

# Effects Of Mainstreaming in The Holistic Development of Grade 6 Learners with Special Educational Needs (LSENs) In Thailand

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*Abstract* — This study examined teachers' perceptions of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs in Anubanrayong School, Rayong, Thailand. Specifically, it described the profile of teachers handling mainstreamed learners, determined their perceived ratings of the effects of mainstreaming on physical, intellectual, social, and emotional development, assessed the extent of teachers' utilization of strategies in handling learners with special educational needs, and tested the relationship between selected teacher profile variables and their perceived ratings of mainstreaming effects. The study employed a quantitative approach using descriptive-survey and descriptive-correlational designs. The respondents were 100 teachers handling Grade 6 learners in mainstream classrooms. Data were gathered using a researcher-made questionnaire-checklist that underwent content validation by two school administrators and three Grade 6 teachers who were not included in the study. Frequency counts, percentages, means, Point-Biserial Correlation, and Kendall's Tau-b were used in the analysis.

Results showed that teachers perceived the overall effects of mainstreaming on the holistic development of learners with special educational needs as moderate, while the strategies used in handling these learners were rated as highly utilized. Among the four developmental domains, physical development obtained the highest mean, while emotional development obtained the lowest, although all remained within the moderate range. Sex showed significant relationships with social, emotional, and overall perceived effects, while nationality showed significant relationships across all measured domains of perceived mainstreaming effects. Highest educational attainment showed weak but significant relationships with selected domains and overall perceived effects. The findings suggest that mainstreaming may offer meaningful developmental opportunities; however, its perceived benefits may remain limited unless supported by responsive teaching practices, coordinated school support, and sustained inclusive implementation.

*Keywords* — **Mainstreaming, Inclusive Education, Learners With Special Educational Needs, Holistic Development, Teacher Perceptions, Thailand**

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## I. Introduction

Inclusive education has become a central concern in contemporary educational reform because it seeks to ensure that all learners, including those with special educational needs, are provided equitable access to participation, learning, and development within regular school settings. Within this broader agenda, mainstreaming has been recognized as a practical approach to inclusion by placing learners with special educational needs in general education classrooms while providing the support necessary for meaningful participation. In the present study, mainstreaming is examined through the perceptions of teachers who directly handle Grade 6 learners with special educational needs in Anubanrayong School, Rayong, Thailand.

In Thailand, inclusive education has been supported by educational reform initiatives and school-based efforts to accommodate learner diversity. However, the practical implementation of mainstreaming remains uneven, and the extent to which it is perceived to support the holistic development of learners with special educational needs continues to require closer examination in actual school contexts. Although inclusion is widely promoted as an educational ideal, the quality of learner outcomes depends greatly on classroom practices, teacher preparedness, institutional support, and the extent to which schools cultivate responsive and affirming learning environments.

The study is further informed by an ecological perspective on learner development. From this perspective, learner growth is shaped not only by individual characteristics but also by interactions within immediate and broader educational environments. In mainstreaming contexts, classroom climate, teacher strategies, peer relationships, and school-level support systems are therefore central to how developmental outcomes are experienced and perceived. This perspective is particularly relevant in examining teachers' perceptions of mainstreaming, since such perceptions reflect the day-to-day realities of inclusion as enacted in classroom settings.

Despite the growing body of work on inclusive education, relatively few studies have examined teachers' perceptions of how mainstreaming relates to the holistic development of learners with special educational needs across physical, intellectual, social, and emotional domains within a specific elementary school context in Thailand. The present study addresses this gap by examining teachers' perceptions of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs in Anubanrayong School, Rayong, Thailand, together with the strategies teachers utilize in handling these learners.

Moreover, this study is significant because it moves the discussion of inclusive education beyond policy aspirations toward evidence-based school practice. By examining how mainstreaming is experienced and interpreted by teachers directly involved in inclusive classrooms, the study provides practical insights into the conditions that may enhance or constrain the holistic development of learners with special educational needs. The findings may assist school administrators, teachers, and other education stakeholders in strengthening intervention programs,

refining classroom strategies, and improving support mechanisms that foster more meaningful and developmentally responsive inclusion.

