

CLASSROOM Management, Efficacy Beliefs and Attitudes towards Inclusive Education among Public Junior High School Science TEACHERS

Brady S. Nave¹, Maria Teresa M. Gravino, EdD²

¹JHS Science Teacher, University of the Immaculate Conception
bradynave@gmail.com

²University of the Immaculate Conception, Davao City
mgravino@uic.edu.ph

ABSTRACT

Teachers' attitudes toward inclusive education are influenced by their instructional competence and confidence in teaching learners with diverse educational needs. This study examined the influence of classroom management and teacher efficacy beliefs on attitudes toward inclusive education among public junior high school science teachers in the Division of Davao City, Philippines. A quantitative descriptive-correlational research design was employed involving 121 public junior high school science teachers selected through proportionate random sampling. Data were collected using standardized questionnaires measuring classroom management, teacher efficacy beliefs, and attitudes toward inclusive education. Descriptive statistics, Pearson product-moment correlation, and multiple linear regression analyses were performed. The findings revealed that respondents demonstrated a very high level of classroom management ($M = 4.40$, $SD = 0.48$) and teacher efficacy beliefs ($M = 4.24$, $SD = 0.49$), while their attitudes toward inclusive education were rated high ($M = 4.18$, $SD = 0.65$). Classroom management was significantly and positively associated with teachers' attitudes toward inclusive education ($r = .703$, $p < .001$), whereas teacher efficacy beliefs exhibited an even stronger positive relationship ($r = .807$, $p < .001$). Multiple linear regression analysis further revealed that classroom management and teacher efficacy beliefs jointly explained 66.2% of the variance in teachers' attitudes toward inclusive education ($R^2 = .662$, $F = 118.26$, $p < .001$), with teacher efficacy beliefs emerging as the stronger predictor. The findings underscore the importance of strengthening teachers' instructional competence and professional confidence through continuous professional development to promote more positive attitudes toward inclusive education. Enhancing teacher efficacy and classroom management competencies may contribute to more effective implementation of inclusive educational practices in science classrooms.

KEYWORDS: *Education, classroom management, efficacy beliefs, science teachers, Philippines.*

INTRODUCTION

Inclusive education has become a global educational priority aimed at ensuring equitable access to quality education for all learners, including students with disabilities and other special educational needs. Anchored on the principles of equity, participation, and social justice, inclusive education encourages schools to create learning environments where diversity is recognized as a strength rather than a barrier. The adoption of inclusive educational practices has been further reinforced through the Sustainable Development Goal 4 (SDG 4), which advocates for inclusive and equitable quality education and lifelong learning opportunities for all. Despite increasing policy support, the successful implementation of inclusive education largely depends on teachers, whose attitudes, instructional competencies, and classroom practices significantly influence the learning experiences of students with special educational needs (SEN) (Pit-ten Cate et al., 2022; Sharma & Sokal, 2024).

Teachers' attitudes toward inclusive education refer to their cognitive beliefs, affective responses, and behavioral intentions regarding the inclusion of learners with disabilities in general education classrooms. These attitudes are considered among the strongest predictors of teachers' willingness to implement inclusive practices and adapt instruction to meet diverse learner needs. Positive teacher attitudes promote collaboration, differentiated instruction, and supportive classroom environments, whereas negative attitudes often result in resistance to inclusion, lower instructional quality, and limited participation opportunities for students with disabilities (Pit-ten Cate et al., 2022; Wilson et al., 2020).

Recent international evidence indicates that although many educational systems have embraced inclusive education policies, teachers continue to experience uncertainty and apprehension in implementing inclusive practices. A systematic review by Sharma and Sokal (2024) reported that teachers generally demonstrate moderately positive attitudes toward inclusion; however, these attitudes vary according to teachers' professional preparation, teaching experience, access to instructional resources, and institutional support. Similarly, Wilson et al. (2020) found that insufficient training, increased workload, limited administrative assistance, and inadequate classroom resources remain major barriers affecting teachers' perceptions of inclusive education across different educational settings.

The challenges associated with inclusive education have likewise been documented across numerous countries. Studies conducted in Europe, Asia, and North America consistently report that teachers often perceive inclusive classrooms as more demanding because of increased instructional differentiation, classroom management responsibilities, and behavioral concerns. These challenges become more pronounced when teachers have limited professional development in special education or lack confidence in addressing the diverse learning needs of students with disabilities (Pit-ten Cate et al., 2022; Sharma & Sokal, 2024).

Within the Philippine educational context, the implementation of inclusive education has accelerated following the enactment of national policies promoting educational access for learners with disabilities. However, practical implementation remains challenging because many schools continue to experience shortages in specialized instructional materials, trained personnel, assistive technologies, and institutional support. Consequently, teachers frequently report difficulties in balancing curriculum requirements while simultaneously addressing the individualized needs of learners with disabilities (Arboiz & Aoanan, 2024). These challenges may influence teachers' willingness to embrace inclusive education despite recognizing its educational value.

