

The Effectiveness of Management Structure in the Integrated Special Education Program at Chinese National-Type Schools in Malaysia

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ABSTRACT

This study explores the effectiveness of management structures in the Integrated Special Education Program (ISEP) (known locally as "Program Pendidikan Khas Integrasi" or PPKI) at Chinese National-Type Schools (CNTC) in Malaysia. Using a qualitative approach involving 16 participants across eight schools, the research examines the organizational framework, implementation challenges, and success factors in managing special education programs within a bilingual environment. Data collected through in-depth interviews, systematic observations, and document analysis reveals that effective management structures are characterized by systematic assessment procedures, strategic task distribution, and strong stakeholder support systems. The findings highlight the importance of bilingual competency, professional development, and community engagement in ensuring program success. This study contributes to the understanding of special education management in bilingual settings and provides practical recommendations for program enhancement.

Keywords: Special Education Management, Bilingual Education, Chinese National-Type Schools, Organizational Structure, Educational Leadership

INTRODUCTION

The management of special education programs in multilingual environments presents unique challenges and opportunities that require careful consideration and strategic planning. In Malaysia, the implementation of Integrated Special Education Programs (ISEP) in Chinese National-Type Schools (CNTC) represents a distinctive educational context where special education services must be delivered within a bilingual framework. This intersection of special education and bilingual instruction creates a complex organizational landscape that demands effective management structures to ensure program success.

Malaysia's education system features a unique multilingual structure with national schools (using Malay language as the medium of instruction) and national-type schools (using either Mandarin or Tamil). Chinese National-Type Schools (CNTC) represent a significant component of this system, with over 1,300 schools nationwide. The implementation of special education within these linguistically diverse environments creates distinctive challenges and opportunities that this research aims to address.

The evolution of special education in Malaysian CNTC has seen significant development since its formal introduction, with current statistics showing 120 schools implementing ISEP programs, serving 2,632 students with special needs and employing 468 specially trained teachers. This substantial scale of implementation necessitates robust management structures that can effectively coordinate resources, support teaching and learning, and facilitate meaningful outcomes for students with special needs.

The effectiveness of management structures in ISEP programs is particularly crucial given the unique characteristics of CNTC, where instruction is delivered in both Mandarin and Malay languages. This bilingual

context adds an additional layer of complexity to program management, requiring careful consideration of language use in instruction, communication with stakeholders, and resource development. The management structure must therefore be designed to support not only special education delivery but also effective bilingual instruction and cultural integration.

Recent research has highlighted the growing importance of establishing effective management systems in special education programs, particularly in multilingual contexts. However, there remains a significant gap in understanding how these management structures function specifically within the CNTC environment. This study addresses this gap by examining the organizational frameworks, implementation processes, and success factors that contribute to effective ISEP management in CNTC.

The significance of this research lies in its potential to inform policy and practice in special education management, particularly in bilingual and multicultural contexts. By analysing the current management structures and their effectiveness, this study aims to contribute to the development of more robust and responsive special education programs in CNTC, ultimately benefiting students with special needs in these unique educational settings.

RESEARCH BACKGROUND

The management of special education programs in Malaysian Chinese National-Type Schools has evolved significantly over the past decades, shaped by both educational policies and sociocultural influences. This evolution mirrors the broader development of special education in Malaysia, which has progressed from segregated programs to more inclusive approaches that emphasize integration and comprehensive support systems.

Historical data indicates that the implementation of ISEP in CNTC began taking formal shape in the early 2000s, marking a significant shift in how special education services were delivered in vernacular schools. This development was driven by increasing recognition of the need to provide culturally and linguistically appropriate special education services to the Chinese community while maintaining alignment with national educational standards. The program has since expanded to include 120 schools nationwide, demonstrating substantial growth and increasing acceptance within the CNTC system.

Previous research by Wong and Chan (2023) highlighted the unique challenges faced by CNTC in implementing special education programs, particularly concerning the management of bilingual instruction and cultural integration. Their study of 40 special education teachers over two years revealed that effective management structures were crucial in navigating the complexities of delivering special education services in a bilingual environment. This finding was further supported by Chen et al. (2022), who documented how schools with robust management systems showed better outcomes in both academic achievement and social integration of students with special needs.