### **Statement of the Problem**

This study examined how mainstreaming affects the holistic development of Grade 6 learners with special education needs (LSENs) in Anubanrayong School, Rayong, Thailand. The findings will serve as the foundation for a proposed Mainstream Intervention Plan framework.

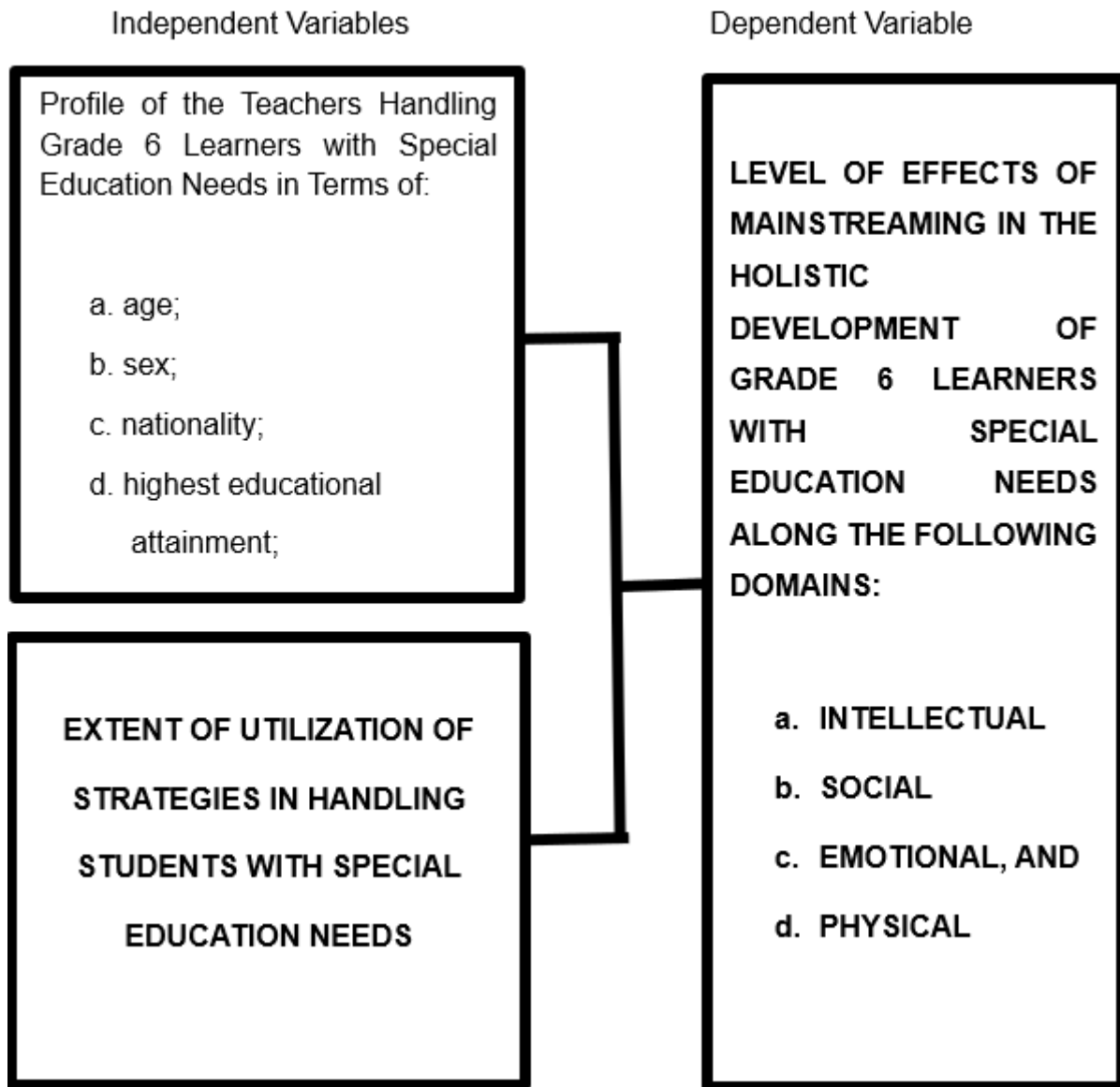
Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
  - a. age;
  - b. sex;
  - c. nationality;
  - d. highest educational attainment;
  - e. number of years of teaching in inclusive education, and
  - f. number of years handling students with various types of special needs?
2. What is the level of effect of mainstreaming in the holistic development of Grade 6 learners with special education needs (LSENs) as perceived by teachers along the following domains:
  - a. intellectual;
  - b. social;
  - c. emotional, and
  - d. physical?
3. What is the extent of utilization of the strategies in handling Grade 6 learners with special educational needs?
4. What is the significance of the relationship of the teachers' profile variables and the extent of effects of mainstreaming in the holistic development of Grade 6 learners with special education needs (LSENs) as perceived by them?