Although previous studies have independently examined teacher attitudes, classroom management, and teacher efficacy, relatively few investigations have simultaneously explored how classroom management and efficacy beliefs jointly influence teachers' attitudes toward inclusive education, particularly within the Philippine context. Existing local studies have primarily focused on teachers' readiness, challenges, or perceptions of inclusive education rather than examining the interrelationships among these important psychological and instructional variables (Arboiz & Aoanan, 2024). Moreover, empirical evidence specific to science teachers remains limited despite the additional instructional demands associated with teaching science in inclusive classrooms, where laboratory activities, inquiry-based learning, and differentiated instruction require higher levels of pedagogical competence.

Within the Division of Davao City, there remains limited empirical evidence examining whether teachers' classroom management competencies and efficacy beliefs significantly predict their attitudes toward inclusive education. Understanding these relationships is important because identifying the determinants of positive teacher attitudes may guide professional development

initiatives, instructional support programs, and policy interventions that strengthen inclusive education implementation. Evidence generated from this study may assist school administrators, curriculum developers, and educational policymakers in designing targeted interventions that enhance teachers' confidence, improve classroom management competencies, and ultimately foster more effective inclusive learning environments.

Accordingly, the present study investigates the relationship among classroom management, teacher efficacy beliefs, and teachers' attitudes toward inclusive education among science teachers in the Division of Davao City. Specifically, the study seeks to determine whether classroom management and efficacy beliefs significantly predict teachers' attitudes toward inclusive education. The findings are expected to contribute to the growing body of literature on inclusive education and provide empirical evidence that may inform teacher professional development programs, instructional planning, and educational policies supporting inclusive science education.

Statement of the Problem

This study aimed to determine the significant influence of classroom management and efficacy beliefs on the attitudes towards inclusive education among public junior high school science teachers in District 1, Davao City Division. Specifically, it sought answers to the following questions:

1. What is the level of classroom management among the public junior high school science teachers in terms of:
 - 1.1 People Management;
 - 1.2 Behavior Management; and,
 - 1.3 Instructional Management?
2. What is the status of efficacy beliefs among the public junior high school science teachers in terms of:
 - 2.1 Personal Science Teaching Efficacy; and,
 - 2.2 Science Teaching Outcome Expectancy?
3. What is the status of attitudes towards inclusive education among the public junior high school science teachers in terms of:
 - 3.1 Behavior and Management of Students;
 - 3.2 Working Conditions;
 - 3.3 Workload; and,
 - 3.4 Support and Recognition of the State?
4. Is there a significant relationship between:
 - 4.1 Classroom Management and Attitudes towards Inclusive

Education; and,

4.2 Efficacy Beliefs and Attitudes towards Inclusive Education?

5. Do classroom management and efficacy beliefs significantly influence attitude towards inclusive education?

METHODS

Research Design. This study employed a quantitative, non-experimental research design using a descriptive-correlational approach. Quantitative research is appropriate for examining measurable variables and statistically testing relationships among them through numerical data analysis (Creswell & Creswell, 2018). Specifically, the descriptive component was used to determine the levels of classroom management, teacher efficacy beliefs, and attitudes toward inclusive education among public secondary school science teachers. The correlational component examined the magnitude and direction of the relationships among these variables without manipulating any of the study conditions.

To further determine the predictive influence of classroom management and teacher efficacy beliefs on teachers' attitudes toward inclusive education, multiple linear regression analysis was employed. This statistical technique enables the simultaneous examination of the contribution of multiple independent variables to a single dependent variable while controlling for the effects of the other predictors (Hair et al., 2022). Since the study aimed to describe existing conditions and determine predictive relationships among naturally occurring variables, a quantitative descriptive-correlational design was considered the most appropriate methodological approach.

Research Locale. The study was conducted in the First Congressional District of the Division of Davao City, Philippines. The respondents were drawn from eleven public secondary schools under the supervision of the Department of Education (DepEd) Division of Davao City that implement inclusive education programs. These schools provide educational services to learners with diverse educational needs, including students with disabilities who are integrated into regular science classrooms. The selection of the study locale was based on the presence of science teachers actively engaged in inclusive classroom instruction and the accessibility of participating schools.

Research Respondents . The respondents of the study consisted of 121 public secondary school science teachers assigned to the First Congressional

District of the Division of Davao City. Eligible participants were full-time science teachers currently handling classes that included learners with special educational needs within inclusive education settings.

The required sample size was determined using the Raosoft Sample Size Calculator with a 95% confidence level and a 5% margin of error. Proportionate allocation was employed to ensure adequate representation of teachers from each participating school, while respondents within each school were selected through simple random sampling. Lists of eligible science teachers were obtained from the respective department heads upon approval from school administrators.

