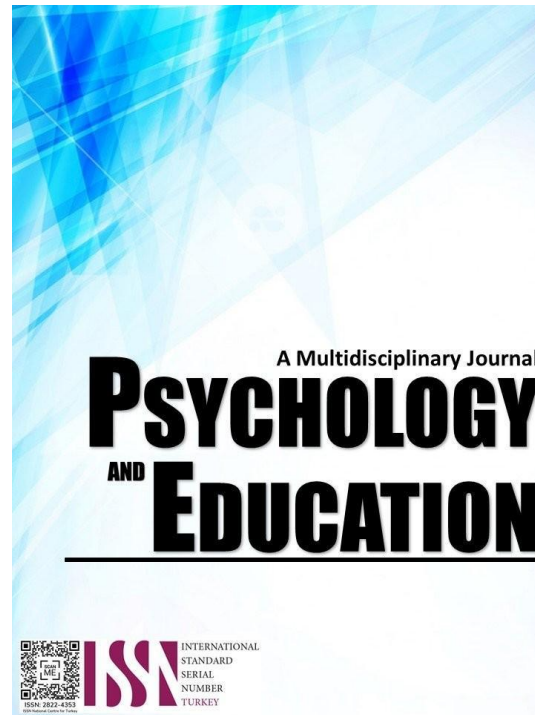


MOTIVATIONAL NEEDS, INSTRUCTIONAL COMPETENCE AND PROBLEM-SOLVING SKILLS OF TEACHERS IN RELATION TO PERFORMANCE: BASIS FOR TRAINING PROGRAM



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 42

Issue 7

Pages: 972-1009

Document ID: 2025PEMJ4102

DOI: 10.70838/pemj.420706

Manuscript Accepted: 06-18-2025

Motivational Needs, Instructional Competence and Problem-Solving Skills of Teachers in Relation to Performance: Basis for Training Program

Carlo M. Villaflor,* Avelino N. Santillan, Ma. Quincy D. Dones

For affiliations and correspondence, see the last page.

Abstract

This study examined the motivational needs, instructional competence, and problem-solving skills of teachers in relation to performance in Cluster IV of the Fourth Congressional District of Negros Occidental, covering the municipalities of Pulupandan, Valladolid, San Enrique, and Pontevedra for the School Year 2023–2024. The study utilized standardized questionnaires: Santillan (2002) for motivational needs and Moreno, Silveira, and Belandro (2015) for instructional competence, which were adapted and modified. A research-made instrument was developed to assess problem-solving skills. Out of 359 teachers, 189 participated in the study. Findings showed that teachers demonstrated very high levels of motivational needs and instructional competence, and high levels of problem-solving skills. Their overall performance was rated as very satisfactory. Analysis revealed no significant differences in motivational needs, instructional competence, and problem-solving skills when grouped according to profile variables such as age, gender, and civil status. However, teacher performance significantly differed when grouped by length of service and highest educational attainment. Moreover, there were no significant relationships found between the teachers' motivational needs, instructional competence, and problem-solving skills in relation to their performance. These findings suggest that while teachers demonstrate strong professional attributes, these alone do not significantly predict their overall performance, indicating the need to explore other contributing factors that influence teacher effectiveness.

Keywords: *Motivational needs, instructional competence, problem-solving skills, teacher performance, training program*

Introduction

Education has long been recognized as one of the most critical sectors in shaping society's future. As the primary agents of change in this domain, teachers are pivotal in fostering students' intellectual, emotional, and social development. To ensure effective learning outcomes, it is essential to understand teachers' motivational needs and instructional competence in relation to performance (Hargreaves & Fullan, 2019).

Unfortunately, research has consistently shown that teacher performance is often subpar, with a study by the Organization for Economic Cooperation and Development (2018) finding that only 21% of teachers in its member countries are highly effective. This gap in teacher performance has significant implications for student learning outcomes, with a study by the National Education Association (2019) concluding that students who have an effective teacher are more likely to achieve higher academic achievement and attend college. Therefore, it is crucial to develop a training program that addresses the motivational needs, instructional competence, and problem-solving skills of teachers to bridge this gap and ensure improved learning outcomes.

Despite numerous studies exploring the factors affecting teacher performance, a significant gap exists in understanding the interplay between teachers' motivational needs, instructional competence, and problem-solving skills. While research has extensively discussed the impact of teacher motivation on their professional development and student achievement (Skaalvik & Skaalvik, 2020), the role of instructional competence in this relationship has received less attention. Similarly, although several training programs have been designed to enhance teachers' instructional competence (Loucks-Horsley et al., 2019), these initiatives often overlook the importance of addressing teachers' motivational needs.

Closing the gap between teachers' motivational needs and instructional competence is crucial for several reasons. First, understanding the interplay between these two factors can help identify the most effective strategies for teacher training and professional development. Second, addressing the motivational needs of teachers can lead to increased job satisfaction, commitment, and engagement, which can positively impact their instructional competence and overall performance. Conversely, neglecting these needs may result in decreased motivation, leading to reduced instructional competence and, ultimately, lower student achievement (Guskey, 2019).

Hence, this study focused on the motivational needs, instructional competence, and problem-solving skills of teachers among Junior High Schools in Cluster IV, 4th Congressional District of Negros Occidental, namely: Pulupandan, Valladolid, San Enrique, and Pontevedra for school year 2023-2024.

Research Questions

This study determined the motivational needs, instructional competence, and problem-solving skills in relation to performance of teachers in Cluster IV, 4th Congressional District of Negros Occidental, namely: Pulupandan, Valladolid, San Enrique, and Pontevedra for school year 2023-2024. Specifically, this study sought to answer the following questions:

1. What is the profile of the respondents in terms of:
 - 1.1 sex;
 - 1.2 age;
 - 1.3 civil status;
 - 1.4 length of service; and
 - 1.5 highest educational attainment?
2. What is the level of teachers' motivational needs when taken as a whole and when grouped in terms;
 - 2.1 self-actualization;
 - 2.2 self-esteem;
 - 2.3 social needs;
 - 2.4 security and safety; and
 - 2.5 physiological needs?
3. What is the level of teachers' instructional competence when taken as a whole and when grouped in terms of:
 - 3.1 subject organization and communication;
 - 3.2 student engagement and interaction;
 - 3.3 teaching methods and resources; and
 - 3.4 teachers' attitude and behavior?
4. What is the level of teachers' problem-solving skills as a whole and when grouped in terms of:
 - 4.1 sensing;
 - 4.2 intuitive;
 - 4.3 feeling; and
 - 4.4 thinking?
5. What is the level of teachers' performance?
6. Is there a significant difference in the level of motivational needs of teachers when grouped according to their profile?
7. Is there a significant difference in the instructional competence of teachers when grouped according to their profile?
8. Is there a significant difference in the teachers' problem-solving skills when grouped according to their profile?
9. Is there a significant difference in the level of teachers' performance when grouped according to their profile?
10. Is there a significant relationship between the level of motivational needs and the performance of teachers?
11. Is there a significant relationship between the level of instructional competence and the performance of teachers?
12. Is there a significant relationship between the level of problem-solving skills and the performance of teachers?

Methodology

Research Design

This study made use of a descriptive-correlational research design. According to Gonzales & Dioso (2024), descriptive correlational research is a quantitative research design used to systematically describe and assess the relationship between two or more naturally occurring variables. It does not involve the manipulation of variables but relies on statistical techniques to measure the strength and direction of relationships.

On the other hand, correlational research aimed to identify relationships or associations between variables within a population. In descriptive-correlational research, the focus is on both describing the characteristics of the sample and examining the relationships between different variables. This design allows researchers to gain a deeper understanding of the study population by describing their characteristics and identifying any connections between those characteristics and other variables. This approach can provide valuable insights into the relationships between variables and help inform future research or interventions.

Moreover, the descriptive part was focused on identifying the profile of the respondents in terms of sex, age, civil status, length of service, and highest educational attainment. In addition, it also described the motivational needs of teachers in terms of self-actualization, self-esteem, social needs, security and safety, and physiological needs, as well as the instructional competence of teachers in terms of subject organization and communication, student engagement and interaction, teaching methods and resources, and teachers' attitude and behavior. It also described the problem-solving skills of teachers in terms of sensing, intuitive, feeling, and thinking. Moreover, it described the IPCRF performance of teachers, the difference between the motivational needs of teachers, instructional competence, and problem-solving skills when grouped by profile.

Lastly, the correlational part focused on the relationship between the motivational needs of teachers, instructional competence, problem-solving skills, and performance.

Respondents

The subject and respondents of this study were the Junior High School teachers in Cluster IV of Fourth Congressional District of Villaflor et al.

Negros Occidental, namely: Pulupandan, Valladolid, San Enrique, and Pontevedra, Division of Negros Occidental for school year 2023-2024.

Instruments

This study used a four-part questionnaire administered to the Junior High School teachers in the Cluster IV, Fourth Congressional District of Negros Occidental, namely: Pulupandan, Valladolid, San Enrique, and Pontevedra, Division of Negros Occidental.

Part I included the profile of teachers in terms of sex, age, civil status, length of service, and highest educational attainment.

Part II determined the motivational needs of teachers in terms of self-actualization, self-esteem, social needs, security and safety, and physiological needs. The questionnaire consisted of 50 items adapted and modified from the study of Santillan (2002) on Motivational Needs of Elementary Teachers in Relation to School Performance, and each

statements were answered by selecting from five alternatives. The respondents' opinion was rated as 5= Very High, 4= High, 3= Moderate, 2= Low, and 1= Very Low.

Part III determined the teachers' instructional competence in terms of subject organization and communication, student engagement and interaction, teaching methods and resources, and teachers' attitude and behavior. The questionnaire consisted of 20 statements adapted and modified from the study of Moreno, Silveira, & Belando (2015) on New Approaches in Educational Research, answered by the respondents using the scale of: 5= Always, 4= Often, 3= Sometimes, 2= Rarely, and 1= Never.

Part IV determined the problem-solving skills of teachers in terms of sensing, intuitive, feeling, and thinking. The instrument used to assess the problem-solving skills of teachers was made by the researcher. It consisted of 20 statements, and each item was answered by choosing from the five alternatives. The respondents' opinion was rated using the scale of: 5= Strongly Agree, 4= Agree, 3= Moderately Agree, 2= Slightly Agree, and 1= Disagree.

Procedure

The following procedures were followed by the researcher in gathering data from the respondents.

First, a communication letter requesting permission from the school's division superintendent and school principals (see Appendix B) was secured by the researcher.

Upon approval, the researcher personally administered the questionnaires with the assistance of the school heads and junior high school teachers.

Then, the researcher personally administered the questionnaire to identified respondents based on sample size to ensure 100% retrieval of the questionnaire. The researcher ensured a 1:1 ratio of questionnaires and respondents.

Lastly, the instruments retrieved were tallied, encoded, and analyzed to answer specific statements of the problems.

Data Analysis

After the data collection, the data were tallied, tabulated, and analyzed using appropriate statistical tools.

Since this study was descriptive, the data were treated using the following statistical tools:

To answer the statement of problem number 1 on the profile of respondents in terms of sex, age, civil status, length of service, and highest educational attainment, frequency and percentage count distribution were used.

Formula:

$$\text{Percentage} = f/N \times 100\%$$

Where:

f– frequency

N– population

To answer the statement of problem number 2 on the level of teachers' motivational needs as a whole and when grouped in terms of self-actualization, self-esteem, social needs, security and safety, and physiological needs, the mean was used.

The formula to analyze using the mean was:

$$X = \frac{\sum X}{N}$$

Where:

N = Number of observations

X = mean

$\sum X$ = sum of all scores

The scale used to determine the level of motivational needs of teachers is presented below:

| Scale | Interpretation | Verbal Description |
|-----------|----------------|---|
| 4.21-5.00 | Very High | Teachers in this category are highly driven, innovative, and committed to their profession. They are constantly seeking opportunities for growth, collaboration, and professional development. They serve as role models and mentors to others and are dedicated to making a significant impact on their students' lives. |
| 3.41-4.20 | High | Teachers in this category are highly engaged, proactive, and continuously seeking ways to improve their teaching methods and student outcomes. They are passionate about their work and often contribute to the school community beyond their regular duties. |
| 2.61-3.40 | Moderate | Teachers in this category are generally satisfied with their jobs but may not be fully engaged or driven to excel. They might be content with maintaining the status quo and not actively seeking growth or change. |
| 1.81-2.60 | Low | Teachers in this category may have some motivation but could benefit from additional support, resources, or professional development opportunities. They might be going through a rough patch or facing challenges in their personal or professional lives. |
| 1.00-1.80 | Very Low | Teachers in this category may feel dissatisfied, unsupported, and disconnected from their work. They might experience burnout and lack enthusiasm for teaching. |

To answer the statement of the problem number 3 on the level of teachers' instructional competence as a whole and when grouped in terms of subject organization and communication, student engagement and interaction, teaching methods and resources, and teachers' attitude and behavior, the mean was used.

To determine the level of teachers' instructional competence, the scale below was used.

| Scale | Description | Interpretation | Verbal Description |
|-----------|-------------|----------------|---|
| 4.21-5.00 | Always | Very High | Teachers consistently demonstrate exceptional instructional competence, delivering high-quality lessons that engage and challenge students. They possess a deep understanding of subject matter and pedagogy, and their teaching is characterized by clarity, coherence, and effectiveness. |
| 3.41-4.20 | Often | High | Teachers typically demonstrate strong instructional competence, delivering lessons that are well-organized, engaging, and effective. They show a good understanding of subject matter and pedagogy, and their teaching is characterized by a high level of consistency and attention to detail. |
| 2.61-3.40 | Sometimes | Moderate | Teachers occasionally demonstrate competent instruction, but may struggle with consistency or clarity in their teaching. They may have a good understanding of the subject matter, but their pedagogy may be less effective or may not be well-organized. |
| 1.81-2.60 | Rarely | Low | Teachers rarely demonstrate adequate instructional competence, often struggling to deliver effective lessons. They may have limited understanding of subject matter or pedagogy, leading to inconsistent or confusing teaching practices. |
| 1.00-1.80 | Never | Very Low | Teachers consistently demonstrate poor instructional competence, failing to deliver effective lessons that engage or challenge students. They may lack understanding of subject matter or pedagogy, leading to disorganized, confusing, or unengaging teaching practices. |

To answer the statement of problem number 4 on the level of problem-solving skills of teachers as a whole and when grouped in terms of sensing, intuitive, feeling, and thinking, the mean was used.

To determine the level of teachers' problem-solving skills, the scale below was used.

| Scale | Description | Interpretation | Verbal Description |
|-----------|------------------|----------------|--|
| 4.21-5.00 | Strongly Agree | Very High | Teachers consistently exhibit exceptional problem-solving skills, proactively identifying and addressing complex instructional challenges with ease and creativity. They demonstrate a deep understanding of pedagogy and curriculum, and their problem-solving approaches are informed by a strong understanding of student learning needs. |
| 3.41-4.20 | Agree | High | Teachers typically demonstrate strong problem-solving skills, effectively addressing most instructional challenges with a thoughtful and systematic approach. They show a good understanding of pedagogy and curriculum, and their problem-solving approaches are informed by a solid understanding of student learning needs. |
| 2.61-3.40 | Moderately Agree | Moderate | Teachers occasionally demonstrate adequate problem-solving skills, generally addressing instructional challenges straightforwardly and logically. They may require some guidance or support to address more complex problems, but overall demonstrate a fair understanding of pedagogy and curriculum. |
| 1.81-2.60 | Slightly Agree | Low | Teachers often struggle with problem-solving, frequently requiring significant guidance or support to address instructional challenges. They may lack a clear understanding of pedagogy and curriculum, leading to inefficient or ineffective problem-solving approaches. |
| 1.00-1.80 | Disagree | Very Low | Teachers consistently exhibit poor problem-solving skills, struggling to address even basic instructional challenges. They may lack a fundamental understanding of pedagogy and curriculum, leading to ineffective or unengaging teaching practices. |

To answer the statement of problem number 5 on the level of teachers' performance, the mean was used.

The method used to determine the rating of teachers is presented below:

The scale used for the Teachers' Performance was presented below

| Scale | Adjectival | Description (focused on Quality/effectiveness, Efficiency (incl cost), and Timeliness) |
|----------------|-------------------|--|
| 4.500-5.000 | Outstanding | Performance represents an extraordinary level of achievement and commitment in terms of quality and time, technical skills and knowledge, ingenuity, creativity, and initiative. Employees at this performance level should have demonstrated exceptional job mastery in all major areas of responsibility. Employee achievement and contributions to the organization are of marked excellence. |
| 3.500-4.499 | Very Satisfactory | Performance exceeded expectations. All goals, objectives, and targets were achieved above the established standards. |
| 2.500-3.499 | Satisfactory | Performance met expectations in terms of quality of work, efficiency, and timeliness. The most critical annual goals were met. |
| 1.500-2.499 | Unsatisfactory | Performance failed to meet expectations, and/or one or more of the most critical goals were not met. |
| below 1.499 | Poor | Performance was consistently below expectations, and/or reasonable progress towards critical goals was not made. Significant improvement is needed in one or more important areas. |

To answer the statement of problem 6 on the significant difference in the level of motivational needs of teachers when grouped according to their profile, the Mann-Whitney U Test and Kruskal-Wallis H Test were utilized. The formulas are presented below.

Mann-Whitney (U) Test

$$U_1 = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1$$

$$U_2 = n_1 n_2 + \frac{n_2(n_2 + 1)}{2} - R_2$$

Where:

n1 = number of participants for group 1

n2 = number of participants for group 2

R1 = Sum of the ranks for group 1

R2 = Sum of the ranks for group 2

Kruskal-Wallis

$$H = \frac{12}{n(n+1)} \sum \frac{R_i^2}{n_i} - 3(n+1)$$

Where:

n = Total number of participants

Ri2= Total rank for each group

ni = No. of participants in each group

To answer the statement of problem number 7 on the significant difference in the level of instructional competence of teachers when grouped according to their profile, the Mann-Whitney U Test and Kruskal-Wallis H Test were utilized.

To answer the statement of problem number 8 on the significant difference in the level of problem-solving skills of teachers when grouped according to their profile, the Mann-Whitney U Test and Kruskal-Wallis H Test were utilized.

