

Inclusive education readiness in suburban Malaysian primary schools

Muhammad Afif Mohd Aris¹, Siti Faizah Zainal², Noor Asmina Mohd Rashid¹, Mohd Muslim Md Zalli¹, Mohd Ridhuan Mohd Jamil¹, Mazarul Hasan Mohamad Hanapi¹

¹Faculty of Human Development, Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia

²Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia

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ABSTRACT

Inclusive education requires not only equitable placement of students with disabilities in mainstream schools, but also adequate structural support and positive stakeholder readiness. This study examined the readiness of suburban primary schools in Malaysia to implement inclusive education by focusing on school facilities, teachers' perceptions, peer acceptance, and parents' perceptions. A quantitative cross-sectional survey was conducted involving headmasters, teachers, students, and parents from five primary schools implementing inclusive education programs. Data were analyzed using descriptive statistics and Pearson correlation analysis. The findings showed that although several accessibility features were available, many essential facilities and specialized instructional supports remained limited. In contrast, teachers, students, and parents generally demonstrated positive perceptions of inclusive education. Teachers' experience with disability and understanding of disability-related needs were also significantly associated with more positive perceptions. These findings reveal a structural-social gap in inclusive education readiness, in which supportive stakeholder attitudes coexist with incomplete infrastructural support. The study highlights the need to strengthen school facilities and sustain professional development to support more equitable and effective inclusive education in primary schools.

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Corresponding Author:

Noor Asmina Mohd Rashid

Faculty of Human Development, Universiti Pendidikan Sultan Idris

35900 Tanjong Malim, Perak, Malaysia

Email: noorasmina@fpm.upsi.edu.my

1. INTRODUCTION

Education is widely recognized as a fundamental driver of human development, social participation, and social equity. Within this broader agenda, inclusive education has become an important framework for ensuring that students with disabilities are provided with equitable access to learning opportunities in mainstream school settings. International commitments to inclusive and equitable quality education have further strengthened the expectation that education systems should respond to learner diversity and create conditions that enable all students to participate meaningfully in school life [1]. From this perspective, inclusive education should not be understood merely as the physical placement of students with disabilities in regular classrooms, but as the provision of appropriate support, accessible learning environments, and equitable opportunities for academic and social participation [2].

The conceptual development of inclusive education is closely associated with the social model of disability, which emphasizes that exclusion often arises not only from individual impairments, but also from environmental, institutional, and attitudinal barriers that restrict participation [3]. In school contexts, this

means that inclusive education depends on more than policy endorsement alone. Schools are required to adapt their infrastructure, teaching practices, and institutional cultures to accommodate diverse learner needs and reduce barriers to participation [4]. Previous studies have shown that the successful implementation of inclusive education is influenced by several interrelated factors, including the accessibility of school facilities, the availability of educational support, teachers' readiness and professional competence, and the attitudes of key stakeholders such as students and parents [5]–[8]. Teachers play a particularly important role because they translate inclusive policy into classroom practice, while peer acceptance and parental support influence the wider social environment in which inclusion is experienced by students [5], [9].

Despite strong support for inclusive education at the international and policy levels, its implementation remains uneven across many educational settings. Existing research continues to identify barriers such as inadequate infrastructure, insufficient support facilities, limited teacher preparation, and uncertainty in implementing inclusive practices [6], [8], [9]. These barriers contribute to a policy–practice gap in which inclusive education is formally promoted, but schools are not always adequately equipped to provide accessible and supportive learning environments for students with disabilities [7]. As a result, the existence of inclusive education policies does not necessarily indicate that schools are fully prepared to sustain inclusive practices in everyday school life.

In Malaysia, inclusive education has been strengthened through national efforts to widen the participation of students with disabilities in mainstream schools and to improve inclusive practices within the education system. However, practical challenges remain, particularly in relation to infrastructural accessibility, school-level support, and teachers' readiness to address diverse learning needs. Although inclusive education has received increasing attention in educational research, empirical evidence that examines both structural readiness and stakeholder-related readiness within the same analytical frame remains limited, particularly in sub-urban primary school contexts in Malaysia. This gap is important because sub-urban schools often operate with uneven levels of resources, support, and institutional capacity, which may influence their ability to implement inclusive education effectively.

To address this gap, the present study adopts an integrated perspective in which readiness is understood as a multidimensional condition shaped by both structural and stakeholder-related factors. Structural readiness is reflected in the availability of school facilities and support provisions, while stakeholder-related readiness is reflected in teachers' perceptions, peer acceptance, and parents' perceptions toward inclusive education. In addition, teachers' background characteristics, including experience with individuals with disabilities and understanding of disability-related needs and services, are examined in relation to their perceptions of inclusive education. By examining these dimensions together, this study provides a more comprehensive account of inclusive education readiness and highlights whether supportive stakeholder attitudes are matched by the structural conditions needed to sustain inclusive practice. Specifically, this study examines school facilities that support inclusive learning environments in sub-urban primary schools, analyses teachers' perceptions toward inclusive education, evaluates peer acceptance of students with disabilities, examines parents' perceptions toward inclusive education, and determines the relationships between teachers' background variables and their perceptions of inclusive education. The conceptual framework guiding the study is presented in Figure 1.