**Research Hypothesis**

This study tested the null hypothesis that there is **no significant relationship** between the selected teacher profile variables and teachers' perceived ratings of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs.

**Conceptual Framework**



**Figure 1. A Schematic Paradigm Showing the Relationship Between the Variables of the Study**

## Literature Review

Inclusive education has become a central concern in contemporary educational reform because it seeks to ensure that all learners, including those with special educational needs, are provided equitable access to participation, learning, and development within regular school settings. UNESCO (2020) emphasized that inclusive education should move beyond mere physical placement and should instead foster access, belonging, engagement, and meaningful learning opportunities for all learners. Similarly, Ahmed et al. (2022) found that the success of disability inclusion in Asia-Pacific countries depends heavily on teacher professional development, school support systems, and responsive instructional practices.

Related international studies suggest that mainstreaming may influence multiple dimensions of learner development. Morningstar et al. (2017) explained that inclusive education can promote academic achievement and broader participation for students with intellectual disability in general education, while Garrote et al. (2017) found that school-based interventions in mainstream settings can improve the social participation of pupils with special educational needs. In a related study, Kalambouka et al. (2007) found that placing pupils with special educational needs in mainstream schools has implications not only for their own learning but also for classroom participation and peer interaction.

However, the literature also cautions that these benefits are not automatic. Placement in a mainstream classroom does not by itself guarantee positive developmental outcomes, since the quality of support, teacher competence, peer climate, and institutional readiness remain crucial mediating factors. Garrote et al. (2017) noted that learners with special educational needs may continue to face barriers to participation unless schools deliberately strengthen inclusive practices. Likewise, Caballero (2024) showed that inclusion in mainstream classrooms must be understood not only in terms of physical placement but also in terms of how learners are accepted, supported, and engaged by peers and teachers.

In the Thai context, inclusive education has increasingly been supported by policy and reform efforts intended to accommodate learner diversity and protect the educational rights of children with disabilities and special educational needs. Vibulpatanavong (2017) described inclusive education in Thailand as a developing educational priority, while Klibthong and Agbenyega (2022) reported that Thai early childhood teachers still encounter important implementation issues related to inclusive education. Jamsai (2019) likewise found that teacher attitudes and school-level conditions significantly influence inclusion in Thai educational settings.

At the regional and local level, related Southeast Asian and Philippine studies also reinforce the importance of teacher perceptions, classroom strategies, and institutional support in inclusive education. Chitiyo et al. (2024) found that teacher perceptions and knowledge remain central to the status of inclusive education in the Philippines. Alcosero et al. (2023) also reported that the preparedness of regular teachers significantly affects the implementation of inclusive

education. In addition, Beltran et al. (2025) identified both effective practices and major challenges in implementing inclusive education in Philippine elementary schools.