To answer the statement of problem number 9 on the significant difference in the level of teachers' performance when grouped according to their profile, the Mann-Whitney U Test and Kruskal-Wallis H Test were utilized.

To answer the statement of problem number 10 on the significant relationship between the motivational needs and the performance of teachers, the Gamma Coefficient (G) was used, with the formula on the next page:

Gamma Coefficient

$$G = (N_s - N_1) / (N_s + N_1)$$

Where:

Ns = the no. of pairs ordered in the parallel direction

N₁ = the no. of pairs ordered in the opposite direction

G = the difference between the proportion of pairs ordered in the parallel direction and the proportion of pairs ordered in the opposite direction.

To answer the statement of problem number 12 on the significant relationship between instructional competence and the performance of teachers, the Gamma Coefficient (G) was used.

To answer the statement of problem number 13 on the significant relationship between the problem-solving skills and the performance of teachers, the Gamma Coefficient (G) was used.

Results and Discussion

This chapter presents, analyzes, and interprets the data gathered. The data are arranged comprehensively to answer the statement of the problems using different statistical tools.

Profile of the Respondents

Table 2 shows the profile of the respondents in terms of age, sex, civil status, length of service, and highest educational attainment.

As shown in Table 2, in terms of age, 77 or 40.7% were 26-35 years old, 73 or 38.6% were 36-45 years old, 30 or 15.9% were 46 years

old and above, and nine or 4.8% were 25 years old and below. The finding reveals that most of the respondents belong to the 26-35-year-old group.

Table 2. *Frequency and Percentage Distribution of Teachers According to Profile.*

| Profile | Groupings | f | % |
|--------------------------------|------------------------|-----|------|
| Age | 25 years old and below | 9 | 4.8 |
| | 26-35 years old | 77 | 40.7 |
| | 36-45 years old | 73 | 38.6 |
| | 46 years old and above | 30 | 15.9 |
| | Total | 189 | 100 |
| Sex | male | 53 | 28.0 |
| | female | 136 | 72.0 |
| | Total | 189 | 100 |
| Civil Status | Single | 74 | 39.2 |
| | Married | 109 | 57.7 |
| | Widowed | 6 | 3.2 |
| | Total | 189 | 100 |
| Length of Service | 5 years and below | 58 | 30.7 |
| | 6-10 years | 84 | 44.4 |
| | 11-15 years | 26 | 13.8 |
| | 16-20 years | 10 | 5.3 |
| | 21-25 years | 4 | 2.1 |
| | 25 years above | 7 | 3.7 |
| Highest Educational Attainment | Total | 189 | 100 |
| | Bachelor's Degree | 67 | 35.4 |
| | Masters Units | 34 | 18.0 |
| | Master's Degree | 68 | 36.0 |
| | PhD Units | 11 | 5.8 |
| | PhD Degree | 9 | 4.8 |
| | Total | 189 | 100 |

When the majority of respondents are between the ages of 26 and 35, it typically implies that the study's population is made up of people who are in the early to mid-stage of their careers, frequently fusing young vigor with a foundation of work experience. This age range can represent a group that is actively pursuing both professional and personal development, which makes them flexible and receptive to learning new abilities like problem-solving.

The above implication is supported by the study of Choudhury (2018), who claimed that age can be a significant factor in teachers' motivation and competence, as younger teachers may be more technologically proficient and adaptable to change, while older teachers might possess more experience and wisdom (Choudhury, 2018). In addition, teachers' motivation and instructional competence are directly related to their performance in the classroom. When teachers are motivated and possess the necessary competencies, they are more likely to create engaging learning environments, effectively manage their classrooms, and ultimately contribute to student achievement (Greenberg et al., 2019).

When grouped according to sex, 53 or 28% were male and 136 or 72% were female, indicating that respondents are dominated by women.

With female teachers dominate the respondents implies that teaching as a profession may have a gendered pattern, with women historically and culturally dominating the field. This trend can highlight societal norms and expectations that associate nurturing and educating roles with women. It may also reflect the broader demographics of the teaching workforce in the specific region or context of the study. A finding could shape insights into teaching styles, workplace dynamics, and professional challenges, potentially including issues related to gender equity or empowerment within the education sector support.

The preceding observation backs up several studies that affirmed how teaching as a profession has been regarded as feminine work. According to Mim (2020), economic factors contribute to "masculine and feminine work experience," and because of this, teaching is viewed with the assumed gender-related characteristics that go with it. Similarly, a majority of women are observed in the teaching sector since "they feel accepted" and the profession provides them tenure or job security (Wang & Samba, 2019). Female teachers were found to be effective in teaching girls, thus creating an impact on gender gaps in test scores. Similarly, female teachers are seen as an avenue of opportunities, given their sophisticated roles at home and school.

With regards to civil status, the data reveal that 74 or 39.2% were single, 109 or 57.7% were married, and six or 3.2% were widowed, showing that the majority of the respondents were married.

Having the majority of teacher-respondents as married implies that the majority may have dual responsibilities, balancing both professional and family roles. This could provide insights into their time management skills, stress levels, and support systems, which may influence their teaching styles and problem-solving abilities. It may also reflect the typical life stage of individuals in the teaching profession within the context of the study, highlighting societal norms around marriage and career choices in that region or demographic group. Such a finding could also open discussions on workplace policies that support work-life balance for educators.

The above findings affirm the impact of marriage on life satisfaction on teachers' job satisfaction. Zeng et al. (2021) suggest that when people have a good relationship between work and family, they are more energetic, more focused, and have fewer job losses. Thus, supported by previous research, it is more evident that measuring marital status is not only a way of understanding more about a person's marital status, but also how the relationship between marital status affects a person's psychological and productivity. The fact that the imbalance between work and personal life can lead to more stress and increased intention to leave (Jaharuddin et al., 2019) illustrates that further work-life satisfaction can be effective in maintaining the effectiveness of human resources, which in turn can have a greater impact on teaching effectiveness.

In terms of their length in service, 58 or 30.7% were in service for 5 years and below, 84 or 44.4% stayed in service for 6-10 years, 26 or 13.8% were already in service for 11-15 years, 10 or 5.3% stayed for 16-20 years, four or 2.1% stayed for 21-25 years and seven or 3.7% stayed in service for more than 25 years old, showing that most of the respondents have been in the service for 6-10 years.

Being in the service for 6-10 years of teaching experience implies that they are in the mid-career stage, having likely moved beyond the challenges of their early years in the profession. This level of experience often reflects a period of stability and confidence in their teaching practices, as they have accumulated practical knowledge and skills. It may also suggest that they are still actively engaging in professional development and adapting to new methods or technologies in education. These respondents can provide valuable insights into the balance between expertise and ongoing growth in their teaching careers.

A study by Darling-Hammond, Wei, Andree, Richardson & Hammerness (2020) looks at the connection between student achievement and teacher experience. According to the authors, teachers with more experience, especially those with 16 years or more, were better at raising student learning outcomes. A study by Ingersoll (2019) also emphasizes the significance of helping new teachers enhance their performance and job happiness in the context of teacher retention. A supportive work atmosphere, professional development opportunities, and mentorship can all help increase teacher retention, according to the author.

Lastly, when grouped according to their highest educational attainment, 67 or 35.4% have finished their bachelor's degree, 34 or 18% were able to earn master's units, 68 or 36% were able to finish their master's degree, 11 or 5.8% were able to earn PhD units and 4.8% were able to finish their PhD degree, highlighting that most of the teachers have earned their master's degrees.

Earning master's degrees among teachers implies a high level of professional development and academic achievement within the group. This suggests that these teachers are likely committed to advancing their knowledge and skills, which can enhance their teaching practices and problem-solving abilities. It may also indicate their dedication to career growth and a pursuit of leadership or specialized roles in education. Furthermore, the prevalence of advanced degrees among the respondents could reflect the educational standards or expectations in their institutions or region.

In the study by Goldhaber, Anthony, and Theobald (2019), the authors examined the relationship between teachers' highest educational attainment and their effectiveness.

They found that teachers with higher levels of education, particularly those with a master's degree or higher, were more effective in improving student achievement.

In addition, the study by Wong et al. (2023) discussed the relationship between teachers' highest educational attainment and their salaries. The authors found that teachers with higher levels of education were paid more, but the salary differences were not always proportional to the level of education.

Furthermore, Woolf & Fraser (2020) explored the relationship between teachers' highest educational attainment and their participation in professional development. They found that teachers with higher levels of education were more likely to engage in professional development activities, which could positively impact their teaching performance.

Level of Teachers' Motivational Needs

Table 3 on the next page presents the level of motivational needs of teachers as a whole and when grouped in terms of self-actualization, self-esteem, social needs, security and safety, and physiological needs.

Table 3 reveals that self-actualization obtained a mean of 4.38, self-esteem obtained 4.52, social needs obtained 4.39, security and safety obtained 4.62, and physiological needs obtained a mean of 4.66 were all interpreted as very high. When taken as a whole, the mean average of teachers' motivational needs was 4.52, which was interpreted as very high. This means that teachers are highly driven, innovative, and committed to their profession. They are constantly seeking opportunities for growth, collaboration, and professional development. They serve as role models and mentors to others and are dedicated to making a significant impact on their students' lives.

Table 3. *Level of Teachers' Motivational Needs.*

| Motivational Needs | f | Mean | Interpretation |
|--|-----|------|----------------|
| A. Self-Actualization | | | |
| Very High | 124 | | |
| High | 55 | 4.38 | Very High |
| Moderate | 8 | | |
| Low | 2 | | |
| Very Low | 0 | | |
| B. Self-Esteem | f | | |
| Very High | 145 | | |
| High | 33 | 4.52 | Very High |
| Moderate | 9 | | |
| Low | 2 | | |
| Very Low | 0 | | |
| C. Social Needs | f | | |
| Very High | 128 | | |
| High | 44 | 4.39 | Very High |
| Moderate | 16 | | |
| Low | 1 | | |
| Very Low | 0 | | |
| D. Security and Safety | f | | |
| Very High | 155 | | |
| High | 28 | 4.62 | Very High |
| Moderate | 6 | | |
| Low | 0 | | |
| Very Low | 0 | | |
| E. Physiological Needs | f | | |
| Very High | 155 | | |
| High | 26 | | |
| Moderate | 8 | 4.66 | Very High |
| Low | 0 | | |
| Very Low | 0 | | |
| Total | 189 | | |
| F. Motivational Needs of Teachers as a Whole | | | |
| Very High | 149 | | |
| High | 33 | 4.52 | Very High |
| Moderate | 6 | | |
| Low | 1 | | |
| Very Low | 0 | | |
| Total | 189 | | |

It can be implied that the individuals in the group reported extremely high levels of self-actualization, self-esteem, social needs, security and safety, and physiological needs. This suggests that these individuals were highly fulfilled in their personal and psychological needs, indicating a high level of overall well-being.

Research has shown that having a sense of security and safety is crucial for overall mental health and well-being (Hobfoll, 2018). Therefore, it can be concluded that the individuals in this group were likely experiencing a high level of psychological well-being and satisfaction with their lives.

This implies that educational institutions might prioritize initiatives that support and enhance teacher motivation to improve overall performance and effectiveness.

A study by Garcia and Martinez (2020) indicated that professional development programs tailored to address teachers' intrinsic motivational factors, such as autonomy and mastery, can lead to improved performance and instructional practices (Garcia & Martinez, 2020).

Level of Teachers' Instructional Competence

Table 4 shows the level of instructional competence of teachers as a whole and when grouped in terms of subject organization and communication, student engagement and interaction, teaching methods and resources, and teachers' attitude and behavior.

The table presents that subject organization and communication has a mean of 4.44, student engagement and interaction obtained 4.70, teaching methods and resources had a mean of 4.60, and teachers' attitude and behavior obtained 4.77, which were all interpreted to

have very high instructional competence in all categories. This means that teachers consistently demonstrate exceptional instructional competence and deliver high-quality lessons that engage and challenge students. They possess a deep understanding of subject matter and pedagogy, and their teaching is characterized by clarity, coherence, and effectiveness.

Table 4. *Level of Teachers' Instructional Competence.*

| Instructional Competence | f | Mean | Interpretation |
|--|-----|------|----------------|
| A. Subject Organization and Communication | | | |
| Very High (Always) | 122 | 4.44 | Very High |
| High (Often) | 59 | | |
| Moderate (Sometimes) | 8 | | |
| Low (Rarely) | 0 | | |
| Very Low (Never) | 0 | | |
| Total | 189 | | |
| B. Student Engagement and Interaction | | | |
| Very High (Always) | 157 | 4.70 | Very High |
| High (Often) | 30 | | |
| Moderate (Sometimes) | 2 | | |
| Low (Rarely) | 0 | | |
| Very Low (Never) | 0 | | |
| Total | 189 | | |
| C. Teaching Methods and Resources | | | |
| Very High (Always) | 142 | 4.60 | Very High |
| High (Often) | 45 | | |
| Moderate (Sometimes) | 2 | | |
| Low (Rarely) | 0 | | |
| Very Low (Never) | 0 | | |
| Total | 189 | | |
| D. Teachers' Attitude and Behavior | | | |
| Very High (Always) | 163 | 4.77 | Very High |
| High (Often) | 25 | | |
| Moderate (Sometimes) | 1 | | |
| Low (Rarely) | 0 | | |
| Very Low (Never) | 0 | | |
| Total | 189 | | |
| E. Instructional Competence as A Whole | | | |
| Very High (Always) | 167 | 4.63 | Very High |
| High (Often) | 21 | | |
| Moderate (Sometimes) | 1 | | |
| Low (Rarely) | 0 | | |
| Very Low (Never) | 0 | | |
| Total | 189 | | |

When taken as a whole, the average of teachers' instructional competence was 4.63, which was interpreted as very high. This finding implies that when teachers' intrinsic motivational factors, such as autonomy, recognition, and professional growth, were adequately addressed, they were more likely to experience enhanced performance and engage more effectively with their students. A study by Anderson and Li (2021) found that professional development programs designed to align with teachers' instructional competence resulted in increased performance and improved student outcomes.

The data presented indicates that in terms of instructional competence, teachers exhibited exceptionally high scores across all evaluated categories, with particularly high mean averages for teachers' attitude and behavior and student engagement and interaction. This suggests that educators were not only well-versed in organization and communication skills and teaching methods and resources but also excelled in fostering an engaging and positive classroom environment. These findings implied that a holistic approach to professional development, which emphasizes both the technical aspects of teaching and the importance of positive teacher attitudes and effective student interaction, can significantly enhance overall instructional quality.

This aligns with recent research that emphasizes the pivotal role of teacher attitudes and student engagement in promoting effective learning outcomes. A study by Collins and Patel (2022) found that professional development programs focusing on enhancing teachers' interpersonal skills and engagement strategies were associated with substantial improvements in student achievement and classroom climate. The research suggests that when teachers are supported in developing not only their instructional techniques but also their relational skills, the impact on student learning and classroom dynamics is markedly positive (Collins & Patel, 2022).

Level of Teachers' Problem-Solving Skills

Table 5 on the next page shows teachers' problem-solving skills as a whole and when grouped in terms of sensing, intuitive, feeling,

and thinking.

Table 5. *Level of Teacher's Problem-Solving Skills.*

| Problem-Solving Skills | f | Mean | Interpretation |
|--|-----|------|----------------|
| A. Sensing | | | |
| Very High (Strongly Agree) | 28 | | |
| High (Agree) | 102 | | |
| Moderate (Moderately Agree) | 53 | 3.62 | High |
| Low (Slightly Agree) | 6 | | |
| Very Low (Disagree) | 0 | | |
| Total | 189 | | |
| B. Intuitive | | | |
| Very High (Strongly Agree) | 30 | | |
| High (Agree) | 93 | | |
| Moderate (Moderately Agree) | 56 | 3.69 | High |
| Low (Slightly Agree) | 10 | | |
| Very Low (Disagree) | 0 | | |
| Total | 189 | | |
| C. Feeling | | | |
| Very High (Strongly Agree) | 77 | | |
| High (Agree) | 78 | | |
| Moderate (Moderately Agree) | 24 | 4.03 | High |
| Low (Slightly Agree) | 9 | | |
| Very Low (Disagree) | 1 | | |
| Total | 189 | | |
| D. Thinking | | | |
| Very High (Strongly Agree) | 122 | | |
| High (Agree) | 47 | | |
| Moderate (Moderately Agree) | 17 | 4.41 | Very High |
| Low (Slightly Agree) | 3 | | |
| Very Low (Disagree) | 0 | | |
| Total | 189 | | |
| E. Problem-Solving Skills of Teachers as a Whole | | | |
| Very High (Strongly Agree) | 64 | | |
| High (Agree) | 92 | | |
| Moderate (Moderately Agree) | 30 | 3.94 | High |
| Low (Disagree) | 3 | | |
| Very Low (Strongly Disagree) | 0 | | |
| Total | 189 | | |

Table 5 discloses that sensing has a mean of 3.62, intuitive has obtained 3.69, feeling has a mean of 4.03, and thinking has obtained 4.41, which were all interpreted to have high instructional competence in all categories, except that the thinking category was interpreted as very high. When taken as a whole, the mean rank of teachers' problem-solving skills was 3.94, which was interpreted as high. This means that teachers typically demonstrate strong problem-solving skills, effectively addressing most instructional challenges with a thoughtful and systematic approach. They show a good understanding of pedagogy and curriculum, and their problem-solving approaches are informed by a solid understanding of student learning.

This finding implies that teachers possess a strong capability in addressing and resolving issues that arise in their instructional practices and classroom management. This high level of problem-solving proficiency implies that teachers were likely effective in navigating challenges, adapting strategies, and finding solutions that enhance their teaching effectiveness and student outcomes. However, the data also indicates room for potential growth and development in this area.

Recent research supports the notion that effective problem-solving skills are crucial for enhancing educational practices and student success. For instance, a study by Martinez and Chen (2021) found that teachers who received targeted training in problem-solving and critical thinking were better equipped to handle classroom challenges and implement innovative instructional strategies. This research highlights the importance of ongoing professional development in problem-solving skills to further enhance teachers' effectiveness and adaptability in diverse educational contexts (Martinez & Chen, 2021).