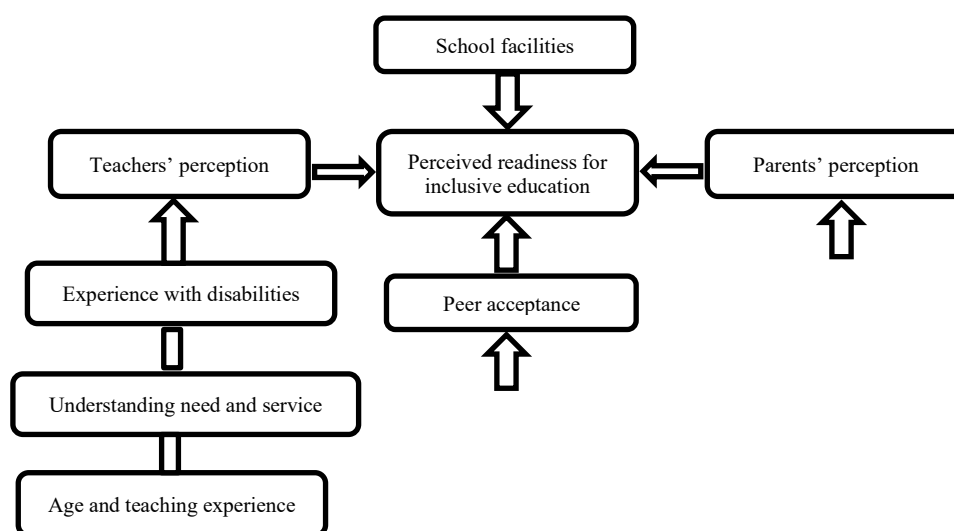


Figure 1. Conceptual framework of the study

2. METHOD

This study employed a quantitative cross-sectional survey design to examine the readiness of sub-urban primary schools in Malaysia to implement inclusive education. The study was conducted in five primary schools offering the Inclusive Education Program within one selected supervisory zone. A cluster sampling approach was used, in which the supervisory zone served as the sampling cluster, and all inclusive primary schools within that cluster were included in the study. This approach was considered appropriate because the schools were situated within the same administrative context and were exposed to similar district-level management and policy implementation conditions. The respondents consisted of 5 headmasters, 52 teachers, 32 Year 4 students, and 6 parents of children with disabilities. Each respondent group was selected based on its relevance to the variables under investigation. Headmasters provided information on school facilities and accessibility, teachers responded to items on perceptions toward inclusive education, students reported on peer acceptance of students with disabilities, and parents provided information on their perceptions toward inclusive education.

Data were collected using structured questionnaires developed in accordance with the conceptual framework of the study. Different instruments were administered to different respondent groups based on the dimensions being measured. School facilities were assessed using a 22-item inventory focusing on physical and academic accessibility within the school environment, including ramps, guiding blocks, wheelchair-accessible doors, special toilets, special parking spaces, resource rooms, and support materials for students with different categories of disabilities. Teachers' perceptions were measured using a 32-item Likert-scale instrument covering seven dimensions related to inclusive education, such as understanding of disabilities, recognition of the rights of students with disabilities, acceptance of learner diversity, and willingness to support students with disabilities in mainstream classrooms. Peer acceptance was measured using a 44-item Likert-scale instrument that assessed the cognitive, affective, and conative dimensions of students' acceptance of peers with disabilities. Parents' perceptions were measured using a 21-item Likert-scale instrument that examined their expectations toward children, attitudes toward inclusive education, knowledge of disability, and views on educational placement.

The content validity of the instruments was established through expert review to ensure that the items adequately represented the constructs related to inclusive education readiness. Reliability was assessed using the split-half method, and the overall reliability coefficient obtained was 0.538. Although this value indicates moderate internal consistency, it was considered acceptable for the purpose of this exploratory study, particularly because the research involved multiple instruments across different respondent groups and measured several related but distinct dimensions. Nevertheless, the reliability value suggests that the findings should be interpreted with appropriate caution.

The data were analyzed using both descriptive and inferential statistics. Frequencies and percentages were used to describe the availability of school facilities and instructional support materials, while mean scores were used to summarize teachers', students', and parents' perceptions toward inclusive education. Pearson correlation analysis was conducted to determine the relationships between selected teachers' background variables and their perceptions toward inclusive education. The variables examined included experience with individuals with disabilities, understanding of disabilities, understanding of disability-related needs and services, age, and teaching experience. The level of significance was set at $p < .01$.