Research further shows that teachers play a central role in determining whether mainstreaming becomes developmentally supportive or merely symbolic. Bandyopadhyay and Dhara (2021) emphasized that teacher attitudes strongly affect inclusive education, while Traya and Lopez (2023) found that mainstreaming influences teachers' attitudes and self-efficacy toward inclusion. Gur and Yikmis (2021) likewise documented the practices of classroom teachers handling mainstreamed learners with special needs, underscoring the importance of actual classroom strategies in inclusive settings. Tan et al. (2023) further highlighted the importance of parental involvement in the education of school-aged children with disabilities, suggesting that effective inclusion also depends on collaboration among teachers, families, and other stakeholders.

## **II. Methodology**

### **Research Design**

This study employed a quantitative descriptive-survey-correlational design to examine teachers' perceptions of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs across the physical, intellectual, social, and emotional domains, and to determine the extent of strategy utilization in handling these learners. A quantitative approach was adopted because it permits the systematic collection and analysis of numerical data, the description of patterns in teacher responses, and the statistical examination of relationships among selected variables.

The descriptive-survey component was used to determine the respondents' profile, their perceived level of the effects of mainstreaming on learners' holistic development, and the extent to which they utilized strategies in handling learners with special educational needs. The correlational component, on the other hand, was used to determine the significance of the relationship between selected teacher profile variables and their perceptions of the effects of mainstreaming. This design was appropriate because it enabled the researcher to investigate naturally occurring conditions in the school setting without manipulating the variables under study.

### **Research Setting**

The study was conducted at Anubanrayong School in Rayong, Thailand, during the school year 2024–2025. The school serves a diverse student population, including learners with special educational needs, and implements inclusive educational practices in which these learners are mainstreamed into regular education classrooms. As a school that actively supports inclusive education, Anubanrayong School provided an appropriate context for examining the effects of mainstreaming on learners' holistic development. The setting was particularly suitable because it gave the researcher access to teachers with direct experience in inclusive instruction and daily interaction with learners with special educational needs.

## Participants of the Study

The respondents of the study were teachers handling Grade 6 learners, including those with special educational needs, in mainstream settings at Anubanrayong School. These teachers were selected because they had direct classroom experience in teaching learners with special educational needs within inclusive education environments and were therefore in a position to provide informed responses regarding the perceived effects of mainstreaming and the strategies used in handling such learners.

The study utilized convenience sampling, whereby all available Grade 6 teachers who met the inclusion criteria and were willing to participate were invited to answer the survey questionnaire. This sampling technique was deemed appropriate because it allowed the researcher to gather data from respondents who were readily accessible and directly relevant to the objectives of the study.

## Research Instrument

Data were collected using a researcher-developed questionnaire-checklist designed in accordance with the objectives of the study. The instrument was intended to generate quantitative data on the respondents' demographic and professional profile, their perceptions of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs, and the extent of their strategy utilization in handling these learners.

The questionnaire consisted of three parts. **Part I** elicited information on the teachers' profiles. **Part II** measured teachers' perceptions of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs across the physical, intellectual, social, and emotional domains using a five-point Likert scale. **Part III** measured the extent of strategy utilization in handling learners with special educational needs in mainstreamed classrooms, likewise using a five-point Likert scale. The instrument was structured to yield measurable indicators aligned with the study variables and suitable for both descriptive and inferential statistical analysis.

## Validity of the Instrument

To establish content validity, the instrument was submitted for expert evaluation after incorporating the comments and suggestions of the researcher's thesis adviser and critic-reader. The pool of evaluators consisted of two school administrators/directors and three Grade 6 teachers who were not included in the actual study. These evaluators assessed the instrument using an assessment checklist adapted from previous studies.

The instrument was considered valid when the average rating assigned by the evaluators reached 2.50 or higher. Based on the comments and recommendations of the evaluators, necessary

revisions were made before the final administration of the questionnaire. This procedure helped ensure that the items were clear, relevant, and aligned with the objectives of the study.

### **Data Collection Process**

Data collection was conducted through a structured and ethically guided procedure. Prior to the administration of the instrument, the researcher secured approval from the appropriate academic and school authorities and sought the permission and support of the department heads of the participating school. Their assistance facilitated the endorsement of the study to prospective respondents and the identification of appropriate channels for questionnaire distribution.