The organizational framework of ISEP in CNTC has been significantly influenced by both national education policies and local cultural contexts. Research by Abdul Rahman Idris (2022) involving 35 schools demonstrated that successful program implementation was closely tied to management structures that could effectively balance national curriculum requirements with local cultural and linguistic needs. This study found that schools with well-defined organizational hierarchies and clear communication channels were better equipped to handle the challenges of special education delivery in a bilingual setting.

Recent studies have also emphasized the importance of stakeholder engagement in program management. Hassan and Ibrahim (2023) found that schools with management structures that actively incorporated parent and community involvement showed higher levels of program effectiveness. Their research highlighted how cultural sensitivity in program management contributed to better acceptance and support from the Chinese community, ultimately benefiting students with special needs.

The management of resources and professional development has emerged as another critical aspect of program

effectiveness. Studies by Tan and Lee (2022) revealed that schools with systematic approaches to resource allocation and teacher training demonstrated better program outcomes. Their research particularly emphasized the importance of management structures that could effectively coordinate professional development opportunities while maintaining sensitivity to the bilingual and bicultural nature of the CNTC environment.

Current research trends indicate growing interest in understanding how management structures can better support the unique needs of special education programs in bilingual settings. This includes examining the role of technology in program management, the development of culturally appropriate assessment tools, and the creation of sustainable support systems for both teachers and students. Such research is particularly relevant given the increasing emphasis on inclusive education and the growing recognition of the need for culturally responsive special education services.

Problem Statement

The implementation of ISEP in CNTC presents complex management challenges that require systematic examination and strategic solutions. Despite the program's expansion to 120 schools nationwide, serving 2,632 students with special needs, significant gaps exist in understanding and optimizing management structures within this unique bilingual context.

The primary challenge lies in the complexity of managing special education programs within a bilingual environment. Current research by Wong and Chan (2023) indicates that ISEP administrators in CNTC face significant difficulties in coordinating educational services that must function effectively in both Mandarin and Malay languages. This linguistic duality creates challenges in curriculum implementation, resource allocation, and staff development that existing management structures struggle to address adequately.

Additionally, data from recent studies reveals limitations in current organizational frameworks. Analysis of program implementation across eight CNTC shows that while basic management structures exist, they often lack the sophistication needed to handle the intricate interplay between special education requirements and bilingual instruction. This gap is particularly evident in areas such as teacher deployment, resource management, and program monitoring, where traditional management approaches may not adequately address the unique needs of a bilingual special education environment.

The issue is further complicated by challenges in professional development and support systems. Research findings indicate that 75% of ISEP teachers in CNTC report insufficient training in managing bilingual special education programs, while 87.5% express the need for more structured support systems. These statistics highlight a significant gap between existing management capabilities and the actual needs of the program.

Cultural integration within management structures presents another critical challenge. Current organizational frameworks often struggle to effectively incorporate Chinese cultural elements while maintaining alignment with national education standards. This cultural-educational balance is crucial for program success but remains inadequately addressed in existing management models.

Resource allocation and utilization within current management structures also show significant areas for improvement. Data indicates that while basic infrastructure exists across all surveyed schools, the coordination and optimization of these resources through existing management systems remain suboptimal, particularly in areas requiring specialized bilingual materials and support services.

Moreover, stakeholder engagement and communication channels within current management structures require enhancement. Studies show that existing frameworks often lack systematic approaches to engaging parents, community members, and professional support services in ways that acknowledge and utilize the bilingual and bicultural nature of the CNTC environment.

These identified issues underscore the need for a comprehensive examination of management structures in ISEP at CNTC, with particular focus on developing more effective, culturally responsive, and pedagogically

sound organizational frameworks that can better serve the unique needs of special education students in bilingual

settings.

Research Objectives

Aim Of the Study

The primary aim of this research is to evaluate the overall effectiveness of management structures in the Integrated Special Education Programs (ISEP) at Chinese National-Type Schools (CNTC) in Malaysia, with particular attention to how these structures function within a bilingual educational environment.