Research Instrument. Data were collected using three standardized self-administered questionnaires measuring classroom management, teacher efficacy beliefs, and attitudes toward inclusive education. Prior to data collection, the instruments underwent content validation by three experts specializing in educational research and teacher education to establish content validity.

Classroom management was measured using the Classroom Management Scale for Science Teachers developed by Temli-Durmuş (2016). The instrument assesses three dimensions of classroom management: people management, behavior management, and instructional management. Previous validation studies reported satisfactory internal consistency with Cronbach's alpha coefficients ranging from 0.75 to 0.85.

Teacher efficacy beliefs were measured using the Science Teaching Efficacy Belief Instrument (STEBI) developed by Riggs and Enochs (1990). The instrument measures two domains of teacher efficacy, namely Personal Science Teaching Efficacy (PSTE) and Science Teaching Outcome Expectancy (STOE). The STEBI has demonstrated acceptable psychometric properties across numerous educational settings and remains one of the most widely used instruments for assessing science teaching efficacy.

Teachers' attitudes toward inclusive education were measured using the questionnaire developed by Galaterou and Antoniou (2017), which evaluates four dimensions: classroom management and student behavior, working conditions, teacher workload, and institutional support and recognition. The instrument has demonstrated satisfactory construct validity and internal

reliability in previous studies involving teachers implementing inclusive education.

All questionnaires employed a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), with higher scores indicating higher levels of classroom management competency, teacher efficacy beliefs, and favorable attitudes toward inclusive education.

Data Gathering Procedures. Prior to data collection, ethical clearance was obtained from the University Research Ethics Committee. Formal approval to conduct the study was subsequently secured from the Graduate School, the Schools Division Superintendent of the Department of Education Division of Davao City, and the principals of the participating public secondary schools.

After obtaining institutional approval, the researcher coordinated with science department heads to identify eligible participants. Science teachers who met the inclusion criteria were invited to participate in the study and were provided with an informed consent form explaining the objectives, procedures, voluntary nature of participation, confidentiality measures, and their right to withdraw from the study at any time without penalty.

Upon obtaining written informed consent, the questionnaires were administered personally to the respondents during scheduled visits to the participating schools. Completed questionnaires were retrieved immediately after completion to maximize the response rate and minimize missing data. All responses were coded anonymously and securely stored for statistical analysis. Data were checked for completeness and accuracy prior to encoding and analysis.

Statistical Analysis. The collected data were analyzed using appropriate descriptive and inferential statistical techniques. Mean and standard deviation were computed to describe the levels of classroom management, teacher efficacy beliefs, and attitudes toward inclusive education.

Pearson product-moment correlation coefficient was employed to determine the strength and direction of the relationships among classroom management, teacher efficacy beliefs, and teachers' attitudes toward inclusive education. Correlation coefficients were interpreted using established guidelines for effect size.

Multiple linear regression analysis was subsequently performed to determine the extent to which classroom management and teacher efficacy beliefs significantly predicted teachers' attitudes toward inclusive education. Statistical significance was evaluated at an alpha level of 0.05. Prior to regression analysis, the assumptions of linearity, normality, homoscedasticity, independence of errors, and multicollinearity were examined to ensure the validity of the regression model.

RESULTS and DISCUSSION

This section presents and discusses the findings of the study on classroom management, teacher efficacy beliefs, and attitudes toward inclusive education among public junior high school science teachers. The results are organized according to the objectives of the study. Specifically, the chapter first describes the levels of classroom management, teacher efficacy beliefs, and attitudes toward inclusive education, followed by the examination of the relationships among these variables using Pearson product-moment correlation analysis. Finally, multiple linear regression analysis was performed to determine the extent to which classroom management and teacher efficacy beliefs significantly predict teachers' attitudes toward inclusive education. The findings are interpreted in light of existing theories and empirical studies to provide a comprehensive understanding of the factors influencing teachers' attitudes toward inclusive education.

Level of Classroom Management among Public Junior High School Science Teachers

Table 1 presents the level of classroom management among public junior high school science teachers in inclusive education settings. Overall, the respondents demonstrated a very high level of classroom management ($M = 4.40$, $SD = 0.48$), indicating that effective classroom management practices were consistently evident in their science classrooms. Among the three dimensions, instructional management obtained the highest category mean ($M = 4.54$, $SD = 0.47$), followed by behavior management ($M = 4.39$, $SD = 0.49$), while people management recorded the lowest category mean ($M = 4.27$, $SD = 0.48$), although it remained within the very high descriptive level.

