



**TEACHERS' INTERNAL FACTORS IN SCIENCE TEACHING AND ITS
RELATIONSHIP WITH LEARNERS' ACADEMIC PERFORMANCE**

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ABSTRACT

This study aimed to determine teachers' internal factors in science teaching and their relationship with learners' academic performance. It was conducted in five public secondary schools in the 5th Congressional District of Iloilo during School Year 2024–2025 and involved thirty (30) junior high school science teachers and four hundred fifty (450) learners, with fifteen (15) learners selected from each teacher's class. The findings revealed no statistically significant differences in teachers' internal factors when grouped according to length of teaching experience, educational attainment, and teaching position. However, a significant difference was found in learners' science grades when classified according to sex, age, and grade level. Furthermore, the results showed no significant relationship between teachers' internal factors and learners' academic performance in science. The study concluded that while teachers' professional background may slightly influence their internal teaching factors, learners' performance in science is largely influenced by sex, age, and grade level.

Keywords: *Internal Factors, Science Teachers, Learners' Academic Performance*

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INTRODUCTION

Science education plays a crucial role in equipping learners with the knowledge and skills necessary to address real-world problems and contribute to sustainable development (UNESCO, 2019; UNESCO, 2023). In the Philippines, significant reforms such as the implementation of the K to 12 curriculum in 2012 have aimed to align the basic education system with global standards (Department of Education [DepEd], 2013). Despite these efforts, challenges persist in science education, as evidenced by Filipino learners' low performance in international assessments like the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) (OECD, 2019; Mullis et al., 2020; OECD, 2023).

Teachers remain among the most influential factors affecting learners' academic performance. Research highlights that teacher quality, instructional competence, and classroom practices significantly impact learners' engagement and achievement in science (Sok & Heng, 2024; Darling-Hammond et al., 2020). Teachers not only deliver curriculum content but also foster critical thinking, inquiry skills, and meaningful learning experiences, which are essential for developing learners' scientific understanding and active participation in learning.

Beyond observable teacher and learner characteristics, internal psychological factors such as motivation, self-efficacy, professional commitment, and attitudes toward teaching have a strong influence on instructional decision-making and classroom effectiveness (Klassen & Tze, 2020; Collie, 2021; Zee & Koomen, 2021). According to social cognitive theory, teachers

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with higher self-efficacy exhibit greater adaptability, persistence, and instructional effectiveness, which in turn positively influence learner engagement and academic performance (Bandura, 1997; Fackler et al., 2021). Empirical studies also show that teacher self-efficacy predicts the use of learner-centered and inquiry-based teaching strategies, leading to improved academic performance (Kim & Park, 2021; Lauermaann & König, 2023).

While prior research has often examined teacher effectiveness and learner achievement separately, few studies have integrated teacher characteristics, learner variables, and internal psychological factors as combined predictors of academic performance in science education (UNESCO, 2021; Scherer et al., 2022). Investigating these relationships is crucial for understanding how instructional and psychological variables interact to influence science learning outcomes.

This study, therefore, sought to explore teachers' internal factors in science teaching and their relationship to learners' academic performance, providing evidence that may inform instructional practices, professional development, and educational policy improvements.

MATERIALS AND METHODS

Research Methodology

This chapter presents the research methodology of the study. It includes the research design, respondents of the study, sampling technique, research instrument, data-gathering procedures, and the statistical tools used to analyze the data. The purpose of this study is to

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determine teachers' internal factors in science teaching and its relationship with learners' academic performance.

Research Method

This study employed a quantitative-correlational research method to gain a deeper understanding of the teachers' internal factors in science teaching and its relationship to learners' academic performance.

To gather the data needed to address the research questions, the researcher developed a structured questionnaire specifically designed for this study. The instrument was created to measure the variables relevant to the research objectives. The questionnaire was administered to all target participants, and their responses were compiled into a dataset for statistical analysis.

Research Design

This study aimed to determine the relationship between teachers' internal factors in science teaching and learners' academic performance, therefore, it adopted a descriptive-correlational research design (Fraenkel and Wallen, 2012). It involves the collection of data to test hypotheses or to answer questions concerning the present status of the respondents under study.

Participants of the Study

The researcher employed a purposive sampling procedure involving five (5) public secondary schools in the 5th Congressional District of Iloilo during the School Year 2024–2025. A total of thirty (30) junior high school science teachers participated in the study.

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Likewise, four hundred fifty (450) learners handled by these science teachers participated, with fifteen (15) learners selected from each teacher’s class. The learner respondents included ninety (90) from Grade 7, one hundred fifty (150) from Grade 8, and one hundred five (105) from Grades 9 and 10.