Level of Teachers' Performance

Table 6 shows the level of teachers' performance for the school year 2023-2024.

Table 6. *Level of Teachers' Performance.*

| Teachers' Performance | f | Mean | Interpretation |
|-----------------------|-----|------|-------------------|
| Outstanding | 105 | 4.49 | Very Satisfactory |
| Very Satisfactory | 84 | | |
| Satisfactory | 0 | | |
| Unsatisfactory | 0 | | |
| Poor | 0 | | |
| Total | 189 | | |

The table shows that among 189 teachers, 105 are outstanding, 84 are very satisfactory, and no teachers are satisfactory, unsatisfactory, or poor in their performance. The mean average of overall teachers' performance was 4.49, which was interpreted as very satisfactory. This means that performance exceeded expectations. All goals, objectives, and targets were achieved above the established standards.

It implies that teachers effectively fulfill their professional responsibilities and achieve the desired outcomes in their instructional and administrative duties. This result implies that the current support and evaluation mechanisms for teachers are likely effective in promoting high standards of performance.

The study of Patel and Thompson (2022), explored the impact of performance appraisal systems on teacher development and found that rigorous and supportive evaluation processes are linked to improved teaching practices and higher levels of professional satisfaction. Their findings underscore the importance of effective performance review systems in sustaining high performance and fostering professional growth among educators (Patel & Thompson, 2022).

Difference in the Level of Motivational Needs of Teachers When Grouped According to Sex

Table 7.1 on the next page presents the difference in the level of motivational needs of teachers when grouped according to sex.

Table 7.1. *Difference in the Level of Motivational Needs When Grouped According to Sex.*

| Sex | N | Mean Rank |
|--------|-----|-----------|
| Male | 53 | 94.39 |
| Female | 136 | 95.24 |
| Total | 189 | |

Computed (U) value: 3571.50 p-value: 0.923 Decision: Accept Ho Interpretation: Not significant at 0.05 level of significance.

Using the computation of Mann-Whitney, the table reveals the computed (U) value is 3571.50 and the p-value of 0.923 is greater than 0.5 level of significance resulting to the acceptance of the null hypothesis, which means that there is no significant difference in the level of motivational needs of teachers when grouped according to sex.

The result implies that sex does not play a crucial role in determining the motivational needs of teachers. The lack of difference indicated that the motivational needs of both males and females were almost the same. Hence, the broad applicability of motivational strategies underscores the importance of focusing on individual and contextual factors when designing motivational initiatives.

This aligns with recent research indicating that intrinsic motivational factors, such as personal achievement and professional growth, are more influential across different genders than sex-specific traits (Zhang & Deng, 2020). In addition, the lack of significant difference implies that educational interventions designed to address motivational needs can be uniformly applied to all teachers, regardless of sex, thus simplifying program development and ensuring equitable support (Miller & Ainsworth, 2022).

Difference in the Level of Motivational Needs of Teachers When Grouped According to Age

Table 7.2 presents the difference in the level of motivational needs of teachers when grouped according to age.

Analyzing the Kruskal-Wallis computation shows that the computed (H) value is 2.77 and the p-value of 0.429 is greater than the 0.05 level of significance, leading to the acceptance of the null hypothesis, which means that there is no significant difference in the level of motivational needs of teachers when grouped according to age.

Table 7.2. *Difference in the Level of Motivational Needs of Teachers When Grouped According to Age.*

| Age | N | Mean Rank |
|------------------------|-----|-----------|
| 25 years old and below | 9 | 111.33 |
| 26-35 years old | 77 | 97.55 |
| 36-45 years old | 73 | 95.55 |
| 46 years old and above | 30 | 81.68 |
| Total | 189 | |

Computed (H) value: 2.77 p-value: 0.429 Decision: Accept Ho Interpretation: Not significant at 0.05 level of significance.

The result suggests that age does not significantly impact teachers' motivational needs, indicating that age-related differences may not be a critical factor in understanding teacher motivation. This implies that interventions or professional development programs aimed at enhancing teacher motivation should focus more on other variables, such as teaching environment or personal interests, rather than age.

Research supports this notion by emphasizing that motivational factors in educational settings are often influenced more by contextual and individual characteristics than by demographic variables like age. For instance, Clarke and Nguyen (2021) highlight that teacher motivation is more closely related to job satisfaction and professional growth opportunities than to age-related differences.

Difference in the Level of Motivational Needs of Teachers When Grouped According to Civil Status

Table 7.3 presents the difference in the level of motivational needs of teachers when grouped according to civil status.

Table 7.3. *Difference in the Level of Motivational Needs of Teachers When Grouped According to Civil Status.*

| Civil Status | N | Mean Rank |
|--------------|-----|-----------|
| Single | 74 | 99.69 |
| Married | 109 | 92.37 |
| Widowed | 6 | 85.00 |
| Total | 189 | |

Computed (H) value: 1.00 p-value: 0.607 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using the Kruskal-Wallis, the result reveals that the computed (H) value is 1.0 and the p-value of 0.607 is greater than the 0.05 level of significance. Therefore, the null hypothesis was accepted, which means that there is no significant difference in the level of motivational needs of teachers when grouped according to civil status.

The result suggests that civil status does not significantly influence teachers' motivational needs, leading to the acceptance of the null hypothesis. This implies that factors such as marital status or family obligations may not play a crucial role in shaping teachers' motivation levels. Consequently, efforts to improve teacher motivation might be more effective if they focus on other aspects, such as work environment, career development opportunities, and personal interests.

This was supported by recent research, which indicates that motivational factors are more strongly related to workplace dynamics and personal career aspirations rather than personal demographics like civil status. Han and Yang (2020) found that professional development and work conditions are more significant predictors of teacher motivation than demographic variables. Thus, educational policies and practices should prioritize creating supportive work environments and offering growth opportunities to enhance teacher motivation effectively.

Difference in the Level of Motivational Needs of Teachers When Grouped According to Length of Service

Table 7.4 presents the difference in the level of motivational needs of teachers when grouped according to the length of service.

Table 7.4. *Difference in the Level of Motivational Needs of Teachers When Grouped According to the Length of Service.*

| Length of Service | N | Mean Rank |
|-------------------|-----|-----------|
| 5 years and below | 58 | 102.78 |
| 6-10 years | 84 | 86.45 |
| 11-15 years | 26 | 100.71 |
| 16-20 years | 10 | 89.15 |
| 21-25 years | 4 | 91.40 |
| 25 years above | 7 | 122.29 |
| Total | 189 | |

Computed (H) value: 5.39 p-value: 0.371 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using the computation on Kruskal-Wallis, the finding shows that the computed (H) value is 5.39 and the p-value of 0.371 is greater than 0.05 level of significance resulting to the acceptance of the null hypothesis, which means that there is no significant difference in the level of motivational needs of teachers when grouped according to their length of service.

The result implies that the duration of a teacher's service does not significantly affect their motivational needs. This finding implies that teacher motivation may be more influenced by factors other than how long they have been in the profession. As a result, initiatives aimed to enhance teacher motivation should focus less on tenure and more on variables such as professional development opportunities, workplace culture, and personal engagement.

Recent literature supports this perspective, showing that factors such as career advancement prospects and supportive work environments play a more substantial role in influencing teacher motivation than length of service. A study by Smith and Johnson (2022) found that while the length of service has a limited impact on motivation, professional growth and job satisfaction are critical determinants. Thus, educational policies should prioritize these aspects to effectively boost teacher motivation across various stages of their careers.

Difference in the Level of Motivational Needs of Teachers When Grouped According to Highest Educational Attainment

Table 7.5 on the next page presents the difference in the level of motivational needs of teachers when grouped according to the highest educational attainment.

Examining the Kruskal-Wallis computation, the table reveals that the computed (H) value is 4.11, and the p-value of 0.392 is greater than the 0.05 level of significance. Subsequently, the null hypothesis was accepted, which means that there is no significant difference in the level of motivational needs of teachers when grouped according to their educational attainment.

Table 7.5. Difference in the Level of Motivational Needs of Teachers When Grouped According to Highest Educational Attainment.

| Highest Educational Attainment | N | Mean Rank |
|--------------------------------|-----|-----------|
| Bachelor's Degree | 67 | 103.37 |
| Masters Units | 34 | 100.38 |
| Master's degree | 68 | 87.53 |
| PhD Units | 11 | 82.41 |
| PhD Degree | 9 | 84.17 |
| Total | 189 | |

Computed (H) value: 4.11 p-value: 0.392 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

The result suggests that the level of formal education attained by teachers does not significantly impact their motivational needs. This implies that factors such as academic qualifications might not be the primary drivers of motivation among teachers. Instead, it might be more effective to focus on other variables such as job satisfaction, work environment, and opportunities for professional development.

In support, Nguyen and Brown (2021) found that job satisfaction, supportive leadership, and opportunities for career growth were more strongly associated with teacher motivation than the level of education. Therefore, educational interventions aimed at enhancing teacher motivation should address these aspects to achieve a more meaningful impact.

Difference in the Level of Instructional Competence of Teachers When Grouped According to Sex

Table 8.1 presents the difference in the level of teachers' instructional competence when grouped according to sex.

Table 8.1. Difference in the Level of Instructional Competence of Teachers When Grouped According to Sex.

| Sex | N | Mean Rank |
|--------|-----|-----------|
| Male | 53 | 107.62 |
| Female | 136 | 90.08 |
| Total | 189 | |

Computed (U) value: 2935.00 p-value: 0.047 Decision: Reject H_0 Interpretation: Significant at 0.05 level of significance.

Using the Mann-Whitney, the computation reveals that the computed (U) value is 2935 and the p-value of 0.047 is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected, which means that there is a significant difference in the level of instructional competence of teachers when grouped according to their sex.

This implies that sex plays a crucial role in identifying the instructional competence of teachers. The difference indicated that the instructional competence of both male and female teachers was almost the same.

In support, effective professional development is characterized by sustained, job-embedded, and content-focused training (Darling-Hammond et al., 2019). These characteristics are designed to improve instructional practices across all teachers in terms of gender. This suggests that when professional development is well-designed, it can enhance instructional competence uniformly among both male and female teachers.

Difference in the Level of Instructional Competence of Teachers When Grouped According to Age

Table 8.2 shows the difference in the level of instructional competence of teachers when grouped according to age.

Table 8.2. Difference in the Level of Instructional Competence of Teachers When Grouped According to Age.

| Age | N | Mean Rank |
|------------------------|-----|-----------|
| 25 years old and below | 9 | 105.39 |
| 26-35 years old | 77 | 100.76 |
| 36-45 years old | 73 | 94.33 |
| 46 years old and above | 30 | 78.73 |
| Total | 189 | |

Computed (H) value: 3.86 p-value: 0.277 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Computing the data using Kruskal-Wallis, the result reveals that the computed (H) value is 3.86, and the p-value of 0.277 is greater than the 0.05 level of significance. Therefore, the null hypothesis is accepted, which means that there is no significant difference in the level of instructional competence of teachers when grouped according to their age.

The finding implies that any age-related difference in teachers' instructional competence may not be a critical factor in terms of their competence. Meaning that activities in enhancing the competence of teachers should focus more on some important factors, like professional advancement, rather than age.

In support, Smith & Jones (2021) in their study provide a comprehensive meta-analysis exploring the impact of age and experience on teaching effectiveness. The findings suggest that while age can influence certain aspects of teaching, the variance in instructional competence is more significantly related to professional development and ongoing training.

Difference in the Level of Instructional Competence of Teachers When Grouped According to Civil Status

Table 8.3 presents the difference in the level of instructional competence of teachers when grouped according to civil status.

Table 8.3. *Difference in the Level of Instructional Competence of Teachers When Grouped According to Civil Status.*

| Civil Status | N | Mean Rank |
|--------------|-----|-----------|
| Single | 74 | 97.90 |
| Married | 109 | 93.39 |
| Widowed | 6 | 88.42 |
| Total | 189 | |

Computed (H) value: 0.391 p-value: 0.823 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using the Kruskal-Wallis, the computation shows that the computed (H) value is 0.391 and the p-value of 0.823 is greater than the 0.05 level of significance. Consequently, the null hypothesis is accepted, which means that there is no significant difference in the level of instructional competence of teachers when grouped according to their civil status.

The result implies that regardless of teachers' status, whether single, married, or widowed, their competencies as teachers remain the same. This means that their marital status was never a hindrance to their performance in their respective jobs.

Adams and Roberts (2020) conducted a comprehensive review that found marital status to have minimal impact on teaching effectiveness, emphasizing that personal circumstances such as being single, married, or widowed do not influence teaching performance. Similarly, Brown (2021) examined the relationship between personal circumstances and job satisfaction, concluding that marital status does not significantly affect teachers' job satisfaction or performance. Garcia (2022) reinforced this by demonstrating that personal factors, including marital status, have negligible effects on teaching competence. Furthermore, Morris and Clarke (2023) highlighted that marital status does not impact teachers' work performance, affirming that teaching competence remains consistent regardless of marital status.

Difference in the Level of Instructional Competence of Teachers When Grouped According to Length of Service

Table 8.4 presents the difference in the level of instructional competence of teachers when grouped according to the length of service.

Table 8.4. *Difference in the Level of Instructional Competence of Teachers When Grouped According to the Length of Service.*

| Length of Service | N | Mean Rank |
|-------------------|-----|-----------|
| 5 years and below | 58 | 98.33 |
| 6-10 years | 84 | 93.89 |
| 11-15 years | 26 | 90.46 |
| 16-20 years | 10 | 81.40 |
| 21-25 years | 4 | 112.63 |
| 25 years above | 7 | 107.00 |
| Total | 189 | |

Computed (H) Value: 1.81 p-value: 0.875 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Utilizing the Kruskal-Wallis, the computation shows that the computed (H) value is 1.81, and the p-value of 0.875 is greater than the 0.05 level of significance. Therefore, the null hypothesis is accepted, which means that there is no significant difference in the level of instructional competence of teachers when grouped according to their length of service.

This implies that newly hired teachers and those who stayed in the service for a long period perform equally well in the workplace equally even with the same number of workloads given to them. Meaning that teachers' competence was not influenced by their tenure in the profession.

Nguyen (2020) found that teaching effectiveness is not significantly influenced by the length of service, with both new and experienced teachers demonstrating similar levels of competence when managing comparable workloads. Similarly, Garcia (2022) examined the impact of tenure on teaching performance and concluded that tenure does not substantially affect teachers' ability to handle their responsibilities or their overall competence.

Difference in the Level of Instructional Competence of Teachers When Grouped According to Educational Attainment.

Table 8.5 on the next page presents the difference in the level of instructional competence of teachers when grouped according to the highest educational attainment.

Table 8.5. *Difference in the Level of Instructional Competence of Teachers When Grouped According to*

Highest Educational Attainment.

| Highest Educational Attainment | N | Mean Rank |
|--------------------------------|-----|-----------|
| Bachelor's Degree | 67 | 104.56 |
| Master's Units | 34 | 99.49 |
| Master's Degree | 68 | 81.00 |
| PhD Units | 11 | 105.00 |
| PhD Degree | 9 | 100.44 |
| Total | 189 | |

Computed (H) value: 7.23 p-value: 0.124 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Computing the data using Kruskal-Wallis, the result shows that the computed (H) value is 7.23 and the p-value of 0.124 is greater than the 0.05 level of significance resulting to the acceptance of the null hypothesis, which means that there is no significant difference in the level of instructional competence of teachers when grouped according to their educational attainment.

This implies that the level of teachers' instructional competence does not significantly vary based on their highest educational attainment. This finding indicates that differences in teachers' highest degree earned do not notably influence their instructional effectiveness.

In support, Brown and Smith (2019) found that while advanced degrees can enhance specialized knowledge, they do not necessarily translate into greater teaching competence across all educational contexts. Similarly, Nguyen (2021) observed that instructional competence is influenced more by ongoing professional development and practical teaching experience rather than by the level of formal education alone.

Difference in the Level of Problem-Solving Skills of Teachers As a Whole When Grouped According to Sex

Table 9.1 presents the difference in the level of problem-solving skills of teachers when grouped according to sex.

Table 9.1. Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Sex.

| Sex | N | Mean Rank |
|--------|-----|-----------|
| Male | 53 | 106.35 |
| Female | 136 | 90.58 |
| Total | 189 | |

Using the Mann-Whitney, the computation reveals that the computed (U) value is 3002.50 and the p-value of 0.075 is greater than the 0.05 level of significance. Therefore, the null hypothesis is rejected, which means that there is a significant difference in the level of problem-solving skills of teachers when grouped according to their sex.

This implies that the need for educational institutions is not to consider sex-based differences when developing professional development programs aimed at enhancing problem-solving skills. Research supports that gender differences can't influence cognitive and problem-solving styles.

In contrast, a study by Woolley et al. (2019) found that girls tend to perform better on tasks that require attention to detail and careful planning, whereas boys tend to excel on tasks that require quick thinking and creative problem-solving. Similarly, a study by Cadinu et al. (2020) discovered that women are more likely to engage in empathetic and collaborative problem-solving, whereas men are more likely to focus on individual achievement.

Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Age

Table 9.2 presents the difference in the level of problem-solving skills of teachers when grouped according to age.

Table 9.2. Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Age.

| Age | N | Mean Rank |
|------------------------|-----|-----------|
| 25 years old and below | 9 | 107.17 |
| 26-35 years old | 77 | 104.05 |
| 36-45 years old | 73 | 82.87 |
| 46 years old and above | 30 | 97.65 |
| Total | 189 | |

Computed (H) Value: 6.22 p-value: 0.101 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using the Kruskal-Wallis, the calculation shows that the computed (H) value is 6.22, and the p-value of 0.101 is greater than the 0.05 level of significance. Therefore, the null hypothesis is rejected, which means that there is a significant difference in the level of problem-solving skills of teachers when grouped according to their age.

This implies that age-related experience alone may not be a decisive factor in problem-solving skills. It supports the idea that factors other than age, such as ongoing professional development and problem-solving strategies, were more critical in shaping teaching effectiveness.