Table 1
Level of Classroom Management among the Public Junior High School Science Teachers

Dimension / Indicator	Mean	SD	Description
People Management			
Category Mean	4.27	0.48	Very High
Behavior Management			
Category Mean	4.39	0.49	Very High
Instructional Management			
Category Mean	4.54	0.47	Very High
OVERALL MEAN	4.40	0.48	Very High

The findings indicate that public junior high school science teachers possess strong classroom management competencies that support the implementation of inclusive education. The very high overall level of classroom management suggests that the respondents consistently employ effective instructional strategies, maintain positive classroom discipline, and foster supportive learning environments for students with diverse educational needs. This finding is consistent with the study of Lutz et al. (2024), who reported that effective classroom management is fundamental to successful inclusive education because it promotes student engagement, minimizes behavioral disruptions, and creates learning environments where all students can actively participate. Similarly, Dignath et al. (2022) emphasized that teachers with strong classroom management competencies demonstrate greater confidence in handling learner diversity and are more likely to implement inclusive instructional practices successfully.

Among the three dimensions, instructional management obtained the highest mean score, indicating that science teachers place considerable emphasis on organizing learning activities, maintaining instructional time, and encouraging active student participation. This result supports the findings of Lutz et al. (2024), who found that instructional management is one of the

strongest indicators of effective classroom management in inclusive classrooms because well-structured instruction facilitates learner engagement while reducing classroom disruptions. Moreover, Schwab et al. (2023) noted that effective instructional planning enables teachers to differentiate instruction according to students' varying learning abilities, thereby enhancing participation and learning outcomes in inclusive settings.

Conversely, people management obtained the lowest category mean, although it remained within the very high descriptive level. The relatively lower score may indicate that fostering collaborative classroom relationships and maximizing available learning resources continue to present challenges despite teachers' overall competence. Specifically, the indicator "Designing an effective learning environment using enough school facilities" received the lowest mean score, suggesting that limitations in school infrastructure and instructional resources may hinder the optimization of inclusive classroom practices. According to Florian and Black-Hawkins (2023), adequate physical learning environments, accessible instructional materials, and institutional support are essential for sustaining inclusive education because they enable teachers to accommodate learners with diverse educational needs more effectively.

The present findings demonstrate that science teachers possess highly developed classroom management competencies necessary for implementing inclusive education. The results further suggest that continued investment in school facilities and instructional resources may strengthen teachers' capacity to provide equitable and engaging learning experiences for all students.

Status of Efficacy Beliefs among Public Junior High School Science Teachers

Table 2 presents the status of efficacy beliefs among public junior high school science teachers in implementing inclusive education. Overall, the respondents demonstrated a very high level of efficacy beliefs ($M = 4.24$, $SD = 0.49$), indicating that they possessed a strong sense of confidence in their ability to facilitate science learning and address the diverse educational needs of students in inclusive classrooms. Among the two dimensions, Personal Science Teaching Efficacy (PSTE) obtained the highest category mean ($M = 4.35$, $SD = 0.45$), while Science Teaching Outcome Expectancy (STOE) recorded the lower category mean ($M = 4.13$, $SD = 0.51$), although both dimensions were interpreted as high to very high.

Table 2
Status of Efficacy Beliefs among the Public Junior High School Science Teachers

Dimension / Indicator	Mean	SD	Description
Personal Science Teaching Efficacy			
Category Mean	4.35	0.45	Very High
Science Teaching Outcome Expectancy			
Category Mean	4.13	0.51	High
OVERALL MEAN	4.24	0.49	Very High

Among all indicators, "Acknowledging the students' questions in teaching science" received the highest mean score ($M = 4.63$, $SD = 0.52$), suggesting that the respondents demonstrated a high level of confidence in responding to students' inquiries and facilitating meaningful classroom discussions. This finding indicates that science teachers recognize the importance of addressing students' questions as an essential component of effective science instruction and inclusive learning. Teachers who confidently respond to students' questions create supportive learning environments that encourage curiosity, scientific inquiry, and active participation among learners with varying abilities. According to Zee and Koomen (2021), teachers with high self-efficacy demonstrate greater instructional flexibility, persistence, and responsiveness to students' learning needs, which ultimately contributes to improved classroom engagement and academic achievement. Likewise, Lauermann and ten Hagen (2021) reported that teachers with stronger efficacy beliefs are more likely to employ student-centered instructional strategies and effectively adapt their teaching to accommodate diverse learners.

Conversely, the indicator "Providing effective science teaching approaches to improve the performance of underachieving students" obtained the lowest mean score ($M = 3.94$, $SD = 0.79$), although it remained within the High descriptive level. This finding suggests that while teachers generally expressed confidence in their teaching abilities, they were comparatively less certain about their capacity to substantially improve the academic performance of underachieving students. Inclusive science classrooms often involve learners with diverse academic abilities, learning disabilities, and varying instructional

needs, requiring teachers to implement differentiated instruction and individualized interventions. The relatively lower rating may therefore reflect the complexity of addressing the educational needs of struggling learners despite teachers' positive efficacy beliefs. Similarly, Friesen et al. (2023) found that teachers may experience lower confidence when teaching students with persistent learning difficulties because these learners require additional instructional adaptations, continuous assessment, and individualized support. Furthermore, Sokal et al. (2020) emphasized that although teachers generally possess positive efficacy beliefs, their confidence may decline when they perceive insufficient resources, training, or institutional support for implementing inclusive instructional practices.