Before the distribution of the questionnaire, the respondents were informed of the purpose of the study, the procedures involved, the voluntary nature of participation, and the safeguards for confidentiality and anonymity. An informed consent form accompanied the instrument. The questionnaire was distributed in both online and paper-based formats, depending on the respondents' accessibility and preference. Online responses were collected through Google Forms, while printed copies were distributed personally when necessary.

Respondents were given sufficient time to complete the questionnaire, and follow-up reminders were issued to maximize the retrieval rate. After collection, the completed questionnaires were checked for completeness and consistency, then prepared for tabulation, encoding, and statistical analysis. All responses were treated confidentially, and no personally identifiable information was required from the respondents.

### **Ethical Considerations**

The study adhered to established ethical standards for research involving human participants. All respondents were properly informed about the nature, purpose, and procedures of the study before participation. Informed consent was secured, and respondents were assured that their participation was entirely voluntary. They were likewise informed that they could decline participation or withdraw from the study at any point without penalty or negative consequence.

All information gathered was treated with strict confidentiality, and the anonymity of the respondents was protected throughout the conduct of the study. No personally identifiable information was required in the questionnaire, and all findings were reported only in aggregate form. The data collected were stored in password-protected files accessible only to the researcher and were retained only for the period necessary for the completion of the study before proper disposal. The researcher further ensured that participation in the study would not expose respondents to physical, emotional, or professional harm.

### **Statistical Treatment**

Both descriptive and inferential statistics were used in analyzing the data. The completed questionnaires were submitted to the PSU-SAS Statistics Center for computation using appropriate statistical tools.

Descriptive statistics such as frequency counts, percentages, and means were used to summarize the respondents' profile and to determine the level of the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs, as well as the extent of strategy utilization in handling these learners. A standard five-point Likert scale was used as the basis for interpreting the responses.

Inferential statistics were employed to determine the significance of the relationship between selected teacher profile variables and their perceptions of the effects of mainstreaming. Specifically, Point-Biserial Correlation and Kendall's Tau-B were used, depending on the measurement level and nature of the variables involved. All statistical tests were conducted at the 0.05 level of significance. These statistical tools were selected because they were appropriate for the study objectives and consistent with the type of data gathered.

### **Interpretation of Non-Significant Findings**

Non-significant findings were interpreted cautiously and discussed in relation to possible methodological and contextual considerations. These may include limited variability in responses, similarities in the respondents' professional experiences, or the possibility that school-based and instructional conditions exerted a stronger influence on perceptions of mainstreaming than the selected teacher profile variables. Such interpretation was intended to provide a balanced and academically grounded discussion of the findings.

### **Feasibility of the Study**

The study was considered feasible because it was conducted in an accessible school setting with available respondents who had direct experience in mainstreaming learners with special educational needs. The support of school authorities and department heads contributed to the efficient administration of the research procedures. In addition, the use of a structured questionnaire-checklist enabled systematic data collection without causing major disruption to the respondents' teaching responsibilities. The resources required for the study, including institutional approval, questionnaire distribution and retrieval, and statistical treatment of the data, were manageable within the scope and timeframe of the research.

Phase	Activity	Timeframe
Phase 1	Instrument development, validation, and revision	Month 1
Phase 2	Securing approval and coordination with school authorities	Month 2
Phase 3	Distribution and retrieval of questionnaires	Months 3–4
Phase 4	Data tabulation, encoding, and statistical analysis	Month 5
Phase 5	Interpretation of findings, writing, and finalization of the study	Month 6