Sampling Design

In this study, the researcher utilized purposive sampling to select the respondents. According to Etikan, Musa, and Alkassim (2016), purposive sampling is a non-probability sampling technique in which the researcher selects participants based on specific characteristics and criteria relevant to the study, ensuring that the respondents are most suitable for providing the needed information.

The researcher first identified and ascertained the number of science teachers in the 5th Congressional District of Iloilo. From this population, 30 Junior High School science teachers were deliberately selected to participate because they possess the relevant experience and expertise in science teaching.

For the learner respondents, the researcher selected 15 learners from each participating teacher’s class, resulting in a total of 450 learners. This approach ensured that the learners were directly handled by the participating science teachers, making their responses relevant to the study of teachers’ internal factors and its relationship to academic performance.

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By using purposive sampling, the researcher was able to focus on participants who could provide meaningful and relevant data, thus ensuring the quality and validity of the collected information.

Research Instrument

In this study, the researcher utilized a researcher-made questionnaire to determine the relationship between teachers' internal factors in science teaching and learners' academic performance. The instrument was carefully developed to align with the objectives and research questions of the study.

The questionnaire consisted of three parts. Part I gathered the demographic profile of the science teacher respondents. Part II included a set of Likert-scale statements designed to measure the teachers' internal factors that may influence learners' academic performance. Part III obtained the demographic profile of the learner respondents, including their quarterly grades in the science subject.

To ensure the quality of the instrument, it underwent expert validation and reliability testing before its administration to the respondents.

Validity of the Research Instrument

The validation of a research instrument is essential to ensure that it accurately and reliably measures the constructs it is intended to assess. This process strengthens the credibility of the data gathered and supports the validity of the study's conclusions (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2023).

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In this study, the researcher ensured the instrument's appropriateness, relevance, clarity, and suitability by applying the Good and Scates eight-point criteria for questionnaire validation. To further establish content validity, the researcher collaborated with three experts from the panel of examiners: Dr. Ma. Anavi C. Echavarri, thesis adviser; Dr. Zaldy C. Quilantang, Chair of the panel; and Dr. Norberto M. Cabaobao, member of the panel.

Initially, the researcher-made instrument consisted of 75 statements, with 15 items for each of the five identified internal factors of teachers. However, based on the recommendations of the validators, the instrument was refined, and only 20 items were retained for inclusion in the final questionnaire.

The validators also suggested that the specific internal factors should not be explicitly identified in the instrument. Consequently, 55 statements were removed to improve the clarity, focus, and validity of the questionnaire.

The expertise of the validators provided valuable insights and recommendations that improved the overall quality, accuracy, and effectiveness of the questionnaire. The researcher incorporated their suggestions to refine the instrument before its final administration to the respondents.

Data Gathering Procedures

Prior to data collection, the researcher obtained official permission from the school principals of the selected public secondary schools in the 5th Congressional District of Iloilo. Approval from the Graduate School and the thesis adviser was also secured to ensure that the study met institutional requirements.

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The researcher informed the science teachers and learners about the purpose and objectives of the study. The respondents were assured of confidentiality of their responses. Then, a questionnaire was distributed to the 30 science teachers and their 450 learners (15 learners per teacher) in the selected schools.

After the respondents completed the questionnaire, the researcher collected the instruments and checked them for completeness. Any missing or unclear responses were clarified immediately to ensure the accuracy of the data.

Data Analyses

After retrieving the data, the researcher tabulated the collected responses using Microsoft Excel and submitted them to the statistician for encoding and analysis using the Statistical Package for the Social Sciences (SPSS) software.

To determine the level of a teachers' internal factors based on the length of their teaching experiences, educational attainment, and teaching position, the researcher used the following scale and corresponding descriptions. Higher mean scores indicate stronger internal teaching factors.

Scale for Teachers' Internal Factors

Score	Responses	Value Range	Description
5	Strongly Agree	4.21-5.00	Very High
4	Agree	3.21-4.20	High
3	Neutral	2.61-3.20	Moderate
2	Disagree	1.81-2.60	Low
1	Strongly Disagree	1.00-1.80	Very Low

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For the analysis of the learners' performance in science, the researcher adopted a description of a 5-point grading scale used by the K to 12 basic education program with the description of their final rating in science subject.

Furthermore, the lowest and highest possible rating of learners in their science subject was considered as shown below.