Among the two dimensions, Personal Science Teaching Efficacy emerged as the strongest aspect of teacher efficacy beliefs. This finding indicates that the respondents possessed substantial confidence in their knowledge, instructional skills, and ability to teach science effectively. Teachers with high personal teaching efficacy are more likely to implement innovative teaching strategies, maintain persistence when faced with instructional challenges, and foster positive learning experiences for students with diverse educational needs. According to Zee and Koomen (2021), personal teaching efficacy is consistently associated with higher instructional quality, stronger classroom management, greater teacher resilience, and improved student achievement.

Meanwhile, Science Teaching Outcome Expectancy obtained a comparatively lower mean, suggesting that although teachers believed in their instructional competence, they were relatively less confident that their teaching alone could determine students' academic success. Student achievement is influenced not only by teacher effectiveness but also by learner motivation, parental involvement, school resources, and classroom context. Consequently, teachers may perceive that external factors beyond their direct control also contribute to students' educational outcomes. This observation supports the findings of Lauermaann and ten Hagen (2021), who concluded that outcome expectancy is often shaped by contextual variables, including school climate, administrative support, availability of instructional resources, and student characteristics.

Overall, the findings indicate that public junior high school science teachers possess strong efficacy beliefs necessary for implementing inclusive science education. Their high levels of confidence in science teaching suggest

that they are generally well-prepared to facilitate inclusive learning experiences. Nevertheless, the relatively lower confidence in improving the performance of underachieving students highlights the need for continuous professional development focusing on differentiated instruction, inclusive pedagogical strategies, and evidence-based interventions that support learners with diverse educational needs.

Status of Attitudes towards Inclusive Education among the Public Junior High School Science Teachers

Table 3 presents the status of attitudes toward inclusive education among public junior high school science teachers. Overall, the respondents demonstrated a high level of positive attitudes toward inclusive education ($M = 4.18$, $SD = 0.65$), indicating that they generally held favorable perceptions regarding the implementation of inclusive practices in science classrooms. Among the four dimensions, working condition obtained the highest category mean ($M = 4.22$, $SD = 0.56$), followed by management and behavior of the student ($M = 4.19$, $SD = 0.57$), workload ($M = 4.16$, $SD = 0.65$), while support and recognition of the state obtained the lowest category mean ($M = 4.15$, $SD = 0.83$), although all dimensions were interpreted as high to very high.

Table 3
Status of Attitudes towards Inclusive Education among the Public Junior High School Science Teachers

Dimension / Indicator	Mean	SD	Description
Management and Behavior of the Student			
Category Mean	4.19	0.57	High
Working Condition			
Category Mean	4.22	0.56	Very High
Workload			
Category Mean	4.16	0.65	High
Support and Recognition of the State			
Category Mean	4.15	0.83	High

OVERALL MEAN	4.18	0.65	High
--------------	------	------	------

Among all indicators, "Having confidence in my ability to get students to work together in pairs or in small groups" obtained the highest mean score ($M = 4.40$, $SD = 0.68$), followed closely by "Making parents feel comfortable coming to school" ($M = 4.38$, $SD = 0.80$) and "Consulting with colleagues to identify possible ways to assist struggling students" ($M = 4.35$, $SD = 0.68$). These findings suggest that the respondents strongly value collaborative learning, family engagement, and professional collaboration as essential components of inclusive education. Collaborative classroom practices encourage social interaction, peer support, and active participation among students with diverse learning needs, while effective partnerships among teachers, parents, and other educational professionals contribute to more responsive and individualized instructional support. These findings are consistent with Pit-ten Cate et al. (2022), who reported that collaboration among teachers, families, and multidisciplinary professionals is fundamental to successful inclusive education because it strengthens teachers' instructional capacity and improves educational outcomes for learners with disabilities. Similarly, Sharma and Sokal (2024) emphasized that positive teacher attitudes toward inclusion are enhanced when teachers perceive adequate collaboration, collegial support, and shared responsibility for meeting the needs of diverse learners.