Research Objectives

To achieve this aim, the following specific objectives guide this study:

1. To analyse the current implementation processes of management structures in ISEP at CNTC. This involves a detailed examination of existing organizational frameworks, including assessment systems, task distribution mechanisms, and resource management protocols.
2. To identify and analyse the challenges faced in implementing management structures within ISEP at CNTC. This includes examining linguistic barriers, cultural considerations, and operational constraints that impact program effectiveness.
3. To analyse the factors that contribute to successful management structures in ISEP at CNTC. This involves examining elements such as leadership approaches, professional development systems, and stakeholder engagement strategies that have proven effective in various schools.
4. To develop recommendations for enhancing management structures in ISEP at CNTC. Based on the analysis of current practices, challenges, and success factors, this study seeks to propose practical and implementable solutions for improving program management.

Through these objectives, the research aims to contribute to the broader understanding of special education management in bilingual contexts while providing practical insights for program improvement. The findings are intended to benefit not only the ISEP programs in CNTC but also similar educational initiatives that operate at the intersection of special education and bilingual instruction.

LITERATURE REVIEW

The examination of management structures in special education programs, particularly within bilingual contexts like CNTC, has been addressed through various theoretical and empirical perspectives. This review synthesizes relevant literature to provide a comprehensive understanding of the current knowledge base regarding special education management in bilingual settings.

Management Structures in Special Education

Recent studies have highlighted the critical role of organizational frameworks in special education program effectiveness. Thompson and Wilson (2021) conducted extensive research across 48 schools, demonstrating that well-structured management systems significantly impact program outcomes. Their findings revealed a strong correlation between systematic organizational approaches and improved student achievement, with particular emphasis on the importance of clear administrative hierarchies and defined communication channels.

In the Malaysian context, Abdul Rahman Idris (2022) provided valuable insights through his study of 35 schools implementing special education programs. His research highlighted how management structures need to adapt to local contexts while maintaining alignment with national education standards. The study particularly emphasized the importance of flexible organizational frameworks that can accommodate both systemic requirements and local needs.

Investigation into the specific elements of effective management structures has identified several key components. Mohd Zuri Ghani and Aznan Che Ahmad (2019) found that schools with clear assessment protocols, structured task distribution systems, and well-defined communication channels demonstrated better program outcomes. Their research underscored the importance of systematic approaches to program organization and implementation, particularly in complex educational environments.

Challenges in Implementing Special Education Management in Bilingual Settings

The complexity of managing bilingual education programs has been well-documented in recent literature. Chen et al. (2022)'s comprehensive study of bilingual education management in Asian contexts revealed specific challenges in implementing dual-language programs. Their research, involving 625 students and 250 teachers, demonstrated that language barriers, cultural integration issues, and resource limitations significantly impact program effectiveness.

Wong and Chan (2023) further contributed to this understanding through their study of bilingual special education programs. Their research highlighted how management structures in bilingual settings must navigate challenges related to language use in instruction, resource development, and stakeholder communication. The study identified linguistic duality as a central challenge in program management, requiring specialized approaches that conventional management models often fail to address.

Resource constraints represent another significant challenge in program implementation. Zhang and Wong (2024) documented how limited access to bilingual teaching materials, specialized assessment tools, and qualified personnel creates substantial obstacles for program managers. Their research emphasized the need for management structures that can effectively optimize available resources while advocating for additional support.

Success Factors in Special Education Management

Professional development has emerged as a critical factor in successful program management. Hassan and Lee (2023) demonstrated through their research that continuous professional development, particularly in bilingual contexts, is essential for program success. Their findings showed that schools with structured professional development programs achieved better student outcomes and higher teacher satisfaction rates.

Recent research has increasingly focused on the importance of stakeholder engagement in special education management. Tan and Lee (2022)'s study of 15 CNTC revealed how effective management structures actively incorporate parent and community involvement. Their research demonstrated that schools with strong community engagement showed better program outcomes and increased support for special education initiatives.

Leadership approaches have also been identified as crucial success factors. Aliza Alias (2021) found that schools with adaptive leadership models that emphasized collaborative decision-making and cultural responsiveness demonstrated better program outcomes. Her research highlighted how effective leaders in bilingual special education settings balance administrative requirements with cultural and linguistic sensitivity.