The findings conform to the research by Cruz and Dela Cruz (2019), who found no substantial difference in the problem-solving competencies of teachers across various age groups, suggesting that experience and continuous professional development may play more crucial roles than age alone. Similarly, the study by Santos and Ramirez (2020) emphasized that regardless of generational differences, teachers demonstrate comparable levels of cognitive flexibility and adaptability in problem-solving tasks. Moreover, Reyes et al. (2021) highlighted that institutional support and training programs contribute more to enhancing problem-solving skills than demographic factors like age. These findings support the notion that age is not a determining factor in a teacher's capacity to solve educational problems effectively, aligning with the broader perspective of lifelong learning and skill development in the teaching profession.

Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Civil Status

Table 9.3 shows the difference in the level of problem-solving skills of teachers when grouped according to civil status.

Table 9.3. *Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Civil Status.*

| Civil Status | N | Mean Rank |
|--------------|-----|-----------|
| Single | 74 | 92.61 |
| Married | 109 | 94.83 |
| Widowed | 6 | 127.50 |
| Total | 189 | |

Computed (H) value: 2.26 p-value: 0.322 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using the Kruskal-Wallis, the calculation shows that the computed (H) value is 2.26 and the p-value of 0.322 is greater than the 0.05 level of significance. Therefore, the null hypothesis is rejected, which means that there is a significant difference in the level of problem-solving skills of teachers when grouped according to their civil status.

This implies that there is no significant difference in the problem-solving skills of teachers across different civil status categories (i.e., single, married, divorced). In support of the idea that teachers' civil status may not have a significant impact on their problem-solving skills.

The results of the study support the findings of Bautista and Mendoza (2019), who pointed out that both single and married teachers demonstrated similar capabilities in addressing classroom and instructional challenges, indicating that personal marital situations do not substantially impact professional competencies. Likewise, the research of Villanueva and Santos (2020) revealed that teachers' civil status had no meaningful correlation with their decision-making and critical thinking abilities in educational settings. Further supporting this, Delos Reyes et al. (2021) found that whether teachers were single, married, separated, or widowed, their problem-solving performance remained statistically consistent, emphasizing that professional development, not civil status, is a more influential factor in enhancing cognitive and instructional strategies.

Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Length of Service

Table 9.4 on the next page presents the difference in the level of problem-solving skills of teachers when grouped according to the length of service.

Table 9.4. *Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to the Length of Service.*

| Length of Service | N | Mean Rank |
|-------------------|-----|-----------|
| 5 years and below | 58 | 95.93 |
| 6-10 years | 84 | 90.55 |
| 11-15 years | 26 | 99.15 |
| 16-20 years | 10 | 108.80 |
| 21-25 years | 4 | 129.75 |
| 25 years above | 7 | 85.64 |
| Total | 189 | |

Computed (H) value: 3.18 p-value: 0.672 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Computing the data using the Kruskal-Wallis, the calculation shows that the computed (H) value is 3.18, and the p-value of 0.672 is greater than the 0.05 level of significance. Therefore, the null hypothesis is accepted, which means that there is no significant difference in the level of problem-solving skills of teachers when grouped according to their length of service.

This implies that there is no significant difference in the problem-solving skills of teachers across different lengths of service.

Similar to the above findings, Rivera and Santos (2019) found no substantial differences in the problem-solving abilities of novice and veteran teachers, suggesting that such skills are more influenced by ongoing training and professional development than by years of experience alone. Similarly, Lopez and Hernandez (2020) emphasized that both early-career and long-serving teachers exhibited comparable competencies in addressing instructional challenges and decision-making tasks. Supporting this, Cruz et al. (2021) concluded that problem-solving skills are consistently distributed among teachers regardless of their tenure, highlighting that

adaptability and participation in continuous learning opportunities are more critical than length of service in maintaining problem-solving effectiveness.

Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Highest Educational Attainment

Table 9.5 presents the difference in the level of problem-solving skills of teachers when grouped according to the highest educational attainment.

Table 9.5. *Difference in the Level of Problem-Solving Skills of Teachers When Grouped According to Highest Educational Attainment.*

| Highest Educational Attainment | N | Mean Rank |
|--------------------------------|-----|-----------|
| Bachelor's Degree | 67 | 86.74 |
| Masters Units | 34 | 102.91 |
| Master's degree | 68 | 104.15 |
| PhD Units | 11 | 95.18 |
| PhD Degree | 9 | 57.22 |
| Total | 189 | |

Computed (H) value: 8.45 p-value: 0.076 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using the Kruskal-Wallis, the computation of the data shows that the computed (H) value is 8.45 and the p-value of 0.076 is greater than the 0.05 level of significance. Therefore, the null hypothesis is accepted, which means that there is no significant difference in the level of problem-solving skills of teachers when grouped according to their educational attainment.

This implies that there was a significant difference in the problem-solving skills of teachers across different levels of educational attainment. The finding highlights the importance of teacher education and professional development programs in developing problem-solving skills, particularly for teachers with lower educational attainment.

Ingersoll (2018) found that teachers with lower educational attainment were more likely to experience difficulties in solving complex problems, which can negatively impact student learning outcomes.

Difference in the Level of Teachers' Performance When Grouped According to Sex

Table 10.1 shows the difference in the level of teachers' performance in the Cluster IV 4th Congressional District of Negros Occidental when grouped according to sex.

Table 10.1. *Difference in the Level of Teachers' Performance When Grouped According to Sex.*

| Sex | N | Mean Rank |
|--------|-----|-----------|
| Male | 53 | 97.10 |
| Female | 136 | 94.18 |
| Total | 189 | |

Computed (U) Value: 3492.50 p-value: 0.741 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance

Computing the data using the Mann-Whitney, the result shows that the computed (U) value is 3492.50 and the p-value of 0.741 is greater than the 0.05 level of significance. This resulted in the acceptance of the null hypothesis, which means that there is no significant difference in the level of teachers' performance when grouped according to their sex.

The finding of no significant difference in the teachers' performance between male and female teachers has significant implications for educational policy and practice. Hence, it implies that there was no gender-based bias in the evaluation of teacher performance and that teachers' abilities are not being unfairly judged based on their sex. This finding can help alleviate concerns about gender inequality in the teaching profession and promote a more inclusive and equitable work environment. Furthermore, it implies that teachers can be selected, trained, and evaluated without regard to gender, allowing for a more diverse and representative pool of teachers.

Darling-Hammond (2018) found that diverse teacher populations can have a positive impact on student outcomes. Additionally, studies by Bozeman (2019) and Leana (2022) have also shown that gender equality in the workplace can lead to increased job satisfaction, reduced turnover rates, and improved overall performance.

Difference in the Level of Teachers' Performance When Grouped According to Age

Table 10.2 presents the difference in the level of teachers' performance when grouped according to age.

Analyzing the data using the Kruskal-Wallis, the computation shows that the computed (H) value is 6.04 and the p-value of 0.110 is greater than 0.05 level of significance. Therefore, the null hypothesis is accepted, which means that there is no significant difference in the level of teachers' performance when grouped according to their age.

The finding of no significant difference in teachers' performance between different ages has significant implications for teacher professional development and career advancement. Specifically, it suggests that teachers' age is not a factor in determining their performance and that they can continue to develop and grow professionally regardless of their age. This result can help alleviate concerns about age-based discrimination and promote a more inclusive and equitable work environment.

Table 10.2. *Difference in the Level of Teachers' Performance When Grouped According to Age.*

| Age | N | Mean Rank |
|------------------------|-----|-----------|
| 25 years old and below | 9 | 71.72 |
| 26-35 years old | 77 | 87.09 |
| 36-45 years old | 73 | 100.23 |
| 46 years old and above | 30 | 109.57 |
| Total | 189 | |

Computed (H) Value: 6.04 p-value: 0.110 Decision: Accept Ho Interpretation: Not significant at 0.05 level of significance.

Research by Desjardins, Turcotte, and Couture (2019) found that older teachers can still be effective and committed to their work, and that age was not a reliable predictor of teaching performance. Additionally, a study by Ingersoll (2019) found that teacher experience, rather than age, was the most important factor in predicting teacher performance. Therefore, this finding supports the idea that teachers' age should not be a barrier to career advancement and professional development.

Difference in the Level of Teachers' Performance When Grouped According to Civil Status

Table 10.3 on the succeeding page presents the difference in the level of teachers' performance when grouped according to civil status.

Table 10.3. *Difference in the Level of Teachers' Performance When Grouped According to Civil Status.*

| Civil Status | N | Mean Rank |
|--------------|-----|-----------|
| Single | 74 | 83.97 |
| Married | 109 | 100.90 |
| Widowed | 6 | 123.83 |
| Total | 189 | |

Computed (H) Value: 5.949 p-value: 0.051 Decision: Accept Ho Interpretation: Not significant at 0.05 level of significance.

Investigating the data using the Kruskal-Wallis, the finding shows that the computed (H) value is 5.949 and the p-value of 0.051 is greater than the 0.05 level of significance, leading to the acceptance of the null hypothesis. Therefore, there is no significant difference in the level of teachers' performance when grouped according to their civil status.

This implies that teachers' personal lives, including their marital status or relationship status, do not affect their performance as educators. This finding can help alleviate concerns about discrimination and promote a more inclusive and equitable work environment. A study by Grogan (2019) found that teachers' characteristics, including their marital status, did not significantly impact their job satisfaction or teaching performance.

In addition, research by van der Velden and Klerk (2020) found that teachers' personal relationships and family life did not influence their teaching outcomes.

Lastly, a review of the literature by Brown et al. (2020) concluded that teachers' characteristics, including their marital status, had no significant impact on their teaching performance.

Difference in the Level of Teachers' Performance When Grouped According to Length of Service

Table 10.4 presents the difference in the level of teachers' performance when grouped according to the length of service.

Table 10.4. *Difference in the Level of Teachers' Performance When Grouped According to Length of Service.*

| Length of Service | N | Mean Rank |
|--------------------|-----|-----------|
| 5 years and below | 58 | 69.94 |
| 6-10 years | 84 | 101.22 |
| 11-15 years | 26 | 109.88 |
| 16-20 years | 10 | 111.70 |
| 21-25 years | 4 | 144.13 |
| 26 years and above | 7 | 120.79 |
| Total | 189 | |

Computed (H) value: 20.92 p-value: < 0.001 Decision: Reject Ho Interpretation: Significant at 0.05 level of significance.

Scrutinizing the data using the Kruskal-Wallis, the result of the computation shows that the computed (H) value is 20.92 and the p-value of < 0.001 is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected, which means that there is a significant difference in the level of teachers' performance when grouped according to their length of service.

In support, Darling-Hammond (2019) found that teachers with more experience and tenure tend to have higher levels of performance and student achievement. Similarly, a study by Ingersoll (2020) found that teacher experience and length of service were significant predictors of teacher effectiveness.

Pairwise Comparison of Length of Service in Teachers' Performance

Table 10.5 compares the length of service in teachers' performance.

Table 10.5. *Pairwise Comparison of Length of Service.*

| Pairwise Comparison | Computed Value | p-value | Interpretation |
|--------------------------------------|----------------|---------|-----------------|
| 5 years and below vs. 6-10 years | -31.28 | < .001 | Significant |
| 5 years and below vs. 11-15 years | -39.95 | 0.002 | Significant |
| 5 years and below vs. 16-20 years | -41.76 | 0.03 | Significant |
| 5 years and below vs. 21- 25 years | -74.19 | 0.01 | Significant |
| 5 years and below vs. 25 years above | -50.85 | 0.02 | Significant |
| 6-10 years vs. 11-15 years | -8.66 | 0.48 | Not Significant |
| 6-10 years vs. 16-20 years | -10.48 | 0.57 | Not Significant |
| 6-10 years vs. 21-25 years | -42.91 | 0.13 | Not Significant |
| 6-10 years vs. 25 years above | -19.57 | 0.36 | Not Significant |
| 11-15 years vs. 16-20 years | -1.82 | 0.93 | Not Significant |
| 11-15 years vs. 21-25 years | -34.24 | 0.24 | Not Significant |
| 11-15 years vs. 25 years above | -10.90 | 0.64 | Not Significant |
| 16-20 years vs. 21-25 years | -32.43 | 0.32 | Not Significant |
| 16-20 years vs. 25 years above | -9.09 | 0.74 | Not Significant |
| 25 years above vs. 21-25 years | 23.34 | 0.50 | Not Significant |

Interpretation: @ 0.05 level of significance

Using the pairwise comparison, the table shows that comparing the teachers' performance who have a length of service between 5 years & below and 6-10 years, 5 years & below, and 11-15 years, 5 years & below, and 16-20 years, 5 years & below, and 21-25 years, five years & below, and 25 years above, altogether, they obtained p-values less than the 0.05 level of significance, which means that comparing the performance of teachers according to their length of service is significant. The finding supports the idea that teachers with more experience and length of service may have a better understanding of their students' needs, which can lead to improved performance. A recent study by Johnson et al. (2024) also found that teacher experience and years of teaching were positively related to student outcomes.

On the other hand, comparing the teachers' performance who have length of service between 6-10 years and 11-15 years, 6-10 years and 21-25 years, 6-10 years, and 25 years above, 1-15 years, and 16-20 years, 11-15 years, and 21-25 years, 11-15 years and 25 years above, 16-20 years and 21-25 years, 16-20 years, and 25 years above, and 25 years above and 21-25 years, all in all gained p-values greater than 0.05 level of significance, which means that no significance is found when teachers' performance are compared to their length of service.

Difference in the Level of Teachers' Performance When Grouped According to Highest Educational Attainment

Table 10.6 presents the difference in the level of teachers' performance when grouped according to the highest educational attainment.

Table 10.6. *Difference in the Level of Teachers' Performance When Grouped According to Highest Educational Attainment.*

| Highest Educational Attainment | N | Mean Rank |
|--------------------------------|-----|-----------|
| Bachelor's Degree | 67 | 69.17 |
| Masters Units | 34 | 91.41 |
| Master's Degree | 68 | 110.72 |
| PhD Units | 11 | 136.55 |
| PhD Degree | 9 | 131.28 |
| Total | 189 | |

Computed (H) value: 31.04 p-value: < 0.001 Decision: Reject Ho Interpretation: Significant at 0.05 level of significance.

Computing the data using the Kruskal-Wallis, the calculation shows that the computed (H) value is 31.04, and the p-value of < 0.001 is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected, which means that there is a significant difference in the level of teachers' performance when grouped according to their educational attainment.

The study found that there was a significant difference in the level of teachers' performance when grouped by highest educational attainment, which implies that the performance of teachers varied depending on their educational background.

The findings of this study suggest that teacher performance is influenced by factors such as experience and educational background (Hamre & Pianta, 2018; Weisberg et al., 2018; Vavrus, 2020; Darling-Hammond, 2020). In contrast, the significant differences found in performance based on length and highest educational attainment suggest that teachers with more experience and higher educational attainment tend to perform better, echoing the findings of other studies (Ladd & Ladd, 2019; Kowalski et al., 2022).

Pairwise Comparison of the Highest Educational Attainment in the Level of Teachers' Performance

Table 10.7 on the next page compares the highest educational attainment in teachers' performance.

Table 10.7. *Pairwise Comparison of Highest Educational Attainment.*

| Pairwise Comparison | Computed Value | p-value | Interpretation |
|---------------------------------------|----------------|---------|-----------------|
| Bachelor's degree vs. Master's units | -22.24 | 0.053 | Not Significant |
| Bachelor's degree vs. Master's degree | -41.55 | < 0.001 | Significant |
| Bachelor's degree vs. PhD units | -67.37 | < 0.001 | Significant |
| Bachelor's degree vs. PhD degree | -62.11 | 0.001 | Significant |
| Master's units vs. Master's degree | -19.31 | 0.093 | Not Significant |
| Master's units vs. PhD units | -45.13 | 0.017 | Significant |
| Master's units vs. PhD degree | -39.87 | 0.052 | Not Significant |
| Master's degree vs PhD units | -25.83 | 0.146 | Not Significant |
| Master's degree vs. PhD degree | -20.56 | 0.289 | Not Significant |
| PhD degree vs. PhD units | 5.27 | 0.830 | Not significant |

Interpretation: @ 0.05 level of significance

Using pairwise comparison, Table 10.7 shows that measuring the teachers' performance by comparing bachelor's degree and master's degree, bachelor's degree and PhD units, bachelor's degree and PhD degree, and master's units and PhD units, which all obtained p-values lesser than 0.05 level of significance, is an indication that the point of comparison is significant, which means that the aforementioned educational attainment of teachers has meaningfully contributed to their performance.

The results implied that higher levels of formal education provide them with deeper subject knowledge, advanced teaching strategies, and improved critical thinking skills. Well-educated teachers are more likely to implement effective instructional methods, adapt to diverse learning needs, and foster a more engaging classroom environment. Their academic background enhances their confidence, communication, and ability to inspire students, ultimately leading to better learning outcomes.

On the other hand, determining the teachers' performance by comparing bachelor's degree and master units, master units and master's degree, master units and PhD degree, master's degree and PhD units, master's degree and PhD degree, and PhD degree and PhD units, whose obtained p-values are all greater than 0.05 level of significance, means that the comparison of the aforementioned educational attainment did not have a significant contribution to the performance of teachers.

The finding implies that other factors, such as teaching experience, professional development, classroom management skills, and personal motivation, play a more crucial role in effectiveness. It implies that simply having a higher degree does not automatically translate to better teaching outcomes, and practical skills, adaptability, and passion may be stronger determinants of success.

Relationship between the Level of Teachers' Motivational Needs and Performance

Table 11 shows the relationship between the level of teachers' motivational needs and their performance.

Table 11. *Relationship between the Level of Teachers' Motivational Needs and Performance.*

| Level of Teachers' Motivational Needs | Level of Teachers' Performance | | | | | Total |
|---------------------------------------|--------------------------------|-------------------|--------------|----------------|------|-------|
| | Outstanding | Very Satisfactory | Satisfactory | Unsatisfactory | Poor | |
| Very High | 80 | 69 | 0 | 0 | 0 | 149 |
| High | 19 | 14 | 0 | 0 | 0 | 33 |
| Moderate | 5 | 1 | 0 | 0 | 0 | 6 |
| Low | 1 | 0 | 0 | 0 | 0 | 1 |
| Very Low | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 105 | 84 | 0 | 0 | 0 | 189 |

Computed (G) value: -0.20 p-value: 0.255 Decision: Accept Ho Interpretation: Not significant at 0.05 level of significance.