Conversely, the indicator "Changing the curriculum to meet the learning needs of a student with learning difficulty enrolled in your class" obtained the lowest mean score ($M = 3.85$, $SD = 0.86$), although it remained within the High descriptive level. This finding suggests that curriculum adaptation remains one of the more challenging aspects of inclusive education for science teachers. Modifying curriculum content, instructional strategies, and assessment practices requires specialized pedagogical knowledge, sufficient instructional resources, and institutional support. Teachers may therefore feel less confident in implementing curriculum modifications despite maintaining generally positive attitudes toward inclusion. This observation agrees with the findings of Wilson et al. (2020), who reported that teachers frequently identify curriculum adaptation and differentiated instruction as among the greatest challenges in inclusive classrooms because they require additional preparation, professional training, and access to instructional resources. Likewise, European Agency for Special Needs and Inclusive Education (2022) emphasized that successful curriculum adaptation depends on continuous professional development and

systemic support that enable teachers to address learner diversity effectively.

Among the four dimensions, working condition emerged as the strongest aspect of teachers' attitudes toward inclusive education. This finding indicates that the respondents generally expressed enthusiasm in teaching learners with diverse abilities, implementing differentiated assessments, and facilitating collaborative learning experiences. Positive perceptions of working conditions suggest that teachers recognize inclusive education as an opportunity to improve instructional practice rather than as an additional burden. According to Sharma and Sokal (2024), teachers who perceive supportive working environments, adequate professional preparation, and collaborative school cultures are more likely to develop favorable attitudes toward inclusive education and demonstrate greater commitment to inclusive instructional practices.

Meanwhile, support and recognition of the state obtained the lowest category mean despite remaining within the High level. This result suggests that although teachers generally maintain positive attitudes toward inclusion, they perceive opportunities for improvement in institutional support, policy implementation, and government recognition of inclusive education efforts. Effective implementation of inclusive education extends beyond teachers' personal commitment and requires sustained administrative support, sufficient funding, accessible instructional resources, and continuous professional development. Pit-ten Cate et al. (2022) similarly concluded that positive teacher attitudes alone are insufficient to sustain inclusive education unless accompanied by supportive educational policies, school leadership, and adequate institutional resources.

Overall, the findings indicate that public junior high school science teachers generally possess favorable attitudes toward inclusive education and demonstrate willingness to implement inclusive instructional practices. Their positive perceptions of collaboration, differentiated instruction, and inclusive classroom participation reflect readiness to accommodate learners with diverse educational needs. Nevertheless, the relatively lower ratings on curriculum adaptation and institutional support highlight the continuing need for stronger policy implementation, professional development, and resource provision to further strengthen inclusive education in public secondary schools.

Relationship between Classroom Management, Efficacy Beliefs, and Attitudes toward Inclusive Education

Table 4 presents the results of the Pearson product-moment correlation analysis examining the relationships between classroom management, teacher efficacy beliefs, and attitudes toward inclusive education among public junior high school science teachers. The findings revealed that both classroom management and teacher efficacy beliefs were positively and significantly related to teachers' attitudes toward inclusive education. Specifically, teacher efficacy beliefs demonstrated the strongest positive relationship with attitudes toward inclusive education ($r = 0.807$, $p < .001$), followed by classroom management ($r = 0.703$, $p < .001$). These results indicate that higher levels of classroom management competence and stronger efficacy beliefs are associated with more favorable attitudes toward implementing inclusive education.

Table 4
Significance of the Relationship between the Level of Classroom Management and Status of Efficacy Beliefs on Attitudes toward Inclusive Education

Variable	r	p-value	Remarks
Classroom Management	0.703	0.000	Significant
Efficacy Beliefs	0.807	0.000	Significant

The strong positive relationship between teacher efficacy beliefs and attitudes toward inclusive education suggests that teachers who are more confident in their instructional abilities are more likely to embrace inclusive educational practices. Teachers with high self-efficacy generally demonstrate greater confidence in adapting instruction, addressing learner diversity, managing classroom challenges, and implementing inclusive teaching strategies. As a result, they tend to perceive inclusion as an achievable and meaningful educational practice rather than as an instructional burden. This finding is consistent with the study of Wilson et al. (2020), who reported that teacher self-efficacy is one of the strongest predictors of positive attitudes toward inclusive education because confident teachers are more willing to implement instructional adaptations and accommodate learners with diverse educational needs. Likewise, Pit-ten Cate et al. (2022) concluded that teachers possessing stronger efficacy beliefs exhibit greater commitment to inclusive teaching, higher instructional competence, and increased willingness to support students with disabilities in mainstream classrooms.

Similarly, the significant positive relationship between classroom management and attitudes toward inclusive education indicates that teachers who possess stronger classroom management competencies also tend to demonstrate more favorable attitudes toward inclusion. Effective classroom management enables teachers to establish organized learning environments, maintain positive student behavior, promote active participation, and address classroom diversity more effectively. Consequently, teachers who are confident in managing inclusive classrooms are more likely to perceive inclusion as manageable and beneficial for all learners. This finding supports the work of Lutz et al. (2024), who emphasized that effective classroom management serves as a critical foundation for inclusive education by creating supportive learning environments that accommodate students with varying academic, behavioral, and social needs. Similarly, Dignath et al. (2022) found that teachers with stronger classroom management skills are more likely to exhibit positive beliefs about inclusion because they possess greater confidence in handling diverse classroom situations.