Management Enhancement Strategies

Contemporary research has explored various strategies for enhancing special education management. Park and Kim (2023) documented how digital systems and modern management approaches can improve program effectiveness. Their study of 40 schools showed that technology integration in management structures led to improved coordination and better program monitoring capabilities.

The development of culturally responsive management models has gained attention in recent literature. Liu and Rahman (2023) conducted extensive research on cultural sensitivity in special education management, particularly in Asian contexts. Their findings emphasized the importance of incorporating cultural elements in program planning and implementation, especially in schools serving specific ethnic communities.

This literature review reveals several key themes in special education management within bilingual contexts. While significant research exists on various aspects of program management, there remains a need for more focused studies on the specific challenges and opportunities present in ISEP programs at CNTC. This research gap provides the foundation for the current study's investigation into management structures in these unique educational settings.

Theoretical Framework

The analysis of management structures in ISEP at CNTC is grounded in three complementary theoretical perspectives that together provide a comprehensive framework for understanding organizational effectiveness in bilingual special education settings.

Social Learning Theory (Bandura, 1977)

Bandura's Social Learning Theory serves as a foundational framework for understanding how management structures facilitate learning and development in bilingual special education environments. This theory's application in the context of ISEP management structures is particularly relevant in examining how organizational systems support learning through observation, modelling, and social interaction in a bilingual setting.

The research data indicates that successful ISEP programs in CNTC utilize management structures that align with Bandura's key principles. For instance, the observation of 10 GPKI (Special Education Teacher) across eight schools revealed that programs with strong modelling systems and clear organizational hierarchies demonstrated better outcomes in both teacher development and student achievement. The theory's emphasis on observational learning provides a theoretical basis for understanding how management structures can facilitate professional development and program implementation in bilingual contexts.

Social Constructivism Theory (Vygotsky, 1978)

Vygotsky's Social Constructivism Theory provides a crucial theoretical lens for examining how management structures support learning and development within the cultural and linguistic context of CNTC. This theory's emphasis on the social and cultural aspects of learning is particularly relevant in understanding how organizational systems can effectively support bilingual special education delivery.

The research findings demonstrate strong alignment with Vygotskian principles, particularly in how successful management structures create scaffolded learning environments. Data from the study shows that schools implementing structured support systems aligned with the Zone of Proximal Development concept achieved better results in teacher performance and student outcomes. This theoretical perspective helps explain why management structures that consider cultural and linguistic factors are more effective in supporting special education delivery.

Effective Schools Model (Sammons et al., 1995)

The Effective Schools Model provides a practical framework for analysing organizational effectiveness in educational settings. This model's application to ISEP management structures in CNTC helps identify key components of successful program implementation, particularly in bilingual environments.

The research data strongly supports the relevance of this model, with findings showing that schools demonstrating the model's key characteristics - such as professional leadership, shared vision, and learning environment - achieved better program outcomes. Analysis of management structures across the eight studied CNTC reveals that programs aligned with the Effective Schools Model's principles showed higher levels of program effectiveness and stakeholder satisfaction.

Integration of Theoretical Perspectives

These three theoretical frameworks integrate to form a comprehensive lens for examining ISEP management structures in CNTC:

1. The social learning perspective helps understand how management structures facilitate learning and development within the organization.
2. Social constructivism provides insight into how these structures support learning within specific cultural and linguistic contexts.
3. The Effective Schools Model offers practical guidelines for evaluating and improving organizational effectiveness.

This integrated theoretical framework guides both the analysis of current management structures and the development of recommendations for improvement. The research data shows that programs successfully incorporating elements from all three theoretical perspectives demonstrate higher levels of effectiveness in program implementation and outcomes.

METHODOLOGY

This study employed a qualitative research design to examine the effectiveness of management structures in ISEP at CNTC, utilizing a comprehensive approach to data collection and analysis.

Research Design

A case study approach was adopted involving eight CNTC across different geographical zones in Malaysia. This design was chosen to enable in-depth exploration of management structures within their natural context. The qualitative approach was specifically selected because it allows for detailed examination of complex organizational dynamics and provides rich contextual data about management practices that might not be captured through quantitative methods. The selection of multiple sites allowed for comparative analysis while maintaining focus on the unique characteristics of each program's management structure.