### III. Results and Discussion

**Table 1. Profile of the Respondents**

Profile	Category	Frequency	Percentage
Age	21-30	39	39.0
	31-40	37	37.0
	41-50	21	21.0
	51-60	2	2.0
	61-70	1	1.0
Sex	Male	20	20.0
	Female	77	77.0
	Prefer not to say	3	3.0
Nationality	Filipino	54	54.0
	Thai	30	30.0
	South African	6	6.0
	Cameroon	2	2.0
	English/British	4	4.0
	American	2	2.0
Civil Status	Indian	2	2.0
	Single	58	58.0
Highest Educational Attainment	Married	41	41.0
	Divorced	1	1.0
	Bachelor's Degree Graduate	78	78.0
	w/ units in Master's Degree	14	14.0
Years of Teaching Experience in Inclusive Education	Master's Degree Graduate	7	7.0
	With Education Units	1	1.0
	10 years and above	31	31.0
	6 years but less than 10 years	27	27.0
	3 years but less than 6 years	24	24.0
Experience Working with Students with various Types of Special Needs	1 year but less than 3 years	15	15.0
	120 days but less than 1 year	3	3.0
	Autism Spectrum Disorder (ASD)	34	34
	Attention-Deficit/Hyperactivity Disorder (ADHD)	77	77
	Learning Disabilities (e.g., dyslexia, dyscalculia)	33	33
	Intellectual Disabilities	11	11
	Emotional and Behavioral Disorder (EBD)	51	51
	Sensory Impairments (e.g., Visual or Hearing Impairments)	10	10
Physical Disabilities	14	14	
Speech and Language Disorders	20	20	

The findings show that the respondents were largely female, academically qualified, and had varying levels of experience in inclusive education, with many reporting prior exposure to learners with ADHD and emotional and behavioral disorders. This profile suggests that the study reflects the perceptions of a teaching group with practical experience in mainstreaming and inclusive classroom instruction. The result is consistent with literature emphasizing that teacher preparedness, exposure to learner diversity, and continuing professional development are important conditions in inclusive education. In the Asia-Pacific region, teacher training and competence have been identified as key factors affecting the quality of inclusive implementation, particularly in contexts where schools serve learners with a wide range of disabilities and learning needs. This implies that the respondents’ background may have influenced how they understood and evaluated the effects of mainstreaming in their classrooms.

**Table 2. Summary of the Effect of Mainstreaming in the Holistic Development of Grade 6 Learners with Special Educational Needs (LSEs)**

Effect of Mainstreaming in the Holistic Development of Grade 6 Learners with Special Education Needs (LSEs)	Level of Effect	
	Mean	Description
Physical	3.13	Moderate
Intellectual	3.08	Moderate
Social	3.11	Moderate
Emotional	3.05	Moderate
<b>Overall Mean</b>	<b>3.10</b>	<b>Moderate</b>

1.00 – 1.50 Very Low (VL); 1.51 – 2.50 Low (L) 4.51 – 5.00 Very High (VH) 2.51 – 3.50 Moderate (M); 3.51 – 4.50 High (H)

The study found that teachers perceived the overall effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs as **moderate**, with physical development obtaining the highest mean and emotional development the lowest. This suggests that mainstreaming was viewed as offering meaningful developmental opportunities, but not to the extent that teachers perceived its effects as consistently high across all domains.

This result is consistent with earlier studies indicating that mainstreaming may support multiple dimensions of learner development. Morningstar et al. (2017) noted that inclusive education can enhance academic participation and achievement in general education settings, while Garrote et al. (2017) reported that supportive school-based interventions improve the social participation of learners with special educational needs in mainstream schools. De Bruijn et al. (2022) likewise highlighted the developmental value of physical activity for children and adolescents with intellectual and developmental disabilities. Nevertheless, these benefits are not automatic, as their realization depends heavily on effective implementation, teacher responsiveness, and adequate school support systems. The present finding therefore supports the view that mainstreaming may be developmentally beneficial, but that its impact remains context-dependent rather than guaranteed.

The moderate rating across all four domains also aligns with prior discussions in the thesis literature review indicating that mainstreaming can promote physical, intellectual, social, and

emotional participation, while still being constrained by insufficient support, uneven inclusion practices, and limited intervention structures. In particular, the lower emotional rating suggests that learners may be physically present and socially exposed in regular classrooms without necessarily experiencing deep emotional inclusion, security, or belonging. This supports international and school-based evidence that inclusive placement alone does not ensure stronger psychosocial outcomes unless schools intentionally cultivate affirming peer environments and sustained emotional support.