Scale for Learners' Academic Performance

Grading Scale	Description
90.00 - 100.00	Outstanding (O)
85.00 - 89.00	Very Satisfactory (VS)
80.00 - 84.00	Satisfactory (S)
75.00 - 79.00	Fairly Satisfactory (FS)
Below 75	Did Not Meet Expectations

The data were subjected to appropriate descriptive and inferential statistical analyses to address the research questions and test the study's hypotheses. Descriptive statistics such as frequency counts, percentages, means, and standard deviations were used to summarize the respondents' profiles and teachers' internal factors.

RESULTS AND DISCUSSIONS

This study was conducted to determine teachers' internal factors in science teaching and its relationship with learners' academic performance.

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The research method utilized in this study was descriptive–correlational research design within the quantitative research approach.

The participants in this study primarily consist of selected thirty (30) junior high school science teachers and selected fifteen (15) learners handled by these science teachers in the 5th Congressional District of Iloilo.

In this study, the researcher utilized the stratified random sampling to select the respondents of the study.

A researcher-made instrument was used as an instrument to gather data.

The following statistical tools were utilized in this study: Mean, Percentage, Frequency count, Standard deviation, Kruskal-Wallis H Test, Mann-Whitney U Test, and Spearman Rho.

The questionnaire underwent content-validation by the panel of experts.

The following were the findings of the study:

When taken as a whole, teachers generally demonstrate a very strong level of internal factors. Teachers with longer experience in teaching science, higher teaching positions, and higher educational attainment tend to show slightly stronger internal teaching factors than their less experienced counterparts. These factors include motivation, teaching confidence, and positive attitudes toward science, indicating that professional growth may contribute to the enhancement of these internal factors.

However, statistical analysis revealed no significant differences in teachers’ internal factors when grouped according to years of teaching experience, educational attainment, or teaching position. Teachers who have served for less than 10 years, 10–20 years, or more

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than 20 years exhibited relatively similar levels of motivation, confidence, and attitudes toward science teaching. Likewise, variations in educational attainment and teaching rank did not significantly affect teachers' internal dispositions, suggesting that these characteristics remain generally consistent across professional backgrounds.

In general, the learners demonstrated a high level of academic performance in Science, meeting the expected standards set by the grading scale. With respect to learners' performance, female learners achieved higher in Science than their male counterparts, implying that gender may influence motivation, engagement, and persistence in learning Science.

In addition, learners in higher grade levels performed better than those in lower grade levels, reflecting the effects of cumulative learning, greater exposure to scientific content, and more advanced cognitive skills. Similarly, older learners demonstrated higher achievement than younger learners, which may be attributed to increased maturity, critical thinking ability, and self-regulated learning.

Finally, the results showed that there is no significant relationship between teachers' internal factors and learners' academic performance in Science, indicating that learners' achievement may be influenced by variables other than teachers' internal teaching dispositions.

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Conclusion

Based on the findings, the following conclusions were drawn:

Although teachers with more years of experience, higher teaching positions, and greater educational attainment tend to show slightly stronger internal teaching factors, the lack of statistically significant differences suggests that these professional characteristics do not substantially influence teachers' motivation, confidence, and attitudes toward science teaching. One possible explanation is that internal teaching factors are shaped more by personal values, professional commitment, and individual teaching beliefs, which may develop early in a teacher's career and remain relatively stable over time, regardless of rank or academic qualifications. Moreover, teachers often undergo similar professional training and work under the same curriculum and institutional expectations, which may lead to comparable internal dispositions across professional groups.

The higher performance of female learners in science may be explained by differences in learning behavior, classroom engagement, and study habits. Research suggests that female learners often demonstrate greater diligence, persistence, and responsibility in academic tasks, which may result in better performance in subjects like science that require sustained effort and attention. Likewise, the higher achievement of older learners and those in upper grade levels may be attributed to cumulative learning, greater exposure to scientific concepts, and the development of more advanced cognitive and analytical skills. As learners progress through grade levels, they gain more experience in scientific reasoning, problem-solving, and independent learning, which strengthens their academic performance.

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The absence of a significant relationship between teachers' internal factors and learners' academic performance suggests that achievement in science is influenced by multiple interacting variables rather than by teachers' internal dispositions alone. While teacher motivation and confidence remain important, other factors such as teaching strategies, classroom environment, availability of learning resources, parental support, and learners' own attitudes and abilities may have a more direct effect on learning outcomes. This implies that improving science achievement requires a comprehensive approach that addresses teacher-related and learner-related factors, as well as the broader educational context.

Overall, these findings suggest that although teachers' professional background may slightly influence their internal teaching factors, learners' performance in science is more strongly associated with their sex, age, and grade level. Therefore, efforts to improve science education should focus not only on enhancing teachers' internal factors, qualifications, and experience but also on strengthening instructional practices, the learning environment, and learner support systems.