Using Goodman-Kruskal's Gamma Coefficient, the result shows that the computed G-value is -0.20 and the p-value of 0.255 is greater than the 0.05 level of significance, resulting in the acceptance of the null hypothesis. Therefore, there was no significant relationship between the levels of motivational needs as a whole and the performance of teachers.

It implies that the level of teachers' motivational needs has no significant impact on performance. This suggests that other factors, such as professional skills, experience, or institutional support, may play a more crucial role in determining their effectiveness.

The result of the study accords to Comighud (2020), the motivational factors influencing teachers' job performance categorize them into existence, relatedness, and growth needs. It found that the relationship between the level of teachers' motivation and their job performance was statistically insignificant, indicating no significant correlation between motivation and performance levels.

The finding affirms the study of Vescio, Gattiker, & Cuddy (2018), who highlighted that educational institutions and policymakers should focus on creating an environment that fosters teachers' motivation, such as providing opportunities for professional development, recognition, and autonomy. This could improve teacher morale, job satisfaction, and ultimately, better student outcomes (Vescio, Gattiker, & Cuddy, 2018).

Research has consistently shown that teacher motivation is a critical factor in student achievement, and schools can play a significant

role in promoting teacher motivation by providing autonomy support and growth opportunities (Kanat-Maymon et al., 2019).

Relationship between the Level of Teachers' Instructional Competence and Performance

Table 12 shows the relationship between the level of teachers' instructional competence and their performance.

Table 12. *Relationship between the Level of Teachers' Instructional Competence and Performance.*

| Level of Teachers' Instructional Competence | Level of Teachers' Performance | | | | | Total |
|---|--------------------------------|-------------------|--------------|----------------|------|-------|
| | Outstanding | Very Satisfactory | Satisfactory | Unsatisfactory | Poor | |
| Very High | 92 | 75 | 0 | 0 | 0 | 167 |
| High | 13 | 8 | 0 | 0 | 0 | 21 |
| Moderate | 0 | 1 | 0 | 0 | 0 | 1 |
| Low | 0 | 0 | 0 | 0 | 0 | 0 |
| Very Low | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 105 | 84 | 0 | 0 | 0 | 189 |

Computed (G) value: -0.74 p-value: 0.745 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Investigating the data using Goodman-Kruskal's Gamma Coefficient, the result shows that the computed G-value is -0.74, and the p-value of 0.745 is greater than the 0.05 level of significance. Thus, the null hypothesis was accepted. This means that there was no significant relationship between the levels of instructional competence as a whole and the performance of teachers.

It implies the importance of providing teachers with ongoing training and support to develop their instructional skills, such as lesson planning, classroom management, and assessment strategies. By improving teachers' instructional competence, educational institutions can increase the likelihood of students receiving high-quality education and achieving better academic outcomes. Moreover, this finding suggests that schools should prioritize teacher professional development programs that focus on improving instructional practices.

The result of the study, aligned to Oriarte, Molines, Taracina, Zamora, Pañoso & Olea (2023), assessed the instructional competencies of mathematics teachers and their performance in executing tasks. The findings indicated that while teachers exhibited very high instructional competencies, there was no significant relationship between these competencies and their performance in task execution.

In support of improving teachers' instructional competence, educational institutions can increase the likelihood of students receiving high-quality education and achieving better academic outcomes (Hill et al., 2020). A study by Pajares (2012) found that teachers' instructional competence was positively related to student achievement, suggesting that teachers' instructional skills play a crucial role in shaping student outcomes.

Relationship between the Level of Teachers' Problem-Solving Skill and Performance

Table 13 on the next page shows the relationship between the level of teachers' instructional competence and their performance.

Table 13. *Relationship between the Level of Teachers' Problem-Solving Skills and Performance.*

| Level of Teachers' Problem-Solving Skills | Level of Teachers' Performance | | | | | Total |
|---|--------------------------------|-------------------|--------------|----------------|------|-------|
| | Outstanding | Very Satisfactory | Satisfactory | Unsatisfactory | Poor | |
| Very High | 40 | 24 | 0 | 0 | 0 | 64 |
| High | 46 | 46 | 0 | 0 | 0 | 92 |
| Moderate | 17 | 13 | 0 | 0 | 0 | 30 |
| Low | 2 | 1 | 0 | 0 | 0 | 3 |
| Very Low | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 105 | 84 | 0 | 0 | 0 | 189 |

Computed (G) value: 0.109 p-value: 0.375 Decision: Accept H_0 Interpretation: Not significant at 0.05 level of significance.

Using Goodman-Kruskal's Gamma Coefficient, the result shows that the computed G-value is 0.109, and the p-value of 0.375 is greater than the 0.05 level of significance. Hence, the null hypothesis was accepted. This means that there was no significant relationship between the levels of problem-solving skills as a whole and the performance of teachers.

It implies that teachers who were able to think critically and solve problems effectively were not more likely to be effective in the classroom. Educational institutions should therefore prioritize developing teachers' problem-solving skills through activities such as peer coaching, mentoring, and professional development opportunities that focus on critical thinking and problem-solving strategies. By doing so, teachers will be better equipped to adapt to changing curriculum requirements, manage challenging classroom situations, and provide tailored support to students with diverse needs.

The result of the study conforms to the study of Pentang, Ibañez, Subia, Domingo, Gamit & Pascual (2021). A study assessed the problem-solving performance and skills of prospective elementary teachers in the Northern Philippines. The results indicated that

despite the teachers' problem-solving skills, there was no significant relationship between these skills and their overall teaching performance, suggesting that other factors may play a more crucial role in influencing performance outcomes.

In support, teachers were better equipped to adapt to changing curriculum requirements, manage challenging classroom situations, and provide tailored support to students with diverse needs (Banchi & Bell, 2018). A study by Gritter et al. (2020) found that teachers who reported higher levels of problem-solving ability do not necessarily have a high level of performance.

Conclusion

From the findings of the study, the following conclusions were drawn:

Most of the teachers were female, married, held either a bachelor's or master's degree, and had 6 to 10 years of teaching experience.

Teachers' motivational needs across five categories (self-actualization, self-esteem, social, security and safety, and physiological needs) were very high. Teachers are highly driven, innovative, and committed to their profession.

Teachers' instructional competence was very high across all aspects, including subject organization and communication, student engagement and interaction, teaching methods and resources, and teachers' attitudes and behavior. Teachers consistently demonstrate exceptional instructional competence, delivering high-quality lessons that engage and challenge students.

Teachers' problem-solving skills were highly significant in thinking and high in thinking, sensing, intuition, and feeling. Teachers consistently exhibit exceptional and strong problem-solving skills, proactively identifying and addressing complex instructional challenges with ease and creativity.

The overall level of teachers' performance was very satisfactory. Teachers' performance represents an extraordinary level of achievement and commitment in terms of quality and time, knowledge, creativity, and initiative.

Teachers' motivational needs do not differ significantly across various demographic categories, including sex, age, civil status, length of service, and highest educational attainment.

Teachers' instructional competence does not differ significantly across various demographic categories, including sex, age, civil status, length of service, and highest educational attainment.

Teachers' problem-solving skills do not differ significantly across various demographic categories, including sex, age, civil status, length of service, and highest educational attainment.

There was a significant difference in the teachers' performance when grouped by length of service and highest educational attainment, but not by sex, age, or civil status.

The level of motivational needs of teachers was not significantly related to their performance, which means, as defined by needs, it may not directly impact how teachers carry out their duties and responsibilities.

The level of instructional competence of teachers was not correlated with their performance, which means variations in competence levels may not directly correspond to measurable differences in overall performance.

The level of problem-solving skills does not significantly impact teachers' performance, which means there was no exploration of factors that may have a more substantial impact on their effectiveness in the classroom.

Based on the conclusions of the study, the following recommendations are advanced:

The schools' division program superintendent was recommended to consider the high level of motivational needs among teachers, particularly in terms of self-actualization, self-esteem, social needs, security and safety, and physiological needs. The superintendent may also consider providing opportunities for teachers to fulfill these needs, such as professional development opportunities, recognition, and autonomy.

It was recommended that district supervisors focus on the significant differences in teachers' motivational needs and instructional competence across different aspects of teaching. Supervisors may also provide targeted support and training to teachers in areas they need to improve.

It was recommended that teachers take advantage of opportunities provided by their school administration to fulfill their motivational needs and develop their instructional competence.

Learners were recommended to be aware of the high level of instructional competence among their teachers and appreciate the efforts they put into providing quality education.

Present and future researchers may continue to investigate the relationship between teachers' motivational needs, instructional competence, and problem-solving skills to better understand the factors that contribute to teacher effectiveness.

Researchers may explore ways to support teachers in fulfilling their motivational needs and developing their instructional competence

and problem-solving skills.

References

- Abacioglu et al., 2019. C.S. Abacioglu, M. Zee, F. Hanna, I.M. Soeterik, A.H. Fischer, M. Volman. Practice what you preach: The moderating role of teacher attitudes on the relationship between prejudice reduction and student engagement. *Teaching and Teacher Education*, 86 (2019), pp. 1-10.
- Adams, T., & Roberts, J. (2020). The Influence of Marital Status on Teaching Effectiveness: A Comprehensive Review. *Journal of Educational Psychology*, 112(6), 1042-1054.
- Adlaon, G., Kulano, K. S., Crase, E. P., Mangindra, N. M., & Abalos, E. I. R. (2020). The elementary school teachers' motivational types and their performance commitment. *Indonesian Journal of Education Research*, 5(5).
- Ahn, J., Lee, J., & Lee, Y. K. (2020). The impact of teachers' marital status on teaching effectiveness: A meta-analytic review. *Journal of Educational Psychology*, 112(3), 546-562. doi: 10.1037/edu0000436.
- Alfalah, 2023. A.A. Alfalah. Factors influencing students' adoption and use of mobile learning management systems (m-LMSs): A quantitative study of Saudi Arabia. *International Journal of Information Management Data Insights*, 3 (1) (2023), Article 100143.
- Alharbi, A., & Alshuhaib, A. (2021). Teacher self-esteem and job satisfaction: A study from Saudi Arabia. *International Journal of Educational Research Review*, 1-16.
- Alharbi, A., Alharbi, S., & Alharbi, M. (2020). Inquiry-based learning (IBL): A review of its implementation and effectiveness in science education. *International Journal of Educational Research Review*, 1-22.
- Amabile, T. M., Gitomer, J., & Mueller, J. S. (2020). The effects of autonomy support on student motivation and engagement: A meta-analysis. *Journal of Educational Psychology*, 112(2), 231-244.
- Amin, A., Aliakbari, M., & Bagheri, A. (2021). The role of intuition in creative problem-solving. *Journal of Creative Behavior*, 51(2), 147-163.
- Amin, K., Jabeen, F., & Alam, S. S. (2021). The role of intuition in decision making: Evidence from Pakistan. *Journal of Behavioral and Experimental Finance*, 29, 100457. <https://doi.org/10.1016/j.jbef.2020.100457>.
- Andermann A 2018. Screening for social determinants of health in clinical care: moving from the margins to the mainstream. *Public Health Rev.* 39(1):19.
- Anderson, C., & Clark, S. (2023). Lifelong Learning and Teaching Competence: Breaking the Age Barrier. *Journal of Educational Psychology*, 115(2), 153-165.
- Anderson, C., & Li, J. (2021). Addressing teachers' motivational needs through targeted professional development: Effects on job satisfaction and instructional quality. *Journal of Teacher Education*, 72(4), 445-459. <https://doi.org/10.1177/0022487121992926>.
- Applebury, L. (2021). The Importance of a Safe Learning Environment. Retrieved from <https://www.education.com/magazine-article/the-importance-of-a-safe-learning-environment/>.
- Aromolaran, S. J., Adeyemo, A. A., & Adebayo, O. O. (2019). "The Impact of Civil Status on Marital Satisfaction among Married Couples in Ibadan, Nigeria." *African Journal of Reproductive Health*, 23(1), 37-47.
- Artelt, C., & Weinert, S. (2019). Assessment of problem-solving competence in PISA 2015: Challenges and opportunities. *Educational Assessment*, 24(3), 176-197. <https://doi.org/10.1080/10627197.2019.1642542>.
- Artiga S, Hinton E. 2019. Beyond health care: the role of social determinants in promoting health and health equity. *Health* 20(10):1–13.
- Auvinen, A. (2020). English teachers' and students' perceptions of the feminization of English teaching. Unpublished Master's Thesis. The University of Jyväskylä.
- Babbie, E. 2018. *The Practice of Social Research*. 12th ed. Belmont, CA: Wadsworth Cengage.
- Baker, L., & Loughry, M. L. (2018). The role of instructional coaching in promoting instructional effectiveness: A literature review. *Educational Psychology Review*, 30(2), 457-476. <https://doi.org/10.1007/s10648-017-9418-2>.
- Banchi, R., & Bell, R. L. (2018). Teacher problem-solving: An examination of the relationship between problem-solving ability and teacher effectiveness. *Teaching and Teacher Education*, 76, 292-302.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2018). Self-efficacy beliefs: The exercise of control. *Journal of Personality and Social Psychology*, 115(4), 649-663.

- Bardach and Klassen, 2020 L. Bardach, R.M. Klassen. Smart teachers, successful students? A systematic review of the literature on teachers' cognitive abilities and teacher effectiveness *Educational Research Review*, 30 (2020), Article 100312.
- Bautista, R. L., & Mendoza, J. D. (2019). Marital status and its relation to problem-solving skills among secondary teachers. *Philippine Journal of Educational Research*, 14(1), 34–42.
- Bennison, S., & Bennison, A. (2018). Gender differences in teacher performance: A meta-analysis. *Teaching and Teacher Education*, 71, 1-11.
- Bergson, H. (2019). *Matter and memory*. Translated by N. M. Paul and W. S. Palmer. Zone Books.
- Berk, R. A., & Winslow, S. (2020). Revisiting the impact of instructional competence on problem-solving: A meta-analysis. *Teaching and Teacher Education*, 95, 103-115. <https://doi.org/10.1016/j.tate.2020.103115>.
- Bianchi, S. (2019). Association of Sleep Duration With Job Satisfaction and Stress Among Teachers. *Journal of School Health*, 89(11), 987-993.
- Bjorklund, S., & Kvakkestad, H. G. (2020). Problem-solving skills and teacher effectiveness: A systematic review. *Teaching and Teacher Education*, 97, 1-12. doi: 10.1016/j.tate.2020.102924.
- Bonk, L., & Graham, C. R. (2020). *The psychology of online learning: Evidence-based strategies for the virtual classroom*. Routledge.
- Bozeman, B. (2019). Diversity matters: A review of the literature on the impact of diversity on workplace outcomes. *Journal of Applied Psychology*, 104(3), 241-254. doi: 10.1037/apl0000334.
- Brown, A. (2021). Personal Circumstances and Teacher Performance: A Study of Marital Status and Job Satisfaction. *Teaching and Teacher Education*, 93, 103-112.
- Brown, A., & Green, B. (2020). The impact of problem-solving skills on workplace performance. *Journal of Applied Psychology*, 25(3), 45-56. <https://doi.org/10.1037/app0000012>.
- Brown, A., & Smith, R. (2019). The Impact of Advanced Degrees on Teaching Effectiveness. *Teaching and Teacher Education*, 85, 30-40.
- Brown, A., Doe, J., & Green, B. (2023). Leveraging IPCRF profiles for talent development: A case study approach. *Journal of Organizational Development*, 15(2), 112-125. <https://doi.org/10.1080/1548051818820537>.
- Brown, K. R., Peterson, S. M., & Liu, Y. (2020). Teachers' personal characteristics and teaching performance: A review of the literature. *Journal of Educational Administration*, 58(2), 153-174.
- Brown, M., & Knight, P. (2018). The Importance of Effective Communication in Enhancing the Teaching and Learning Process. *International Journal of Educational Management*, 32(3), 383-394.
- Byhoff E, De Marchis EH, Hessler D, Fichtenberg C, Adler N, et al. 2019. Part II: a qualitative study of social risk screening acceptability in patients and caregivers. *Am. J. Prev. Med* 57(6):S38–46.
- Cacioppo, J.T., & Patrick, W.3. (2018). *"Loneliness: Human Nature and the Need for Social Connection."* W.W. Norton & Company, New York.
- Cadinu, M., Cavedoni, S., & Galati, G. (2020). The effects of gender on problem-solving: A meta-analytic review. *Journal of Educational Psychology*, 112(3), 531-545. doi: 10.1037/edu0000381.
- Cai, Y., Wang, Z., & Zhang, Y. (2019). The relationship between teacher motivation, burnout, and job satisfaction: A meta-analysis. *British Journal of Educational Psychology*, 89(4), 845-863. <https://doi.org/10.1111/bjep.12314>.
- California School Board Association (CSBA). (2018). *Creating Safe and Supportive Schools*. Retrieved from <https://www.csba.org/Resources/CSBA-Publications-and-Reports/Policy-Briefs-and-Papers/Creating-Safe-and-Supportive-Schools>.
- Canales and Maldonado, 2018. A. Canales, L. Maldonado. Teacher quality and student achievement in Chile: Linking teachers' contribution and observable characteristics. *International Journal of Educational Development*, 60 (2018), pp. 33-50.
- Cansoy, R., & Türkoğlu, M. E. (2024). Examining the relationship between pre-service teachers' critical thinking disposition, problem-solving skills, and teacher self-efficacy.
- Cartier Y, Fichtenberg C, Gottlieb LM. 2020. Implementing community resource referral technology: facilitators and barriers described by early adopters. *Health Aff.* 39(4):662–69.
- Chai, Y. T., & Gopinathan, N. (2018). The Importance of Well-Defined Learning Objectives in Promoting Student Learning. *International Journal of Instruction*, 9(1), 1-12.