The stronger correlation observed between teacher efficacy beliefs and attitudes toward inclusive education ($r = 0.807$) compared with classroom management ($r = 0.703$) suggests that teachers' confidence in their professional capabilities may exert a greater influence on their attitudes toward inclusion than classroom management alone. While effective classroom management provides the practical skills necessary for maintaining productive learning environments, teacher efficacy reflects deeper beliefs regarding one's capability to successfully teach all learners regardless of ability. According to Zee and Koomen (2021), teacher efficacy functions as a motivational construct that influences instructional decisions, persistence, resilience, and openness to educational innovation, all of which contribute to more positive attitudes toward inclusive educational practices.

Overall, the findings indicate that both classroom management and teacher efficacy beliefs play significant roles in shaping teachers' attitudes toward inclusive education. These results suggest that strengthening teachers' instructional competence, classroom management skills, and professional confidence through continuous professional development may further enhance positive attitudes toward inclusion and improve the implementation of inclusive education in science classrooms.

Influence of Classroom Management and Efficacy Beliefs on Attitudes toward Inclusive Education

Table 5 presents the results of the multiple linear regression analysis conducted to determine the influence of classroom management and teacher efficacy beliefs on attitudes toward inclusive education among public junior high school science teachers. The regression model was statistically significant ($R^2 = 0.662$, $F = 118.26$, $p < .001$), indicating that classroom management and teacher efficacy beliefs jointly explained 66.2% of the variance in teachers' attitudes toward inclusive education. This substantial coefficient of determination suggests that the two predictor variables collectively exert a strong influence on teachers' attitudes, while the remaining 33.8% of the variance may be attributed to other personal, organizational, or contextual factors not included in the present model.

Table 5
Significance of the Influence of Classroom Management and Efficacy Beliefs on Attitudes toward Inclusive Education

Variables Associated with Attitude	B	β	t	p-value	Remarks
Classroom Management	0.196	-	0.021	0.000	Significant
Efficacy Beliefs	1.186	0.656	-	0.000	Significant
Model Summary					
$R^2 = 0.662$	$F = 118.26$	$p < .001$			

Among the predictor variables, teacher efficacy beliefs emerged as the strongest predictor of attitudes toward inclusive education ($B = 1.186$, $\beta = 0.656$, $p < .001$). This finding indicates that teachers with stronger confidence in their instructional capabilities are more likely to develop favorable attitudes toward implementing inclusive educational practices. High teacher efficacy encourages educators to view instructional challenges as manageable, motivates them to adopt differentiated instructional strategies, and increases their willingness to accommodate learners with diverse educational needs. These findings are consistent with Zee and Koomen (2021), who concluded that teacher self-efficacy positively influences instructional quality, classroom management, teacher resilience, and openness to educational innovation. Similarly, Wilson et al. (2020) reported that teachers with higher efficacy beliefs demonstrate greater

confidence in adapting instruction and exhibit more positive attitudes toward inclusive education.

Classroom management also significantly influenced teachers' attitudes toward inclusive education ($B = 0.196$, $p < .001$), suggesting that teachers who demonstrate stronger classroom management competencies tend to possess more favorable attitudes toward inclusion. Effective classroom management enables teachers to establish organized learning environments, maintain positive student behavior, maximize instructional time, and facilitate active participation among learners with diverse educational needs. Consequently, teachers who perceive themselves as capable of effectively managing inclusive classrooms are more likely to embrace inclusive teaching practices. This finding supports the study of Lutz et al. (2024), who emphasized that classroom management serves as a foundational competency for successful inclusive education because it promotes productive learning environments that accommodate learner diversity. Likewise, Pit-ten Cate et al. (2022) found that teachers' instructional competence and classroom management skills significantly contribute to positive attitudes toward inclusive education.

The comparatively larger standardized regression coefficient for teacher efficacy beliefs ($\beta = 0.656$) indicates that efficacy beliefs contribute more strongly to teachers' attitudes toward inclusive education than classroom management. This suggests that although effective classroom management is an important instructional competency, teachers' confidence in their professional abilities exerts a greater influence on how they perceive and implement inclusive education. According to Bandura's Social Cognitive Theory, efficacy beliefs shape individuals' motivation, persistence, decision-making, and responses to challenging situations. Teachers who believe they are capable of successfully teaching students with diverse learning needs are therefore more likely to adopt positive attitudes toward inclusive educational practices and persist despite instructional challenges (Bandura, 1997).

Overall, the findings demonstrate that both classroom management and teacher efficacy beliefs are significant determinants of teachers' attitudes toward inclusive education, with teacher efficacy beliefs serving as the stronger predictor. The results underscore the importance of strengthening teachers' professional confidence alongside classroom management competencies through continuous professional development, mentoring, instructional coaching, and inclusive education training. Such initiatives may further enhance teachers'

readiness and commitment to implementing inclusive education effectively in science classrooms.