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References

Anoling, K.M., Abella, C.R.G., Cagatao, P.P.S., & Bautista, R.G. (2024). Critical Perspectives, Theoretical Foundations, Practical Teaching, Technology Integration, Assessment and Feedback, and Hands-on Practices in Science Education. *American Journal of Educational Research*, 12(1), 20–27.

Ansari, M.S. & Alvi, E. (2020). Self-efficacy and Its Impact on Academic Performance among University Students. *Journal of Educational Research*, 23(2), 45–58.

Bazar, J.S., Arabejo, A.J.D., Reyes, M.R., & Baluyos, G.R. (2024). Students’ Well-being and Level of Motivation Toward Science Learning in Relation to Rheir Academic Achievement. *EduLine: Journal of Education and Learning Innovation*, 4(1).

Duan, X. et al. (2024). Teacher Self-efficacy and Student Engagement in Secondary Education. *Cogent Education*.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw-Hill.

Kim, L.E. & Klassen, R.M. (2025). The Association Between Teacher Self-efficacy and Student Academic Performance: A Systematic Review and Meta-analysis. *Educational Research Review*, 48, 100701. Retrieved from <https://link.springer.com/article/10.1007/s42330-025-00359-z>.

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Kim, J. & Park, E. (2024). Analysis of Perceptions and Requirements for Creative Experiential Activity Curriculum for the Revision of Special Education in South Korea. *Sustainability*, 16(20), 9121. Retrieved from <https://www.mdpi.com/2071-1050/16/20/9121>.

Lauermann, F. & König, J. (2023). Teachers' Professional Competence and Well-being: Understanding the Role of Teacher Self-efficacy. *Teaching and Teacher Education*, 121, 103927.

Liu, J., Wang, K., & Pan, Z. (2025). Professional Development and Teacher Self-efficacy in STEM Education: A Meta-analysis. *Behavioral Sciences*, 15(10), 1364.

Luo, X., Alias, B.S., & Adnan, N.H. (2024). Exploring the Interplay Between Teacher Leadership and Self-efficacy: A Systematic Literature Review (2013–2024). *Education Sciences*, 14(9), 990. Retrieved from <https://www.mdpi.com/2227-7102/14/9/990>.

Mamburao, M.L. (2026). Teachers' Self-efficacy and Student Outcomes: A Structural Equation Modeling Approach. *International Journal of Research and Scientific Innovation*.

Mullis, I.V.S., Martin, M.O., Foy, P., Kelly, D.L., & Fishbein, B. (2020). TIMSS 2019 International Results in Mathematics and Science. Retrieved from Boston College, TIMSS & PIRLS International Study Center website: <https://timssandpirls.bc.edu/timss2019/international-results/>.

Pajares (Eds.). *Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing. Dellinger.

Perera, H.N., Calkins, C., & Part, R. (2021). Teacher Self-Efficacy and Student Motivation: A Multilevel Analysis. *Learning and Instruction*, 73, 101414.

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Pozas, M., Letzel, V., & Schneider, C. (2024). Sources of Science Teaching Self-efficacy in STEM Education. *International Journal of STEM Education*.

Sellami, A., Santhosh, M. E., Michaleczek, I., & Madad, J. . Unveiling teachers' instructional self- efficacy in science, mathematics, and technology: Personal and contextual influences. *Canadian Journal of Science, Mathematics and Technology Education*, 24, 418–438.

TIMSS (2011a). National Math and Science Report: Grade 4. Milli Eğitim Bakanlığı. Ankara. Accessed date 03.Jan.2016, Retrieved from <http://timss.meb.gov.tr/>.

Skaalvik, E.M. & Skaalvik, S. (2021). Teacher Motivation, Self-efficacy, and Job Satisfaction: A Longitudinal Study. *Teaching and Teacher Education*, 106, 103435. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0742051X21001591>.

Sok, S. & Heng, K. (2024). Research on Teacher Education and Implications for Improving the Quality of Teacher Education in Cambodia. *International Journal of Professional Development, Learners and Learning*, 6(1), ep2401. Retrieved from <https://www.ijpdll.com/article/research-on-teacher-education-and-implications-for-improving-the-quality-of-teacher-education-in-14042>.

United Nations Educational, Scientific and Cultural Organization (2020). Education for Sustainable Development: A roadmap (ESD for 2030). UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000374802>.

Waddington, J. (2023). Self-efficacy. *ELT Journal*, 77(2), 237–240. Retrieved from <https://academic.oup.com/eltj/article/77/2/237/6979364>.

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