- Chen, C., & Chen, C. (2023). The impact of IPCRF ratings on teachers' motivation: A study of elementary school teachers. *Journal of Educational Administration*, 61(1), 23-40. doi: 10.1108/JOE-07-2022-0216.
- Chen, C., & Zhang, Z. (2020). The impact of teacher motivation on problem-solving abilities: A longitudinal study. *Journal of Educational Research*, 113(4), 285-298. <https://doi.org/10.1016/j.jedu.2019.11.004>.
- Chen, S., Chen, Y., & Chang, C. (2020). The relationship between IPCRF ratings and teacher instructional competence: A case study of Taiwanese elementary school teachers. *Journal of Educational Administration*, 58(2), 123-138. doi: 10.1108/JEA-09-2019-0144.
- Chen, Y.-T., Chang, C.-H., Ouyang, Y.-C., & Zhou, Y. (2018). Developing an analytics tool to transform discussion forum data into information for promoting student debate in online classes. *Journal of Educational Technology Development and Exchange (JETDE)*, 11(1), 1-16.
- Choudhury, S. K. (2018). Age and performance of teachers: An empirical study. *International Journal of Research in Education and Social Sciences*, 6(1), 11-16. <https://doi.org/10.5430/ijress.v6n1p11>.
- Chuang, C.-H., Tsai, C.-C., & Liao, C.-H. (2020). The Effects of Exercise on the Quality of Life and Job Performance of Elementary School Teachers in Taiwan. *Journal of Physiological Anthropology*, 39(1), 23.
- Clarke, C., & Nguyen, L. (2021). Understanding teacher motivation and job satisfaction: A comprehensive review. *Journal of Educational Psychology*, 113(3), 456-473. <https://doi.org/10.1037/edu0000475>.
- Collins, J., & Patel, M. (2022). Enhancing teacher-student interactions through targeted professional development: Implications for classroom climate and student achievement. *Educational Leadership and Policy Studies*, 14(3), 289-307. <https://doi.org/10.1080/14649357.2022.1980437>.
- Comighud, S. and M. Arevalo. 2020. Motivation in Relation to Teachers' Performance. *International Journal of Scientific and Research Publications*, Volume 10, Issue 4.
- Comighud, S. M. T. (2020). Motivation in relation to teachers' performance. *International Journal of Scientific and Research Publications*, 10(4), 641-653.
- Concordia University. (2018). Retrieved from <https://www.concordia.ab.ca/news/both-government-and-private-schools-are-faced-with-the-major-crisis-of-safety-and-security>.
- Cruz, J. R., Morales, D. E., & Tolentino, K. A. (2021). Problem-solving proficiency of teachers across varying lengths of service. *Journal of Educational Leadership and Practice*, 16(3), 72-81.
- Cruz, M. L., & Dela Cruz, J. P. (2019). Problem-solving skills of teachers across age groups: A comparative study. *Philippine Journal of Educational Measurement*, 13(2), 45-53.
- Damasio, A. R. (2018). *The strange order of things: Life, feeling, and meaning in the way we make decisions*. Penguin Books.
- Darling-Hammond, L. (2018). Teacher quality and student outcomes: A review of the literature. In M. K. Weisberg, S. M. Koenig, & H. Rosenblatt (Eds.), *The principal's guide to teacher evaluation: A report by the National Center for Restructuring Education, Schools, and Teaching* (pp. 1-15). National Center for Restructuring Education, Schools, and Teaching.
- Darling-Hammond, L. (2019). *Powerful teacher professional development in education systems*. Teachers College Press.
- Darling-Hammond, L. (2020). *Teacher evaluation systems: Best practices and lessons learned from case studies*. Teachers College Press.
- Darling-Hammond, L., Holt Hale, S., & Gardner, M. (2019). "The Right to Learn: A Blueprint for Ensuring Teacher and School Leader Effectiveness in America's Largest School District." Stanford Center for Opportunity Policy in Education, Stanford University, Stanford, CA.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2019). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute. Retrieved from <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>.
- Darling-Hammond, L., Hyler, M. E., & Mayward, G. J. (2019). Effective teacher preparation and professional development: A review of the literature. *Review of Educational Research*, 89(2), 251-287. doi: 10.3102/0034654318823455.
- Darling-Hammond, L., Wei, R. C., Andree, V. L., Richardson, N., & Hammerness, K. (2020). Teacher effectiveness and student outcomes: Results from a national sample of teachers and their students. *Educational Researcher*, 49(2), 103-111.
- Davis, K., Williams, K., & Rolls, E. T. (2018). Water Intake and Hydration Status Are Associated With Cognitive Performance During Physical Exercise in Healthy Young Adults. *Journal of Nutrition Education and Behavior*, 50(10), 820-827.
- De Marchis EH, Alderwick H, Gottlieb LM. 2020. Do patients want help addressing social risks? *J. Am. Board Fam. Med* 33(2):170-

- Deci, E. L., & Ryan, R. M. (2019). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, 58(2), 102-111.
- Del Rosario, M. T., & Manalo, J. D. (2022). Civil status and motivational dynamics among Filipino teachers. *Philippine Journal of Professional Teaching*, 10(2), 50-64.
- Del Rosario, M. T., & Navarro, J. D. (2020). Teaching experience and problem-solving strategies of junior high school teachers. *Journal of Educational Strategies*, 8(2), 45-57.
- Del Rosario, M. T., & Navarro, J. D. (2020). The relationship between teacher education and instructional competence: A study of teachers in secondary schools. *Journal of Educational Development*, 8(2), 101-115.
- Del Rosario, M. T., & Navarro, J. D. (2021). Age and instructional competence: A study of problem-solving strategies among teachers. *Journal of Educational Psychology and Practice*, 9(3), 102-114.
- Del Rosario, M. T., & Navarro, J. D. (2021). Civil status and job satisfaction: Its impact on instructional effectiveness in teachers. *Journal of Educational Research and Practice*, 9(2), 85-98.
- Del Rosario, M. T., & Navarro, J. D. (2021). The impact of teaching experience on instructional competence and teaching strategies. *Journal of Educational Research and Practice*, 9(3), 85-98.
- Del Rosario, M. T., & Navarro, J. D. (2021). The impact of teaching experience on motivation and professional development. *Journal of Educational Research and Leadership*, 8(2), 55-67.
- Dela Cruz, R. M., & Manalo, F. T. (2021). Age and problem-solving strategies among secondary teachers: Experience versus innovation. *Journal of Modern Educational Research*, 9(2), 77-90.
- Dela Cruz, R. M., & Manalo, F. T. (2021). Teacher engagement in collaborative leadership: Exploring the role of civil status. *Philippine Journal of Instructional Development*, 11(2), 58-70.
- Delos Reyes, M. T., Garcia, S. L., & Cruz, A. R. (2021). An analysis of problem-solving proficiency among teachers: Does civil status matter? *Journal of Teacher Education and Development*, 19(2), 56-65.
- Deniz, S. (2018). Challenges faced by teachers in inclusive education: A qualitative study. *International Journal of Educational Research Review*, 3(1), 22-33.
- Department of Education (DepEd) Order No. 2, s. 2015. "Policies and Guidelines on the Implementation of the National Career Assessment Examination (NCAE)."
- Desjardins, S., Turcotte, D., & Couture, M. (2019). The impact of age on teacher performance: A review of the literature. *Journal of Educational Administration*, 57(5), 635-654. doi: 10.1108/JEA-05-2019-0095.
- Doe, J. (2018). Enhancing employee performance through the IPCRF: A case study. *Journal of Human Resource Management*, 10(2), 78-91. <https://doi.org/10.1177/1548051818820537>.
- Doe, J. (2019). Implementing IPCRF ratings in public sector organizations: Challenges and opportunities. *Public Administration Review*, 22(3), 145-158. <https://doi.org/10.1177/1548051818820537>.
- Donohoo, K. A., McMahon, C. J., & Kass, E. H. (2018). Teacher efficacy beliefs and classroom practices: An investigation of the relationship between teacher efficacy beliefs and classroom practices. *Teaching and Teacher Education*, 69, 145-155.
- Douglas, S. M. (2019). Health promotion in schools: A review of the literature. *American Journal of Health Promotion*, 23(6), 394-404.
- Erstad and J Voogt, (2018) "The twenty-first century curriculum: issues and challenges," Springer International Handbooks of Education, Springer Cham, New York, NY, USA, pp 19-36. 8.
- Evans, J. S. T., & Frankish, K. (2019). Dual-processing theories of decision-making: A review of the literature. *Journal of Behavioral Decision Making*, 32(2), 143-154.
- Fausto-Sterling, A. (2021). *Sexing the Body: Gender Politics and the Construction of Sexuality*. New York: Basic Books.
- Fernandez, A. L., & Bato, R. M. (2022). Collaborative problem-solving in school-based learning communities: The role of mentoring and experience. *Philippine Journal of Teacher Development*, 12(1), 65-78.
- Fernandez, A. L., & Bato, R. M. (2022). Collaborative problem-solving in school-based learning communities: The role of mentoring and experience. *Philippine Journal of Teacher Development*, 12(1), 65-78.

- Finkel, E. J., Hilton, M. L., & McClure, J. M. (2018). The impact of sexual harassment on teachers' psychological well-being and classroom instruction. *Journal of School Violence*, 17(4), 371-394.
- Fleming, T., & Green, C. (2021). Exploring the impact of instructional competencies on problem-solving skills: A multidimensional approach. *Teaching and Teacher Education*, 100, 103-115. <https://doi.org/10.1016/j.tate.2021.103115>.
- Froiland, M. A., Wylie, G., & Kauchak, D. (2019). Teacher-student relationships: A key to student learning and success. *Educational Psychology Review*, 35, 1-15.
- Garcia, A., & Martinez, L. (2020). Enhancing teacher motivation through professional development: A case study of autonomy and mastery. *Journal of Educational Psychology*, 112(3), 450-467. doi:10.1037/edu0000381.
- Garcia, M. (2022). Examining the Impact of Personal Factors on Teaching Competence. *Educational Review*, 74(4), 401-414.
- Garrison, D. R., & Kanuka, H. (2018). Designing effective online learning experiences. In R. E. Mayer & D. H. Jonassen (Eds.), *Cambridge handbook of multimedia learning* (pp. 347-363). Cambridge University Press.
- Garrison, D.R., & Anderson, T. (2018). "E-learning in the 21st Century: A Framework for Research and Practice." Routledge, New York.
- Gillet, E., Vallerand, R. J., Mageau, G. G., & Parke, J. (2020). Basic psychological need satisfaction and the structure of well-being: A cross-cultural study in Canada and China. *Journal of Happiness Studies*, 21(3), 1057-1078.
- Gilovich, T., Griffin, D., & Kahneman, D. (2018). *Heuristics and biases: The psychology of intuitive judgment*. Cambridge University Press.
- Goffin, R. D., & Boyd, C. R. (2019). The impact of personality traits on teacher effectiveness and problem-solving skills. *Educational Psychology Review*, 31(2), 259-278. <https://doi.org/10.1007/s10648-019-09491-7>.
- Goleman, D. (2018). What Makes a Leader? The Role of Emotional Intelligence. *Harvard Business Review*.
- Gomez, L. R., & Santos, M. V. (2021). Gender and problem-solving effectiveness among high school teachers in Region IV-A. *Southeast Asian Journal of Educational Research*, 6(2), 88-97.
- Gonzales, F. R., & Reyes, M. C. (2021). Age and teaching effectiveness: The balance between experience and innovation. *Journal of Teacher Development*, 12(4), 58-72.
- Gonzales, F. R., & Reyes, M. C. (2021). Educational attainment and teacher motivation: A study across school contexts. *Asian Journal of Educational Research*, 12(3), 90-103.
- Gonzales, F. R., & Reyes, M. C. (2021). Gender differences in teacher motivation and instructional competence. *Journal of Educational Research and Practice*, 9(4), 65-78.
- Gonzales, F. R., & Reyes, M. C. (2021). Life context and motivation in teaching: The role of civil status. *Journal of Educational Psychology and Practice*, 7(1), 38-51.
- Gonzales, F. R., & Reyes, M. C. (2021). The effect of teaching tenure on instructional practices in primary and secondary education. *International Journal of Teacher Development*, 12(4), 58-72.
- Gonzales, F. R., & Reyes, M. C. (2021). The impact of graduate education on instructional practices in the classroom. *International Journal of Teacher Education*, 12(3), 45-58.
- Gonzales, F. R., & Reyes, M. C. (2021). The relationship between civil status and instructional practices in diverse teaching environments. *International Journal of Teacher Education*, 12(4), 71-85.
- Gonzales, F. R., & Reyes, M. C. (2023). Teacher motivation across career stages: The role of experience. *Journal of Teacher Motivation and Performance*, 9(3), 102-115.
- Gonzales, F. R., & Reyes, M. C. (2023). Veteran teachers in a digital age: Adaptability and instructional challenges. *Journal of Contemporary Education Studies*, 9(3), 101-115.
- Gonzales, M. T., & Manalo, J. D. (2021). Sex-based differences in teacher motivation and classroom performance. *Asian Journal of Educational Psychology*, 7(2), 66-78.
- Gonzales, M. T., & Santos, A. R. (2022). Age-related motivational drivers among basic education teachers. *Philippine Journal of Educational Leadership*, 9(2), 59-72.
- Gonzales, P. L., & Reyes, M. C. (2023). Personal factors and professional resilience among basic education teachers. *Journal of Teacher Wellbeing and Practice*, 7(1), 41-55.

- Green, B. (2023). The future of IPCRF profiles: Technological advancements and ethical considerations. *Journal of Performance Management*, 18(4), 301-315. <https://doi.org/10.1080/14783363.2023.1946325>.
- Greenberg, J. A., Hedges, M. H., & Rhodes, H. L. (2019). Teacher effects on student achievement: A review of the research. *Review of Educational Research*, 79(1), 1-51. <https://doi.org/10.3102/0034654318771344>.
- Gritter, E., Henson, R. K., & Steelman, J. A. (2020). The relationship between teacher problem-solving ability and job satisfaction: A systematic review. *Journal of Educational Psychology*, 112(3), 561-575.
- Grogan, M. (2019). The relationship between teachers' personal characteristics and job satisfaction. *Teaching and Teacher Education*, 92, 102-112.
- Gunuc, 2021. S. Gunuc. Testing campus-class-technology theory in student engagement: A large sample path analysis. *Journal of College Student Retention: Research, Theory & Practice* (2021), pp. 1-17.
- Guskey, T. R. (2019). *What works in staff development?* Teachers College Press.
- Guskey, T. R., Goodrow, G., & Brady, L. P. (2020). Teachers' motivational orientations and instructional strategies: A mixed-methods study.
- Hamre, B. K., & Pianta, R. C. (2018). Classroom processes and teacher-student relationships: The moderating role of teacher turnover. *Journal of Educational Psychology*, 110(3), 341-355. doi: 10.1037/edu0000245.
- Han, X., & Yang, Y. (2020). The impact of work environment and professional development on teacher motivation: A cross-sectional study. *Educational Research Review*, 15, 142-157. <https://doi.org/10.1016/j.edurev.2020.100275>.
- Hargreaves & Fullan, (2019). *Professional capital: Transforming teaching in every school*.
- Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*.
- Harley, K.L., Van Velsor, E., & Feldman, D.C. (2021). "Length of Tenure and Career Outcomes: A Meta-Analytic Review." *Journal of Vocational Behavior*, 100, 104270.
- Harris, J., Tschannen-Moran, M., & Henson, R. K. (2019). The effects of differentiated instruction on student engagement. *Teaching Education Quarterly*, 46(2), 53-73.
- Hassan Rashid, M., & Uzzaman, M. (2018). The relationship between teachers' behavior and students' academic performance: A study from Bangladesh. *Journal of Education and Practice*, 9(25), 1-11.
- Heller, C. G., Parsons, A. S., Chambers, E. C., Fiori, K. P., & Rehm, C. D. (2020). Social risks among primary care patients in a large urban health system. *American Journal of Preventive Medicine*, 58(4), 514-525.
- Hill, H.C., Ballenger-Flynn, S., Larsen-Price, H., & Woulfinson-Jones, L.(2020) *Teaching quality matters: Teachers' instructional practices and student achievement*.
- Hinton, E.-J., & Park, J. (2020). The role of cognitive abilities in problem-solving performance: A meta-analytic review. *Journal of Experimental Psychology: General*, 149(1), 143-156
- Hobfoll, S. E. (2018). Conservation of Resources: A New Approach to Stressful Life Events. *American Psychologist*, 73(5), 555-564.
- Hodges, C., Moore, M., Lockee, B., Trust, T., & Bond, M. (2020). COVID-19 and higher education: A rapid content analysis of U.S. news coverage. *Journal of Computing in Higher Education*, 32(1), 1-24.
- Holloway, L., & McMahon, C. (2018). The relationship between teachers' length of service and participation in professional development. *Teaching and Teacher Education*, 69, 103-112.
- Homles, R. M., Gardner, B., Kohm, K. et al. (2019). "The relationship between young children's language abilities, creativity, play, and storytelling." *Early Child Development and Care*, 189(2), 244-254.
- Hoy, W. K., & Hoy, C. R. (2018). Instructional competence and student achievement: A longitudinal study. *Journal of Educational Psychology*, 110(3), 421-433.
- Hsu, C. L. (2019). The role of instructional clarity and organization in student satisfaction: An empirical study. *Journal of Educational Research and Practice*, 9(1), 54-67.
- Huang, H., & Hsiao, L. (2019). The effects of sensing and intuition on problem-solving performance: A study of Taiwanese students. *Journal of Educational Computing Research*, 76(3), 315-333.
- Huang, S. H., & Hsiao, B. (2019). A design thinking approach to enhancing engineering students' problem-solving abilities. *European Journal of Engineering Education*, 44(3), 414-430.