**Table 3. Summary of the Strategies Used in Enhancing Grade 6 Learners with Special Educational Needs’ Holistic Development**

Strategies Used in Handling Grade 6 Learners with Special Educational Needs	Mean	Description
Sensory and/or Physical Needs	4.37	Highly Utilized
Behavioral, Emotional, and Social Development	4.27	Highly Utilized
Cognitive and Learning	4.23	Highly Utilized
Communication and Interaction	4.44	Highly Utilized
<b>Overall Mean</b>	<b>4.33</b>	<b>Highly Utilized</b>

1.00 – 1.50 Not Utilized (NU);                      1.51 – 2.50 Somewhat Utilized (SU)  
 2.51 – 3.50 Moderately Utilized (MU);        3.51 – 4.50 Highly Utilized (HU)  
 4.51 – 5.00 Very Highly Utilized (VHU)

The study further revealed that teachers rated their utilization of strategies in handling Grade 6 learners with special educational needs as **highly utilized overall**. This indicates that teachers perceived themselves as frequently using communication, support, adaptation, and classroom management strategies in mainstream settings. Such a finding is consistent with prior studies highlighting the importance of teacher strategies in successful inclusion. Ahmed et al. (2022) found that disability inclusion depends heavily on teacher professional development and responsive classroom practice, while Gur and Yikmis (2021) underscored the importance of actual strategies used by classroom teachers handling mainstreamed learners with special needs. Alcosero et al. (2023) likewise reported that teacher preparedness significantly influences the implementation of inclusive education. Taken together, these studies support the present result that teacher strategies are central to effective mainstreaming. Prior studies and reviews have identified differentiated instruction, communication support, collaboration, behavior guidance, and learner-responsive classroom practices as important contributors to more effective mainstreaming and inclusive education.

At the same time, the present findings show an important pattern: although teachers reported a high extent of strategy utilization, the overall perceived effects of mainstreaming remained only moderate. This suggests that teacher effort alone may not be sufficient to produce stronger perceived developmental outcomes. The result supports literature arguing that the effectiveness of inclusive practices depends not only on individual teacher strategies but also on broader institutional support, such as specialist assistance, school leadership, coordinated implementation, and sustained professional development. Thus, the findings imply that mainstreaming may require stronger systemic support if high strategy use is to translate into stronger learner outcomes.

**Table 4. Relationship Between the Profile of the Respondents and the Effect of Mainstreaming in the Holistic Development of Grade 6 Learners with Special Educational Needs (LSEs)**

Profile of Teachers	Effect of Mainstreaming in the Holistic Development of Grade 6 Learners with Special Educational Needs (LSEs)				Overall	
		Physical	Intellectual	Social		Emotional
Age	r	0.105	0.041	0.061	0.052	0.074
	Sig.	0.299	0.684	0.546	0.604	0.467
Sex	r <sub>pb</sub>	0.163	0.127	<b>.327**</b>	<b>.351**</b>	<b>.295**</b>
	Sig.	0.110	0.214	<b>0.001</b>	<b>0.000</b>	<b>0.003</b>
Nationality <sup>a</sup>	r <sub>pb</sub>	<b>-.292**</b>	<b>-.325**</b>	<b>-.343**</b>	<b>-.370**</b>	-
	Sig.	<b>0.003</b>	<b>0.001</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
Highest Educational Attainment	T <sub>b</sub>	-0.130	<b>-.168*</b>	-0.125	<b>-.173*</b>	<b>-.171*</b>
	Sig.	0.120	<b>0.046</b>	0.134	<b>0.038</b>	<b>0.036</b>
Years of Teaching Experience	T <sub>b</sub>	-0.088	-0.044	-0.051	-0.103	-0.088
	Sig.	0.262	0.577	0.516	0.186	0.249

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

<sup>a</sup> Adjusted to binary variable (Nationality=Filipino/Other)

The correlation analysis showed that sex had significant relationships with the social, emotional, and overall perceived effects of mainstreaming, while nationality showed significant relationships across all measured domains. Highest educational attainment had weak but significant relationships with intellectual, emotional, and overall perceived effects. In contrast, age and years of teaching experience were not significantly related to teachers’ perceptions of mainstreaming effects.