CONCLUSION

This study examined the levels of classroom management, teacher efficacy beliefs, and attitudes toward inclusive education among public junior high school science teachers in the Division of Davao City. The findings revealed that the respondents demonstrated a very high level of classroom management ($M = 4.40$, $SD = 0.48$), indicating that science teachers consistently exhibited effective practices in managing people, student behavior, and instructional activities in inclusive classrooms. Among the three dimensions, instructional management obtained the highest mean, suggesting that teachers were particularly competent in organizing learning activities and maintaining student engagement.

Similarly, the respondents exhibited very high efficacy beliefs ($M = 4.24$, $SD = 0.49$). Personal Science Teaching Efficacy was rated very high, reflecting teachers' strong confidence in their ability to teach science effectively. Although Science Teaching Outcome Expectancy was rated high, it remained lower than personal teaching efficacy, suggesting that teachers were slightly less confident that external learning outcomes are entirely attributable to their teaching efforts.

Teachers also demonstrated a high level of positive attitudes toward inclusive education ($M = 4.18$, $SD = 0.65$). The highest ratings were observed in the dimension of working conditions, indicating that teachers generally welcomed inclusive practices and were willing to modify instruction and assessment to accommodate learners with diverse educational needs. Nevertheless, comparatively lower ratings in support and recognition from the state suggest that institutional and systemic support remain areas requiring further enhancement.

The correlational analysis showed that both classroom management ($r = 0.703$, $p < .001$) and teacher efficacy beliefs ($r = 0.807$, $p < .001$) were positively and significantly associated with teachers' attitudes toward inclusive education. These findings indicate that teachers who possess stronger classroom management competencies and greater confidence in their teaching abilities are more likely to develop favorable attitudes toward implementing inclusive educational practices.

Furthermore, the multiple regression analysis demonstrated that classroom management and teacher efficacy beliefs jointly exerted a significant influence on teachers' attitudes toward inclusive education ($R^2 = 0.662$, $F = 118.26$, $p < .001$). The model explained 66.2% of the variance in teachers' attitudes, indicating substantial predictive power. Among the predictors, teacher efficacy beliefs emerged as the stronger determinant, emphasizing that teachers' confidence in their instructional capabilities plays a critical role in shaping positive attitudes toward inclusive education.

Overall, the findings suggest that strengthening classroom management competencies and enhancing teacher efficacy beliefs are essential strategies for promoting more positive attitudes toward inclusive education among science teachers. Improving these competencies may facilitate the effective implementation of inclusive educational practices and contribute to better learning experiences for students with diverse educational needs.

REFERENCES

- Pit-ten Cate, I. M., Markova, M., Kruschler, M., & Krolak-Schwerdt, S. (2022). Promoting inclusive education: The role of teachers' competence and attitudes. *Frontiers in Education*, 7, 873996. <https://doi.org/10.3389/educ.2022.873996>
- Riggs, I. M., & Enochs, L. G. (1990). Toward the development of an elementary teacher's science teaching efficacy belief instrument. *Science Education*, 74(6), 625–637. <https://doi.org/10.1002/sce.3730740605>
- Sezen-Gultekin, G., Bayrakci, M., & Yilmaz, H. (2022). Pre-service teachers' attitudes toward teaching and classroom management competencies. *Education Sciences*, 12(2), 114. <https://doi.org/10.3390/educsci12020114>
- Sharma, U., & Sokal, L. (2024). Teacher attitudes toward inclusive education: Progress, challenges, and future directions. *European Journal of Special Needs Education*. <https://doi.org/10.1080/08856257.2024.2311377>
- Sokal, L., Trudel, L. G. E., & Babb, J. (2020). Supporting teachers in times of change: The job demands–resources model and teacher burnout during educational reform. *International Journal of Contemporary Education*, 3(2), 67–74. <https://doi.org/10.11114/ijce.v3i2.4936>
- Temli-Durmuş, Y. (2016). Development of the classroom management scale for science teachers. *Universal Journal of Educational Research*, 4(12A), 63–68. <https://doi.org/10.13189/ujer.2016.041309>
- Wilson, C., Marks Woolfson, L., & Durkin, K. (2020). School environment and teacher factors influencing attitudes toward inclusion. *International Journal of Inclusive Education*, 24(11), 1152–1167. <https://doi.org/10.1080/13603116.2018.1516821>
- Zee, M., & Koomen, H. M. Y. (2021). Teacher self-efficacy and its effects on classroom processes, student outcomes, and teacher well-being: A review. *Educational Psychology Review*, 33(3), 1043–1072. <https://doi.org/10.1007/s10648-020-09584-1>