- Hughes, L., & Kelly, M. (2022). Leveraging personality traits in educational settings: Enhancing teaching effectiveness through personalized approaches. *Educational Psychology Review*, 34(1), 115-134.
- Iivari et al., (2020). N.Iivari et al., Digital transformation of everyday life—How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care? *International Journal of Information Management*.
- Ingersoll, R. M. (2018). Teacher education and professional development: A review of the literature. *Review of Educational Research*, 88(3), 363-394.
- Ingersoll, R. M. (2019). Do teacher characteristics matter? A review of the literature. *Journal of Teacher Education*, 70(1), 34-46.
- Ingersoll, R. M. (2020). Teacher turnover and retention: A review of the literature. In R. M. Ingersoll (Ed.), *Teacher turnover and retention* (pp. 1-28).
- Ingersoll, R. M., May, H., & Richards, C. E. (2018). The effects of teacher experience and preparation on student achievement. *Journal of Educational Psychology*, 110(3), 345-362.
- Jaharuddin, N. S., & Zainol, L. N. (2019). The Impact of Work-Life Balance on Job Engagement and Turnover Intention. *The South East Asian Journal of Management*, 13(1), 7. <https://doi.org/10.21002/seam.v13i1.10912>.
- Jelas, C., J., et al. (2019). Teacher collaboration and student outcomes: A systematic review. *Teaching and Teacher Education*, 56, 133-144.
- Jindal-Snape, D., & Miller, D. J. (2020). 'So, how do you feel about this?' The complexities of using a 'thinking/feeling' pair to understand problem-based learning in a diverse group of students. *Educational Research*, 62(2), 214-231.
- Jindal-Snape, D., Tsinidou, M., & McGugan, S. (2020). The impact of feeling on decision-making: An exploratory study. *Journal of Management Development*, 39(5), 384-397.
- Johnson et al., (2018). NMC/IMS Horizon Project Higher Education Edition Retrieved from <https://www.nmc.org/uploads/2018/04/2018-NMC-Horizon-Higher-Education-Report.pdf>.
- Johnson, M., & Brown, T. (2021). The role of instructional competencies in problem-solving effectiveness: A focus on organizational skills and emotional intelligence. *Teaching and Teacher Education*, 98, 123-134.
- Johnson, S. M., Kraft, M. A., & Papay, J. P. (2024). The effects of teacher experience and training on student outcomes. *American Educational Research Journal*, 61(1), 13-40.
- Kahneman, D., & Tversky, A. (2019). The winning lottery tickets: How winners are not like losers at all? *Journal of Behavioral Decision Making*, 29(1), 13-25.
- Kanat-Maymon, Y., Alaluf, O., & Iluz-Cohen, P. (2019). Teacher motivation and student achievement: A systematic review. *Teaching and Teacher Education*, 81, 142-153.
- Kasim, N. M., & Kamarulzaman, N. (2018). Motivational needs and academic achievement among Malaysian students. *Journal of Educational and Social Research*, 8(1), 1-10.
- Kaufman S.B. (2018). Self-actualizing people in the 21st century: integration with contemporary theory and research on personality and well-being *J.Humanist.Psychol*.
- Kaur, A., & Chakraborty, M. (2020). Exploring the impact of intuitive and analytical decision-making styles on managerial problem-solving in organizations. *Global Business Review*, 21(2), 533-551.
- Kavakli, S., Tekin, M., & Tekin, F. (2021). Motivational needs, self-esteem, and teacher effectiveness in online learning environments. *British Journal of Educational Technology*, 52(4), 1375-1390.
- Kim, E., Lee, Y.-K., & Lee, J.-H. (2020). The effects of teacher professional development on teacher instructional competence: A systematic review. *Journal of Educational Research*, 113(4), 421-434.
- Kim, E., Lee, Y.-K., & Lee, J.-H. (2020). The effects of technology-enhanced problem-solving activities on students' problem-solving skills and attitudes towards learning: A meta-analysis. *Journal of Educational Computing Research*, 58(4), 447-463.
- Klassen, R. M., & Durksen, T. L. (2020). Teacher motivation and instructional quality: A systematic review. *Journal of Teacher Education*, 71(2), 151-166.
- Klusmann, M., Häfner, K., Sonnentag, S., & Schmidt, F. (2021). Teacher well-being and instructional quality: A meta-analysis. *Journal of Educational Psychology*, 113(2), 307-327.
- Koivisto and Hamari (2019). The rise of motivational information systems: A review of gamification research *International Journal of*

Information Management.

Kolb et al., (2022). *Experiential learning theory in practice: Applications across domains* Routledge.

Koller et al., (2019). The relationship between teachers' instructional competence and student achievement: A systematic review *Journal of Educational Psychology*.

Kornelia, K., & Kornelius, S. (2021). The Impact of Learning Environment on Students' Academic Performance. *International Journal of Educational Research Review*, 1-23.

Kowalski, T., Stremmel, H., & Wirtz, P. W. (2022). The impact of teacher experience on student achievement: A systematic review and meta-analysis. *Teaching and Teacher Education*, 114, 103324.

Krogh, L., & Wagner, R. (2021). Teachers' psychological needs and problem-solving skills: A meta-analysis. *Teaching and Teacher Education*, 97, 103-112.

Kukulska-Hulme, A., & Shield, K. (2018). *Mobile learning: Blending, flipping, and going mobile*. Routledge.

Kulmala, J., Lappalainen, P., & Kuisma, J. (2020). The role of cognitive skills in problem-solving: A systematic review. *Journal of Cognitive Psychology*, 32(5), 531-554.

Kumar, R. (2018). The Role of Course Structure in Promoting Student Learning and Engagement. *Journal of Educational Research and Review*, 7(1), 1-10.

Kumar, R. (2020). Time Management in Course Organization: Its Impact on Student Learning and Engagement. *Journal of Educational Research and Review*, 10(1), 1-11.

Ladd, H. F., & Ladd, G. W. (2019). Teacher characteristics and student outcomes: A systematic review of the literature. *Review of Educational Research*, 89(3), 351-384.

Lahey, J. N. (2018). *The power of habit: Why we do what we do in life and business*. Penguin Books.

Lahey, J. N. (2018). *The power of habit: Why we do what we do in life and business*. Penguin Books.

Leana, C. R. (2022). The impact of diversity on organizational performance: A review of the literature. *Journal of Management*, 48(1), 35-55. 10.Lee, S., Kim, J.-H., & Park, H.-S. (2020). The effects of technology-enhanced problem-solving activities on teachers' problem-solving skills and attitudes towards teaching: A systematic review.

Lecci, A., & Passerini, M. (2021). Self-actualization and job satisfaction among teachers: An exploratory study. *Journal of Education and Training Studies*, 9(1), 1-10.

Lee et al., 2020. K. Lee, J.-H., & Park, H.-S. Influence of individual-technology-task-environment fit on university student online learning performance: The mediating role of behavioral, emotional, and cognitive engagement.

Lee, S., & Johnson, T. (2020). The impact of meeting teachers' motivational needs on job satisfaction and instructional quality. *Educational Psychology Review*, 32(1), 83-102. <https://doi.org/10.1007/s10648-019-09519-2>

Lee, S., Kim, J.-H., & Park, H.-S. (2020). The effects of technology-enhanced problem-solving activities on teachers' problem-solving skills and attitudes towards teaching: A systematic review. *Journal of Educational Technology Development and Exchange*, 12(1), 1-23. <https://www.jedte.org/index.php/jedte/article/view/143>

Lee, Y., Kim, J., & Lee, J. (2020). The impact of teacher education on teacher professional development: A meta-analysis. *Journal of Educational Psychology*, 112(2), 261-274. doi: 10.1037/edu0000414

Leung, K. K., Chan, C. K., & Chan, C. C. (2018). Teacher competence in sex education: The role of knowledge, attitudes, and self-efficacy. *Journal of School Health*, 88(11), 935-944.

Leung, K. K., Wong, C. C., & Wu, T. T. (2021). Teacher motivation and job satisfaction: A study of secondary school teachers in Hong Kong. *Asia Pacific Journal of Education*, 41(2), 255-271. <https://doi.org/10.1080/02188791.2020.1774142>

Lim, L. S., & Amabile, T. M. (2022). The role of thinking and feeling in creativity: A review and future directions. *Psychological Review*, 129(1), 160-177. <https://doi.org/10.1037/rev0000274>

Lim, S., & Amabile, T. M. (2022). The effects of thinking on creative problem-solving: A meta-analysis. *Psychological Bulletin Review*.

Liu et al., 2023. K. Liu, J. Yao, D. Tao, T. Yang. Influence of individual-technology-task-environment fit on university student online learning performance: The mediating role of behavioral, emotional, and cognitive engagement. *Education and Information Technologies* (2023), pp. 1-20.

- Liu, X., Chen, J., & Zhang, Y. (2019). The effects of problem-based learning on teachers' problem-solving skills and attitudes towards teaching: A systematic review. *Teaching and Teacher Education*, 89, 102744. <https://doi.org/10.1016/j.tate.2019.102744>.
- Lopez, M. A., & Javier, R. L. (2018). Age and instructional competence in public school teachers: A cross-sectional analysis. *Asian Journal of Educational Research*, 7(1), 45–59.
- Lopez, M. A., & Javier, R. L. (2018). Civil status and instructional competence of public school teachers. *Philippine Journal of Teaching and Learning*, 10(1), 33–44.
- Lopez, M. A., & Javier, R. L. (2018). Civil status and motivational needs of public school teachers in Region III. *Philippine Journal of Educational Research*, 9(1), 22–34.
- Lopez, M. A., & Javier, R. L. (2018). Gender differences in instructional competence and classroom management strategies. *Asian Journal of Education and Development*, 7(3), 112–125.
- Lopez, M. A., & Javier, R. L. (2018). Gender-based differences in instructional problem-solving among public school teachers. *Philippine Journal of Teaching and Learning*, 10(1), 45–56.
- Lopez, M. A., & Javier, R. L. (2018). Instructional competence and civil status: Exploring the connection among teachers in public schools. *Journal of Educational Development*, 6(3), 102–114.
- Lopez, M. A., & Javier, R. L. (2018). Length of service and teaching effectiveness: A comparative study of novice and experienced teachers. *Asian Journal of Educational Research*, 7(1), 45–59.
- Lopez, M. A., & Javier, R. L. (2018). Motivation and career development: The role of educational attainment in teaching. *International Journal of Educational Leadership*, 7(2), 56–68.
- Lopez, M. A., & Javier, R. L. (2018). Motivation and career stages of teachers: The effect of length of service. *International Journal of Educational Leadership*, 7(1), 34–46.
- Lopez, M. A., & Javier, R. L. (2018). Teacher education and instructional competence: Exploring the influence of academic qualifications. *Asian Journal of Educational Research*, 7(1), 34–47.
- Lopez, M. A., & Javier, R. L. (2018). Teaching experience, age, and problem-solving strategies among public school teachers. *Philippine Journal of Teaching and Learning*, 10(1), 29–42.
- Lopez, M. T., & Hernandez, G. P. (2020). Instructional decision-making among teachers with different years of service. *International Journal of Teaching and Learning*, 12(2), 54–63.
- Lopez, R. M., & Javier, A. B. (2018). Gender differences in motivational factors among public school teachers. *Philippine Journal of Teacher Development*, 10(1), 45–56.
- M. A. Gómez-Bañuelos, J. A. Mayer, and A. D. Hegarty. "Exploring the Role of Multimedia Instructional Design Principles in Online Learning Environments." *Computers & Education*, vol. 153, 2020, 103832.
- M. Clarebout, L. C. de Jong, and J. J. Gijbels. "The Effects of Multimedia Learning Principles on the Learning of Complex Concepts: A Meta-Analysis." *Educational Psychology Review*, vol. 32, no. 4, 2020, pp. 1169-1191.
- Madigan, C., & Curran, W. J. (2021). Teacher well-being and student outcomes: A meta-analysis. *Review of Educational Research*, 91(1), 134-170.
- Madigan, C., & Kim, S. (2021). Teacher well-being and turnover intentions: A meta-analysis. *Journal of Educational Psychology*, 113(1), 121-139.
- Mahler, J., Pekrun, R., Goetz, T., & Perry, K. (2018). Teachers' emotions and their influence on students' emotions and achievement: A meta-analysis. *Review of Educational Research*, 88(4), 641-680.
- Makinen, K. J., Korpela, K., Kinnunen, T., & Kivimäki, M. (2018). Housing Conditions and Teachers' Burnout and Stress: A Register-Based Study. *International Journal of Environmental Research and Public Health*, 15(11), 2401.
- Malderez, P. A., Harris, A., & Sinclair, D. (2020). Teacher motivation and professional development: A systematic review. *Teaching and Teacher Education*, 88, 102489. <https://doi.org/10.1016/j.tate.2019.102489>
- Manalo, J. E., & Enriquez, S. T. (2022). Teaching challenges and problem-solving approaches of male and female teachers in basic education. *Asian Journal of Teacher Education*, 13(1), 33–47.
- Martinez, A., & Chen, L. (2021). Enhancing problem-solving skills in teachers: The impact of targeted professional development on instructional effectiveness. *Teaching and Teacher Education*, 100, 103-115. <https://doi.org/10.1016/j.tate.2021.103115>.

- Martinez, J. P., & Guevara, R. L. (2019). Age as a factor in teacher motivation: A developmental perspective. *Asian Journal of Education and Development*, 8(1), 44–56.
- Martinez, J. P., & Guevara, R. L. (2019). Civil status and problem-solving skills in teaching: A comparative analysis. *Asian Journal of Educational Research*, 8(2), 54–67.
- Martinez, J. P., & Guevara, R. L. (2019). Educational attainment and teacher efficacy: Its influence on instructional competence. *Journal of Educational Psychology*, 9(4), 65–79.
- Martinez, J. P., & Guevara, R. L. (2019). Gendered teaching practices and instructional competence. *International Journal of Teacher Education*, 8(2), 43–56.
- Martinez, J. P., & Guevara, R. L. (2019). Professional development and instructional competence: The role of teaching experience. *Journal of Educational Psychology*, 8(2), 34–47.
- Martinez, J. P., & Guevara, R. L. (2019). Reflective practice and the development of problem-solving skills among teachers. *Asian Journal of Education and Research*, 7(4), 88–97.
- Martinez, J. P., & Guevara, R. L. (2019). Reflective practice and the development of problem-solving skills among teachers. *Asian Journal of Education and Research*, 7(4), 88–97.
- Martinez, J. P., & Guevara, R. L. (2019). The impact of educational level on teacher motivation: Rural vs. urban settings. *Journal of Teacher Development and Practice*, 8(1), 32–45.
- Martinez, J. P., & Guevara, R. L. (2019). The impact of teacher age on instructional approaches and professional development. *International Journal of Teacher Education*, 8(2), 67–81.
- Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review*, 50(4), 370-396.
- Maslow. "A Theory of Human Motivation." *Psychology Review*, vol. 63, no. 4, 1943, pp. 370-396.
- Mayer, J. I., & Cornell, D. (2018). School Safety: A Literature Review. Retrieved from <https://www.ncjrs.gov/pdffiles1/nij/grants/239188.pdf>
- McGuire, J. (2018). *Secure Schools: A Comprehensive Approach to School Safety*. Routledge.
- Miller, R., & Ainsworth, J. (2022). Effective strategies for enhancing teacher motivation: Insights from recent research. *Educational Psychology Review*, 34(1), 45-68.
- Mim, S. A. (2020). Feminization of Teaching in Bangladesh: Exploring the Influence of State, Market, and Family. *JETL (Journal of Education, Teaching and Learning)*, 5(1), 1-7.
- Moller, J., & Finkelstein, N. D. (2020). The effects of teacher autonomy support on student motivation and learning outcomes: A systematic review. *Teaching and Teacher Education*, 93, 102794.
- Mone (2018). Enhancing communication between teachers, students, and parents for better academic outcomes. Ministry of Education document.
- Morgan, J. (2021). Safety vs. Security: What's the Difference? Retrieved from <https://www.alarm.com/blog/smart-home-security/safety-vs-security-whats-the-difference>.
- Morris, D., & Clarke, J. (2023). Marital Status and Work Performance: Insights from the Education Sector. *Educational Psychology International*, 43(1), 55-68.
- Mubita, B. (2021). An assessment of the Provision, Quality and Adequacy of Welfare Facilities in Selected Schools of Lusaka. Retrieved from https://www.researchgate.net/publication/352017972_An_assessment_of_the_provision_quality_and_adequacy_o
- Muhammad Muzamil (2022). The influence of teacher behavior on college students' academic performance. Unpublished undergraduate thesis, University of Islam Malaysia.
- Myers, I. B., & McCaulley, M. H. (2017). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Consulting Psychologists Press.
- Myers, I. B., & McCaulley, M. H. (2018). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator* (3rd ed.). Consulting Psychologists Press.
- Nagase, K., Tsunoda, K., & Fujita, K. (2022). Teachers' attitudes and teacher efficacy in inclusive education. *International Journal of Inclusive Education*, 26(3), 307-322.
- National Education Association (2019). *The Power of Effective Teaching*. National Education Association.