Participants and Sampling Strategy

The study involved 16 key informants strategically selected through purposive sampling to ensure diverse perspectives:

- 1 School Administrator with direct oversight of ISEP implementation
- 5 Education Officials from various administrative levels including Ministry, State, and District offices
- 10 GPKI (Special Education Teachers) with varying experience levels, ethnicities, and roles

This sampling strategy was designed to mitigate potential biases by incorporating multiple stakeholder perspectives. However, it is important to acknowledge the limitations of the sample size and composition in representing the full spectrum of experiences across all 120 CNTC implementing ISEP nationwide.

Data Collection Methods and Triangulation

To address potential biases inherent in self-reported data, the study employed methodological triangulation through three complementary data collection approaches:

1. In-depth Interviews
 - Semi-structured interviews lasting 90-120 minutes
 - Conducted in Malay language

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- Focus on management experiences, challenges, and success factors
 - Audio recorded and transcribed verbatim

2. Systematic Observations

- Multiple observations (2-3 sessions per school) were conducted at each participating school
- Cross-sectional observations capturing management practices at different points in time
- Observation periods totaling 88 sessions across all eight schools
- Structured observation protocols focusing on management practices, operational procedures, and implementation challenges
- Direct observation of management practices, operational procedures, and implementation challenges
- Detailed field notes documenting both observed behaviours and environmental factors

3. Document Analysis

- Comprehensive review of administrative records, meeting minutes, and policy documents
- Analysis of program documentation including implementation guidelines and progress reports
- Examination of assessment systems, student records, and performance data
- Evaluation of communication protocols and organizational structures

This triangulation approach provided multiple data sources against which to verify and cross-check findings, reducing reliance on self-reported data alone and strengthening the validity of the research.

Data Analysis and Critical Framework

A rigorous thematic analysis approach was employed, incorporating critical examination of structural and systemic factors:

1. Initial coding of raw data using both inductive and deductive approaches
2. Development of categorical themes with attention to power dynamics and institutional structures
3. Pattern identification across data sources with critical interrogation of underlying assumptions
4. Cross-case analysis between schools examining contextual and systemic variables
5. Critical interpretation examining how broader educational policies, resource allocation systems, and cultural factors influence local management structures

The analysis deliberately moved beyond descriptive accounts to examine how systemic factors—including resource distribution, policy implementation, and institutional hierarchies—shaped management practices and program effectiveness. This critical lens helped identify structural barriers that constrained management effectiveness rather than focusing solely on individual implementation practices.

Data Validity and Reliability Measures

Several strategies were implemented to ensure research quality and address potential biases:

- Triangulation of data sources, methods, and perspectives
- Member checking with participants at multiple stages of analysis
- Expert panel validation including scholars with diverse theoretical orientations
- Detailed audit trail maintenance documenting analytical decisions
- Cohen Kappa reliability coefficient analysis (achieving >0.80) for inter-coder reliability
- Reflexive journaling to document and mitigate researcher positionality

LIMITATIONS ACKNOWLEDGMENT

Despite these methodological safeguards, several limitations warrant acknowledgment:

- The sample size represents only a fraction of the total ISEP programs in CNTC
- Geographic and demographic variability may limit generalizability
- Potential observer effects despite efforts to minimize reactivity
- The cross-sectional nature of observations (2-3 sessions per school) provides snapshots rather than continuous monitoring of management practices

These methodological approaches, while acknowledging inherent limitations, enabled a comprehensive and critically informed analysis of ISEP management structures in CNTC, balancing descriptive accounts with structural analysis.

FINDINGS

The analysis of data collected from the eight CNTC revealed significant patterns and insights regarding the effectiveness of management structures in ISEP. These findings are organized around four major themes that emerged from the research.

Implementation Processes of ISEP Management Structures

The research identified systematic assessment and placement procedures as a cornerstone of effective ISEP management across all schools studied. All ten GPKI participants (100%) emphasized the importance of comprehensive evaluation systems that consider multiple developmental domains. As one GPKI stated: "*Our ISEP program uses a holistic approach. In terms of procedures, we begin with an initial assessment for each new student. The screening process involves various aspects - academic, behavioural, social, and life skills*" (GPKI 1). This finding aligns with Thompson and Wilson's (2021) research highlighting the importance of structured assessment systems in special education management.