These findings suggest that some teacher characteristics may shape how mainstreaming is perceived, although the relationships should be interpreted cautiously. The significance of sex and nationality may reflect differences in professional experiences, training backgrounds, or expectations regarding inclusion. However, such results should not be overstated as causal, especially because nationality in the article was coded as a binary variable and therefore reflects grouped differences rather than fine-grained cultural interpretation.

The weak but significant relationship involving educational attainment is consistent with literature suggesting that teacher education and advanced academic preparation may influence attitudes, confidence, and responsiveness toward inclusive education. Prior studies indicate that educational attainment and professional exposure may shape how teachers understand and respond to learners with special educational needs. Fabella (2023) found that educational attainment and years of teaching children with special needs were associated with teachers’ attitudes toward inclusive education in Thailand, while Alcosero et al. (2023) emphasized the importance of teacher preparedness in inclusive education practice. Taken together, these studies support the view that teacher qualifications and prior exposure may influence perceptions and responses toward mainstreaming. In contrast, the absence of significant relationships for age and years of teaching experience suggests that professional longevity alone may not necessarily produce stronger or

more favorable perceptions of mainstreaming. This supports the article's own methodological interpretation that school-based conditions, shared workplace realities, or similarities in respondents' experiences may have exerted a stronger influence on perceptions than these profile characteristics alone.

#### **IV. Conclusion and Recommendations**

This study examined the effects of mainstreaming on the holistic development of Grade 6 learners with special educational needs and the extent of strategy utilization among teachers in inclusive classroom settings in Rayong, Thailand. The findings revealed that although teachers highly utilized strategies to support learners across physical, intellectual, social, and emotional domains, the overall effect of mainstreaming on holistic development was only moderate. Among the four domains, the physical aspect obtained the highest mean, while the emotional aspect registered the lowest, although all domains remained within the moderate level. These findings suggest that while teachers are actively implementing inclusive practices, the developmental outcomes of mainstreaming may still be constrained by broader contextual and institutional factors.

The study further found that most teacher profile variables described a relatively experienced and academically prepared group of educators, yet only selected variables were significantly associated with perceptions of mainstreaming effectiveness. In particular, sex and nationality showed significant relationships with teachers' perceptions of the effects of mainstreaming across developmental domains, with Filipino teachers reporting higher perceptions of its effects than teachers of other nationalities. A notable finding of the study is the gap between the high utilization of strategies and the moderate developmental effects of mainstreaming, pointing to the need for stronger support systems to maximize inclusive outcomes.

Based on these findings, school administrators may provide sustained professional development for teachers on mainstreaming strategies, differentiated instruction, behavior management, and the handling of diverse special educational needs. Training should be practical, continuous, and responsive to actual classroom challenges, particularly in areas where teachers have less experience, such as sensory impairments, intellectual disabilities, and other specialized learner needs. School leaders may also allocate resources and instructional support that enable teachers to implement inclusive practices more effectively across all domains of learner development.

Institutions may further strengthen collaboration among general education teachers, special education specialists, school leaders, and parents to ensure that learners with special educational needs receive coordinated and consistent support. Continuous monitoring and evaluation mechanisms may likewise be established to assess the progress of mainstreaming practices, identify implementation gaps, and guide timely interventions. Future studies may be conducted in other school contexts and may include additional variables to deepen understanding of the factors

that influence the effectiveness of mainstreaming. Sustainable improvement in learner outcomes requires not only teacher effort, but also a supportive and collaborative educational environment that promotes the holistic development of learners with special educational needs.

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