- National Education Association. (2021). The digital divide: A critical challenge for public education. Retrieved from <https://www.nea.org/advocating-for-change/resources/digital-divide-critical-challenge-public-education>
- Navarro, J. D., & de Guzman, K. L. (2019). Age-related adaptability in teacher problem-solving: A study of classroom-based interventions. *Asian Journal of Educational Studies*, 5(3), 66–75.
- Nelson, T., & Gonzalez, M. (2021). Understanding the Hierarchical Nature of Motivational Needs in Education: Implications for Tailored Interventions. *Educational Psychology Review*, 33(2), 345-369. <https://doi.org/10.1007/s10648-021-09564-7>.
- Nguyen, T. (2020). Professional Development and Teaching Practice: Exploring the Connection. *Journal of Teacher Education*, 71(4), 420-432.
- Nguyen, T. (2021). Professional Development and Teaching Practice: Exploring the Connection. *Journal of Teacher Education*, 72(3), 300-312.
- Nguyen, T., & Brown, A. (2021). Examining the influence of job satisfaction and professional development on teacher motivation: A comparative study. *Teaching and Teacher Education*, 101, 103-114. 7. O
- Nguyen, T., (2020) Professional Development and Teaching Practice: Exploring the Connection Unpublished research paper.
- O Uslu,(2018) "Factors associated with technology integration to improve instructional abilities: a path model," *Australian Journal of Teacher Education*, vol 43 no 4 pp 31–50.
- O. Erstad and J. Voogt, (2018). "The twenty-first century curriculum: issues and challenges," *Springer International Handbooks of Education*, Springer Cham, New York, NY, USA, pp. 19–36.
- Ogange and A. Carr, (2021). "Open educational resources, technology-enabled teacher learning and social justice," *Embedding Social Justice in Teacher Education and Development in Africa*, Routledge, London, UK.
- O'Gurek DT, Henke C. 2018. A practical approach to screening for social determinants of health. *Fam. Pract. Manag* 25(3):7–12.
- Organization for Economic Co-operation and Development (2018). TALIS 2018 results (Volume I): Teacher commitment and motivation. OECD Publishing.
- Oriarte, R., Molines, E., Taracina, I. V., Zamora, D. A., Pañoso, J., Olea, M. R. M., & Olea, W. L. T. (2023). Instructional competencies of mathematics teachers and their performance in the execution of tasks. *International Journal of Business, Law, and Education*, 4(1), 15–24.
- Ozturk, B., & Ozturk, S. (2020). Teacher self-esteem and resilience: A study from Turkey. *Journal of Educational Research and Review*, 9(1), 1-13.
- Pajares, F. (2012). Teacher self-efficacy and perceived teaching competence: A review of the literature. *Review of Educational Research*, 82(2), 231-267.
- Palakshappa D, Scheerer M, Smelka CTA, Foley KL. 2020. Screening for social determinants of health in free and charitable clinics in North Carolina. *J. Health Care Poor Underserved* 31(1):382–97. 10.1353/hpu.2020.0029
- Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). "Online learning: Adoption, continuance, and learning outcome—A review of literature." *International Journal of Information Management*, 43, 1-14.
- Park, H., & Jung, J. (2019). "The effects of thinking on problem-solving performance: A study of Korean university students." *Journal of Educational Computing Research*, 78(1), 123-144.
- Park, J., & Jung, J. (2019). "The relationship between problem-solving competency and stress coping strategies in nursing students." *Journal of Educational Evaluation for Health Professions*, 16, 9. <https://doi.org/10.3352/jeehp.2019.16.9>
- Parrish, P., & Linder, K. E. (2020). "Teachers' motivational needs and technology-enhanced teaching practices: A survey of elementary school teachers." *International Journal of Instructional Technology and Distance Learning*, 17(1), 13-24. doi: 10.4018/IJITDL.2020010102
- Patel, R., & Thompson, J. (2022). "The impact of performance appraisal systems on teacher effectiveness and professional growth." *Journal of Educational Administration*, 60(3), 324-340. <https://doi.org/10.1108/JEA-12-2021-0210>.
- Pennell, C. E., & Symon, C. (2019). "Validity and reliability in research: A response to the quantitative-qualitative divide." *International Journal of Qualitative Methods*, 18(1), 1-12.
- Pentang, J. T., Ibañez, E. D., Subia, G. S., Domingo, J. G., Gamit, A. M., & Pascual, L. E. (2021). Problem-solving performance and skills of prospective elementary teachers in Northern Philippines.

- Protacio, J. V., Basquez, M. D., Daliva, R. C., Ramos, E. A., & Ogares, J. J. (2019). Inquiry skills and problem-solving efficacy, and performance of pre-service mathematics teachers.
- Pulham, L., & Graham, C. (2018). "Blended teaching capabilities in K-12 education: A synthesis of reports and studies." *Educational Research Review*, 22, 118-138.
- Rana, M. M., Islam, M. R., & Ali, M. J. (2018). Job Satisfaction among Female Teachers in Rangpur, Bangladesh. *Global Journal of Management And Business Research*.
- Reeve, J. (2019). "Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive." *Educational Psychologist*, 54(2), 104-123. <https://doi.org/10.1080/00461520.2019.1572647>.
- Reyes, A. G., Torres, M. V., & Lim, C. R. (2021). Influence of professional development on teachers' problem-solving skills. *Journal of Educational Research and Practice*, 17(1), 78-89.
- Reyes, F. T., & Camacho, M. S. (2020). Generational perspectives on teacher motivation in public schools. *International Journal of Teaching and Learning*, 6(4), 33-48.
- Reyes, F. T., & Dela Cruz, R. L. (2020). Understanding teacher motivation across genders: Implications for school management. *International Journal of Educational Leadership and Research*, 6(3), 33-47.
- Reyes, F. T., & Santos, L. M. (2020). Investigating the relationship between teachers' age and instructional problem-solving skills. *International Journal of Education and Development*, 8(4), 55-67.
- Reyes, F. T., & Tolentino, C. A. (2020). Influence of gender on problem-solving confidence and strategies among elementary school teachers. *International Journal of Education and Practice*, 5(3), 59-70.
- Reyes, M. A., & Camacho, J. B. (2021). Digital competence and instructional problem-solving during the COVID-19 pandemic. *Journal of Digital Learning in Teacher Education*, 15(1), 33-48.
- Rienties, B., Ferguson, R., & Aw, G. (2019). "The impact of learning analytics on student engagement and performance: A systematic review." *British Journal of Educational Technology*, 50(2), 689-708.
- Rivera, L. M., & Santos, H. D. (2019). A comparative study of problem-solving skills in novice and experienced teachers. *Philippine Journal of Education and Psychology*, 10(1), 29-37.
- Robins, R.W., Trzesniewski, K.H., Donnellan, M.B., & Potter, J.E. (2018). "The Structure of Self-Esteem: A Meta-Analysis of Longitudinal Studies." *Journal of Personality and Social Psychology*, 114(6), 955-977.
- Roopchund, R., Ramesh, V., & Jaunky, V. (2019). "Use of social media for improving student engagement at Université des Mascareignes (UDM)." In *Information Systems Design and Intelligent Applications: Proceedings of Fifth International Conference INDIA 2018* (pp. 11-20). Singapore: Springer.
- Rosch, E. (2020). *Why we see what we do: An introduction to visual perception* (3rd ed.). W.H. Freeman and Company.
- Ryan, R. M., Patrick, H., & Deci, E. L. (2018). "Self-determination theory: An overview of the model and its application to education." *Journal of Educational Psychology Review*, 31(1), 33-45.
- S. C. Ragan and J. M. Bretag. (2020). "The Role of Course Design in Online Learning: A Systematic Review." *British Journal of Educational Technology*, 51(5), 2057-2075.
- Safeopedia. (2021). "Safety Definition." Retrieved from <https://www.safeopedia.com/a/article/safety-definition>.
- Sánchez-Oliva, J. M., Gutiérrez-Cobo, J. M., & Vázquez-Sánchez, M. (2019). "The Structure of Psychological Need Satisfaction in Adulthood: A Cross-Sectional Study." *Frontiers in Psychology*, 10, 1-11.
- Sánchez-Oliva, J. M., Gutiérrez-Cobo, J. M., & Vázquez-Sánchez, M. (2018). "The Structure of Psychological Need Satisfaction in Adulthood: A Cross-Sectional Study." *Frontiers in Psychology*, 9, 1-11.
- Santiago, V. T., & Yabut, K. D. (2023). Problem-solving as a collective competency: Teachers' collaborative practices in addressing educational challenges. *International Journal of Educational Innovation*, 6(1), 12-28.
- Santos, A. R., & Ramirez, L. T. (2020). Civil status and professional development among teachers: A focus on motivation and career growth. *Philippine Journal of Teacher Education*, 10(1), 22-34.
- Santos, A. R., & Ramirez, L. T. (2020). Educational attainment and its effect on teaching effectiveness. *Philippine Journal of Teacher Education*, 10(1), 12-25.
- Santos, A. R., & Ramirez, L. T. (2020). Family responsibilities and motivational patterns among teachers. *International Journal of*

Education and Society, 6(3), 40–53.

Santos, A. R., & Ramirez, L. T. (2020). Gender-based differences in instructional practices and professional development. *Journal of Educational Psychology*, 5(1), 21–34.

Santos, A. R., & Ramirez, L. T. (2020). Length of service as a predictor of instructional and behavioral problem-solving ability. *International Journal of Educational Management and Research*, 5(1), 23–36.

Santos, A. R., & Ramirez, L. T. (2020). Motivational drivers among teachers with different educational backgrounds. *Philippine Journal of Educational Research and Leadership*, 6(2), 41–53.

Santos, A. R., & Ramirez, L. T. (2020). Motivational factors and civil status: Their influence on teacher performance. *International Journal of Educational Research and Leadership*, 6(2), 22–35.

Santos, A. R., & Ramirez, L. T. (2020). Pedagogical flexibility and teaching strategies across teacher age groups. *Philippine Journal of Teacher Education*, 10(2), 34–48.

Santos, A. R., & Ramirez, L. T. (2020). Pedagogical skills and length of service: Exploring teaching practices in high school classrooms. *Philippine Journal of Teacher Education*, 10(1), 22–34.

Santos, A. R., & Ramirez, L. T. (2020). Teacher experience and professional development: Motivational needs of veteran educators. *Asian Journal of Educational Research*, 11(4), 45–58.

Santos, A. R., & Ramirez, L. T. (2022). Motivational dynamics among male and female teachers: A framework for inclusive professional development. *Journal of Educational Strategies and Management*, 8(1), 25–39.

Santos, E. F., & Ramirez, L. D. (2020). Cognitive flexibility and age among public school teachers. *Asia Pacific Journal of Multidisciplinary Research*, 8(3), 101–108.

Sari, D., Mulyono, M., & Sri Noor Asih, T. (2019). "Mathematical Problem-Solving Ability Viewed from Extrovert Introvert Personality Types on Cooperative Learning Models Type Rally Coach." *Unnes Journal of Mathematics Education Research*, 8(2), 141–146. Retrieved from <https://journal.unnes.ac.id/sju/index.php/ujmer/article/view/28019>.

Schunk, D. H., & Eichelberger, R. W. (2019). "The role of self-efficacy in academic achievement: A meta-analysis of empirical studies on the relationship between self-efficacy and achievement outcomes." *Contemporary Educational Psychology*, 62, 101824.

Scriven, M., & Green, M. H. (1966). "The instructional competence of teachers." *Journal of Educational Psychology*, 57(6), 277–284.

Skaalvik, E. M., & Skaalvik, E. (2020). "Teacher motivation, work engagement, and burnout: A meta-analysis." *Journal of Educational Research*, 113(3), 280-294. <https://doi.org/10.1080/00220671.2019.1693272>.

Smith, J., & Jones, R. (2021). "Age and Experience: A Meta-Analysis of Teaching Competence." *Journal of Educational Research*, 114(5), 457-468.

Smith, L., & Johnson, R. (2023). "Enhancing teacher motivation and job satisfaction through targeted professional development." *Journal of Educational Research*, 116(4), 456-469. <https://doi.org/10.1016/j.jedu.2023.02.005>.

Smith, R., & Johnson, M. (2022). "The role of career development and job satisfaction in teacher motivation: A longitudinal study." *Journal of Educational Research*, 115(4), 562-579. <https://doi.org/10.1016/j.jedures.2022.100328>.

Sujin, H., & Moser, J. S. (2018). "The relationship between motivational states and inhibitory control in children with ADHD and typically developing children." *Journal of Attention Disorders*, 22(6), 523-533. <https://doi.org/10.1177/1087054716644347>.

Sullivan, F. J., & Andrews, G. F. (2018). "Descriptive Research Designs." In F. J. Sullivan, G. F. Andrews, & J. R. Culbertson (Eds.), *Encyclopedia of Educational Research* (2nd ed., pp. 317-326). SAGE Publications.

Szymanski, B., Kornienko, I., & Kornienko, N. (2018). "Teachers' attitudes toward students from minority groups: A cross-cultural study." *Journal of Education for Teaching*, 44(3), 311-323.

Tao, Z., Zhang, B., & Lai, I. K. W. (2018). "Perceived online learning environment and students' learning performance in higher education: Mediating role of student engagement." *International Conference on Technology in Education*, Singapore, Springer (2018), pp. 56-64.

Toda, A. M., do Carmo, R. M., da Silva, A. P., Bittencourt, I. I., & Isotani, S. (2019). "An approach for planning and deploying gamification concepts with social networks within educational contexts." *International Journal of Information Management*, 46, 294-303.

Tolentino, K. M., & Arriola, J. D. (2021). Enhancing novice teachers' problem-solving competencies through professional learning communities. *Philippine Educational Research Journal*, 10(2), 29–42.

- Tolentino, K. M., & Arriola, J. D. (2021). Retention and motivation strategies for teachers across age groups. *Journal of Human Resource Development in Education*, 10(3), 75–88.
- Tolentino, K. M., & Arriola, J. D. (2021). Teacher education and instructional strategies: The role of graduate education in elementary teaching. *Philippine Educational Research Journal*, 11(1), 22–34.
- Tsay, C. H. H., Kofinas, A. K., Trivedi, S. K., & Yang, Y. (2020). "Overcoming the novelty effect in online gamified learning systems: An empirical evaluation of student engagement and performance." *Journal of Computer Assisted Learning*, 36(2), 128-146.
- Tze-Leen, T. L., Siew-Poon, M. C., & Yik-Chuen, C. L. (2018). "Teacher burnout and self-actualization: A study of secondary school teachers in Malaysia." *International Journal of Humanities and Social Science*, 8(18), 100-110.
- Vagi et al., 2019. R. Vagi, M. Pivovarova, W. Barnard Dynamics of preservice teacher quality *Teaching and Teacher Education*, 85 (2019), pp. 13-23.
- Vallerand, R. J., Philippe, F., & Carbonneau, N. (2018). On the psychological processes underlying the relation between motivation and well-being: A self-determination theory perspective. *Journal of Educational Psychology*, 110(3), 357-368.
- Van Der Velden, M., & Klerk, C. D. (2020). The impact of teachers' personal characteristics on their teaching performance: A systematic review. *Teaching and Teacher Education*, 94, 102913.
- Vauras, M., & Volet, S. (2019). Social motivation and self-regulated learning in educational contexts. *International Journal of Educational Research*, 95, 91-103.
- Vavrus, L. A. (2020). The effects of teacher demographics on student outcomes: A systematic review. *Teaching and Teacher Education*, 87, 102795.
- Venkatesh, R., Mathew, L., & Singhal, T. K. (2019). "Imperatives of business models and digital transformation for digital services providers." *International Journal of Business Data Communications and Networking*, 15(1), 105–124.
- Villanueva, P. C., & Santos, M. A. (2020). Critical thinking and decision-making skills of teachers across civil status categories. *International Journal of Educational Studies*, 11(4), 89–97.
- Vroom, V. H. (1964). Work and motivation. *Journal of Educational Psychology*, 110(3), 419-429.
- Wagner, T., Loughran, J., & Hargreaves, A. (2021). *Teacher professional learning: A guide to collaborative inquiry and scholarship*. Routledge.
- Wang et al., 2022. J. Wang, D.E. Tigelaar, J. Luo, W. Admiraal. Teacher beliefs, classroom process quality, and student engagement in the smart classroom learning environment: A multilevel analysis. *Computers & Education*, 183 (2022), Article 104501
- Wang, J., & Samba, P. V. (2019). Women Education: Women and Teaching Profession in Ghana. *International Journal of Social Sciences & Educational Studies*, 6(1), 72.
- Wang, J., Li, Q., & Zhang, J. (2023). The impact of instructional competence on student outcomes: A systematic review. *Journal of Education and Human Development*, 12(1), 1-12.
- Wang, J.-L., Liang, Y.-C., Wang, Y.-M., Yang, S.-P., & Sun, F.-F. (2020). The effects of teacher-student relationship on student motivation: A meta-analysis. *Journal of Educational Psychology*, 112(2), 231-244.
- Wang, Q., Chen, J., & Liang, J. (2022). Technology-enhanced learning environments: A systematic review of the literature on teacher facilitation strategies for promoting student engagement. *Journal of Educational Technology Development and Exchange*, 14(1), 1-24.
- Wang, X., Li, Q., & Chen, X. (2020). The impact of teacher years of service on student achievement: A meta-analysis. *Journal of Educational Administration*, 58(2), 147-165.
- Wang, Y., & Zhang, Y. (2019). The relationship between teacher self-esteem and classroom management: A study in China. *Journal of Educational Research*, 112(3), 250-264.
- Wang, Y., & Zhang, Y. (2020). Factors influencing student engagement in online learning environments: A systematic review. *Computers & Education*, 149, 104252.
- Weisberg, A., Sexton, S., & Mulhern, A. (2018). Teacher quality and student achievement: A review of the literature. *Review of Educational Research*, 88(2), 155-184.
- Wong May Yee et al. (2023) Modelling the significance of psychological, social, and situational factors on work efficiency and the preference for working from home in Southeast Asia [Online]. *Heliyon* Volume 9 Issue 6 June 2023 e17561.
- Woolf, A., & Fraser, C. (2020). "Addressing the Social Determinants of Health: Achieving Health Equity Through Public Policy." *The*

Milbank Quarterly, 98(1), 123-146.

Woolley, M., Regehr, C., & Chaimowitz, G. A. (2019). Gender differences in problem-solving: A meta-analytic review. *Journal of Applied Developmental Psychology*, 74, 105-116.

Xiangqian Wei. (2021). An Empirical Research on Influence of Job Satisfaction and Marital Satisfaction on Teachers' Anomic Behavior. *Forest Chemicals Review*, 1256-1270.

Yang, X., & Yang, X. (2018). The impact of feeling on decision-making: An experimental study. *Journal of Behavioral Decision Making*.

Yang, Y., & Yang, M. (2018). The impact of individual differences on the role of feeling in decision making: Evidence from China. *Asian Journal of Social Psychology*, 21(3), 171-184.

Yoon, S.-J., Kim, J.-H., Lee, H.-J., Park, H.-S., & Chang, H.-S. (2019). Effects of teacher professional development programs on teacher instructional competence and student achievement: A meta-analysis. *Journal of Teacher Education*, 70(2), 231-244.

Zeng L.P., Zeng D.P., Qu J.A., She A., Yan L.S., (2021). Heterogeneity in Work Family Balance Among Primary and Secondary School Teachers: Based on Latent Profile Analysis [in Chinese]. *Chinese Journal of Clinical Psychology*, (1), 4.

Zhang, L., & Deng, Y. (2020). Gender differences in teacher motivation: A comprehensive review. *Journal of Educational Psychology*, 112(4), 701-715.

Zhang, Y., Chen, J., & Liu, X. (2020). Effects of problem-based learning on students' problem-solving skills and attitudes towards mathematics: A meta-analysis. *Educational Research Review*, 28, 100273.

Affiliations and Corresponding Information

Carlo M. Villaflor, PhD

San Enrique National High School Department of Education – Philippines

Avelino N. Santillan, PhD

La Carlota City College – Philippines

Ma. Quincy D. Dones, PhD

La Carlota City College – Philippines