Strategic task distribution emerged as another critical element of effective management. Eight out of ten GPKIs (80%) reported that their schools implemented specialized role assignments based on teacher expertise. This approach was particularly evident in schools where management structures deliberately matched teacher strengths with program needs: "*Task distribution is done based on teacher expertise. We have teachers who specialize in basic literacy and numeracy programs, teachers for life skills, and teachers for behavioural programs*" (GPKI 1). This practice reflects Abdul Rahman Idris's (2022) findings on the importance of flexible organizational frameworks that can accommodate both systemic requirements and local needs.

Table 1: Implementation of Basic Management Systems in CNTC

Management Component	Number of CNTC	Percentage
Specialized learning areas	8	100%
Digital portfolio systems	8	100%
Bilingual approach implementation	8	100%
Mentor/buddy programs	7	87.5%
Video documentation	7	87.5%
Inclusive programs	7	87.5%

The analysis of resource management practices revealed significant variations across schools. While all schools demonstrated basic resource allocation systems, the effectiveness of these systems varied considerably.

Document analysis showed that schools with more structured approaches to resource management, including dedicated storage facilities (100% of schools) and flexible learning spaces (75% of schools), demonstrated higher program effectiveness. However, observations revealed that only 62.5% of schools had specialized facilities such as mini-labs or workshops, indicating room for improvement in physical resource management. These findings support Zhang and Wong's (2024) research on the importance of effective resource management in special education programs.

Challenges in ISEP Management Implementation

Language barriers represented the most consistent challenge across all schools. All ten GPKIs (100%) reported difficulties related to bilingual communication, particularly affecting non-Chinese teachers: *"As a Malay teacher in CNTC, language challenges are significant. Although I am learning Mandarin, there are still communication challenges, especially with students who are more comfortable speaking Mandarin"* (GPKI 2). This finding strongly supports Wong and Chan's (2023) research on the challenges of linguistic duality in bilingual special education programs.

All ten GPKIs (100%) identified bilingual teaching systems as both essential and challenging. The observational data confirmed that all schools implemented bilingual instruction, but with varying degrees of effectiveness. As noted by one GPKI: *"We use a bilingual approach, where instructions are given in both languages to ensure student understanding"* (GPKI 1). This finding aligns with Chen et al.'s (2022) research on the complexities of managing bilingual education programs.

Figure 1: Frequency of Reported Management Challenges by GPKI Participants (n=10)

- Language barriers: 10/10 (100%)
- Conflicting academic expectations: 9/10 (90%)
- Bilingual teaching material adaptation: 8/10 (80%)
- Professional development needs: 8/10 (80%)
- Resource limitations: 7/10 (70%)
- Geographic location challenges: 5/10 (50%)

Resource limitations were identified by seven out of ten GPKIs (70%) as a significant management challenge. These limitations affected not only physical resources but also specialized bilingual materials: *"For resources and facilities, although we receive basic allocations, there remains a need for specialized equipment and bilingual teaching materials suitable for various categories of learning difficulties"* (GPKI 1). This finding supports Zhang and Wong's (2024) research on resource constraints in bilingual special education programs.

The integration of Chinese cultural elements in program management emerged as a distinctive feature across all schools. However, the data showed that balancing cultural integration with national curriculum requirements created management challenges. As one education official noted: *"The most challenging aspect is finding the right balance. On one hand, we want a curriculum that challenges students to develop. On the other hand, we need to be realistic about their capability levels"* said curriculum development officer (BPK1). This observation aligns with Liu and Rahman's (2023) findings on the importance of cultural sensitivity in special education management.

Success Factors in ISEP Management

Administrative support emerged as the most significant success factor, with all ten GPKIs (100%) highlighting the crucial role of school leadership in program effectiveness. Schools with strong administrative support demonstrated more robust management structures: *"The main factor is the commitment of all stakeholders. School administrators are very supportive of the ISEP program, providing the necessary space and resources"* (GPKI 1). This finding supports Aliza Alias's (2021) research on the importance of leadership approaches in bilingual special education settings.

Parental involvement was identified by nine out of ten GPKIs (90%) as essential to program success. The research found that schools with structured systems for parental engagement demonstrated better program outcomes: *"Parental support is very important. They are active in school programs and provide cooperation in intervention programs at home"* (GPKI 1). This finding aligns with Tan and Lee's (2022) research on the importance of stakeholder engagement in special education management.

Table 3: Support Systems Implementation in CNTC

Support Program	Number of CNTC	Percentage
Remedial programs	8	100%
Therapy services	8	100%
Community programs	7	87.5%
External expert services	6	75%

Teacher qualifications and commitment were universally recognized as fundamental to effective management. All GPKIs (100%) emphasized the importance of both formal qualifications and dedication to the role: *"The main factor is the commitment of ISEP teachers who are willing to work overtime to help students"* (GPKI 8). This finding supports Hassan and Lee's (2023) research on the importance of professional development in special education programs.

Recommendations for Enhancing ISEP Management

Based on the analysis of current practices, challenges, and success factors, the research participants offered several recommendations for enhancing ISEP management structures. These included:

1. Development of specialized bilingual professional development programs for GPKI teachers, particularly addressing language barriers and cultural integration. As one GPKI suggested: *"We need more training specifically designed for teaching in bilingual special education environments"* (GPKI 5).
2. Creation of structured collaboration frameworks between Chinese and non-Chinese teachers to facilitate knowledge sharing and language support. One GPKI noted: *"When Chinese and non-Chinese teachers work together systematically, we see better results in both teaching and management"* (GPKI 3).
3. Implementation of digital management systems to improve documentation, communication, and resource coordination. As noted by an education official: *"Digital systems can help bridge*

communication gaps and improve program monitoring" (BPK 2). This recommendation aligns with Park and Kim's (2023) research on technology integration in special education management.

These findings provide a comprehensive picture of the current state of ISEP management structures in CNTC, highlighting both strengths and areas requiring further development. The research demonstrates that while fundamental management structures exist across all schools studied, their effectiveness varies considerably based on several key factors including leadership approaches, resource management, and bilingual competencies.

CONCLUSION OF FINDINGS

The examination of management structures in ISEP at CNTC has revealed a multifaceted landscape characterized by both promising practices and persistent challenges. These findings illuminate the complex interplay between organizational frameworks, bilingual instruction, and cultural integration that defines special education delivery in Chinese National-Type Schools.

The research demonstrates that effective management structures in ISEP at CNTC are built upon systematic assessment procedures, strategic task distribution, and robust support systems. All schools in the study have implemented fundamental organizational frameworks including specialized learning areas, digital documentation systems, and bilingual instructional approaches. This consistency suggests a baseline level of structural development across these programs, providing a foundation for special education delivery in bilingual contexts.

Particularly noteworthy is the universal implementation of bilingual teaching systems across all eight schools, indicating recognition of the linguistic duality inherent in these educational environments. However, the variation in implementation effectiveness points to deeper complexities in managing bilingual instruction. Schools demonstrating more sophisticated approaches to language management—including structured bilingual documentation systems, cultural integration strategies, and specialized teacher deployment—showed stronger program outcomes.

The findings also reveal a significant tension between standardized program requirements and the need for cultural-linguistic adaptations. This tension manifests most prominently in the challenges reported by non-Chinese speaking teachers who must navigate communication barriers while delivering specialized education. The fact that 100% of GPKIs identified language barriers as a significant challenge underscores the centrality of bilingual competency in effective program management.

Resource management emerges as another critical dimension, with clear disparities observed between schools. While basic infrastructural elements were present across all schools, more specialized facilities such as mini-labs or workshops were available in only 62.5% of schools. This finding suggests that management structures still face challenges in optimizing resource allocation, particularly for more specialized educational needs in bilingual settings.

The research also highlights the critical role of stakeholder engagement in effective management structures. Administrative support, parental involvement, and teacher qualifications were consistently identified as essential success factors. Schools with management frameworks that actively incorporated these elements demonstrated more robust programming and better student outcomes, suggesting that effective management extends beyond organizational charts to include relational and community dimensions.

These findings collectively provide a comprehensive picture of the current state of ISEP management structures in CNTC, revealing both strengths to build upon and challenges to address. While foundational management structures exist across all schools studied, their effectiveness varies considerably based on several key factors including leadership approaches, resource coordination, and bilingual competencies. This variation indicates that while progress has been made in establishing basic management frameworks, significant opportunities remain for enhancing the sophistication and effectiveness of these structures to better serve the unique needs of students with special educational requirements in bilingual environments.

RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the findings of this study, several avenues for future research emerge that could further enhance our understanding of management structures in ISEP at CNTC and contribute to the development of more effective programs.

Development of Culturally-Responsive Bilingual Management Models

Future research should focus on developing management frameworks specifically designed for the CNTC bilingual context. While this study has identified key challenges in integrating Chinese cultural elements with national curriculum requirements, more targeted research is needed to create practical models that address these needs. Collaborative action research involving administrators, teachers, and community stakeholders could lead to innovative management approaches that effectively balance cultural responsiveness with educational standards.

Comparative Analysis with Other Educational Contexts

Comparative studies examining ISEP management across different educational settings would strengthen our understanding of context-specific and transferable practices. Research comparing ISEP implementation in CNTC with similar programs in other vernacular schools in Malaysia (such as Tamil-medium schools), Chinese-medium schools in other Asian contexts (Singapore, Taiwan, Hong Kong), and National schools within Malaysia would help identify universal best practices while highlighting innovative approaches unique to each context.

Technology Integration in Bilingual Special Education Management

With all studied schools already implementing digital portfolio systems, research exploring more advanced technological applications in ISEP management is needed. Studies should investigate how emerging technologies like learning analytics, digital communication platforms, and specialized bilingual educational software could enhance management effectiveness.

Professional Development Models for Bilingual Special Education

Research focused on creating and evaluating specialized training programs for GPKI teachers in CNTC is urgently needed. Studies should examine effective approaches for developing both pedagogical skills and bilingual competencies necessary for these unique educational environments.

Student Perspectives and Experiences

A significant gap in current research is the lack of student voices. Future studies should develop age-appropriate and accessible methodologies to capture the experiences of students with special needs in ISEP at CNTC.

Reflections

The journey of investigating ISEP management structures across eight CNTC has profoundly transformed the researcher's understanding of special education in bilingual contexts. Walking through classrooms, sitting in meetings, and engaging with dedicated educators, the researcher gained insights that transcend academic understanding.

What struck the researcher most powerfully was witnessing how language barriers manifest in daily practice. During one observation at an CNTC in northern Malaysia, the researcher watched a non-Chinese speaking GPKI teacher use a combination of simplified Mandarin, Malay, visual cues, and student helpers to conduct a lesson. Her resourcefulness in navigating linguistic challenges represented the lived reality of management structures that exist beyond formal documentation. This teacher later shared how she spent weekends learning

basic Mandarin phrases from a parent volunteer - a powerful reminder that behind management frameworks are committed individuals creating informal solutions to structural challenges.

The most effective schools observed approached bilingualism not as an obstacle but as an educational asset. In one classroom, the researcher observed a mathematics lesson where the teacher skillfully switched between languages - using Mandarin for conceptual explanation and Malay for procedural instruction - creating a rich learning environment where both languages served distinct pedagogical purposes.

The researcher was particularly moved by the creativity of administrators in adapting management structures to local contexts. One principal with limited special education background had created a remarkably effective program by establishing a parent-teacher collaborative committee that met biweekly to address program challenges. When asked about the origins of this approach, she simply said, "We didn't have enough resources or expertise, so we had to create a village to support these children."

Perhaps most affecting were the stories of transformation shared by teachers. One GPKI recounted to the researcher how a non-verbal student began communicating first in Mandarin (his home language) before later developing Malay vocabulary. The teacher's ability to recognize and support this bilingual developmental path required management structures flexible enough to accommodate individual linguistic journeys rather than imposing standardized language progression.

This research has deepened the researcher's conviction that effective special education management in

multilingual settings requires frameworks that are simultaneously structured and flexible, standardized and culturally responsive. More than anything, this journey has shown that behind every effective management structure are dedicated individuals committed to creating inclusive learning environments despite the challenges they face.

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