3. RESULTS AND DISCUSSION

3.1. School facilities and structural readiness

The availability and accessibility of school facilities represent an important structural dimension of school readiness for inclusive education. Accessible infrastructure enables students with disabilities to move safely within school spaces, access learning environments, and participate more meaningfully in school life. From an inclusive education perspective, physical placement alone is insufficient if the school environment does not provide the accessibility features required for full participation [3], [4], [7]. The descriptive findings regarding the accessibility of school buildings in the participating schools are summarized in Table 1.

The results indicate that structural accessibility across the participating schools remains limited. Only a small number of schools reported the availability of wheelchair-accessible doors and resource rooms, whereas essential features such as guiding blocks, pedestrian access adaptations, ramps, special toilets, and designated parking spaces were absent across most schools. These findings suggest that infrastructural adjustments for inclusive education have been introduced only partially and unevenly. This finding is important because inclusive education requires school environments that reduce barriers and support access for students with different disability profiles [7], [10]. In the present study, the absence of ramps, accessible toilets, and wayfinding support suggests that students with mobility or visual impairments may still face difficulties in navigating the school environment independently. The findings are consistent with previous

literature showing that inadequate infrastructure remains a persistent barrier to the implementation of inclusive education, even in settings where inclusive policy is formally supported [7], [11], [12]. Overall, the results indicate that structural readiness in the participating sub-urban primary schools remains incomplete.

Table 1. Accessibility of school buildings

No.	Building facilities	Yes	No
1	Guiding blocks	0	37
2	Pedestrian	0	37
3	Ramps	0	37
4	Wheelchair accessible doors	3	34
5	Special toilets	0	37
6	Special parking	0	37
7	Resource rooms	5	32

3.2. Availability of instructional and support materials

In addition to physical infrastructure, the availability of instructional and support materials is another important component of structural readiness for inclusive education. Such materials enable teachers to adapt instruction to diverse learner needs, support classroom participation, and provide more equitable access to learning for students with disabilities. The availability of instructional and support materials for students with special educational needs is presented in Table 2.

The findings indicate that support materials were unevenly distributed across the participating schools. Although some schools reported the availability of Braille-related materials, specialized aids for intellectual disabilities, behavior-related spaces, and enriched resources for gifted students, many other forms of support were absent. In particular, no schools reported the availability of hearing-related supports, wheelchairs, or dedicated spaces for autistic students. This pattern suggests that support provision is selective rather than comprehensive. These findings are significant because the effectiveness of inclusive education depends not only on classroom placement, but also on whether schools possess the pedagogical tools and support resources needed to respond to varied learning profiles [4], [13], [14]. Where such materials are absent, teachers may encounter difficulties in differentiating instruction or providing appropriate accommodations for students with sensory, behavioral, cognitive, or communication-related needs. The results are in line with earlier research indicating that inclusive education is often hindered by a lack of appropriate support resources, assistive materials, and specialized school-level provisions [8], [15], [16]. Taken together, the findings in Tables 1 and 2 suggest that structural readiness in the participating schools remains partial rather than comprehensive.

Table 2. Availability of instructional and support materials for students with special educational needs

No.	Type of special educational need/support area	Yes	No
1	Visual impairment (Braille materials, tactile media)	6	31
2	Hearing impairment (hearing aids, sign language support, visual signs)	0	37
3	Intellectual disabilities (motor skills materials, specialized learning aids)	3	34
4	Physical disabilities (wheelchairs)	0	37
5	Behavioral difficulties (play area, therapy room)	9	28
6	Autism spectrum condition (dedicated space)	0	37
7	Gifted and talented students (enriched learning resources)	5	32

3.3. Parents' perceptions of inclusive education

Parents' perceptions toward inclusive education constitute an important stakeholder dimension in the implementation of inclusive schooling. Family support can strengthen inclusive practice by encouraging cooperation between home and school, shaping social attitudes toward disability, and reinforcing children's participation in learning environments [17], [18]. The findings indicate that parents in the present study generally expressed supportive attitudes toward inclusive education. They showed acceptance of the presence of students with disabilities in mainstream classrooms and recognized the value of equal educational opportunities and social participation. This suggests that, at the stakeholder level, the social climate surrounding inclusive education is relatively encouraging within the participating school communities.

At the same time, variations in parental responses indicate that support for inclusion is not entirely unconditional. Some parents expressed concerns regarding the adequacy of school resources and specialized support available for students with disabilities. This finding suggests that positive parental attitudes may coexist with practical concerns about whether schools are adequately prepared to implement inclusive education effectively. This pattern is consistent with previous studies reporting that parents are often broadly

positive toward inclusive education while still expressing concerns about support quality, classroom provision, and schools' capacity to meet diverse needs effectively. The findings therefore indicate that parental support is an important enabling condition, but one that must be sustained through continued communication, trust-building, and visible school capacity.

3.4. Peer acceptance of students with disabilities

Peer acceptance represents a critical social dimension of inclusive education because students' everyday interactions strongly shape the social participation, emotional security, and classroom experiences of students with disabilities. Inclusive schooling is more likely to function meaningfully when students are not only physically placed together but are also socially accepted by their peers [19], [20]. The results related to peer acceptance are illustrated in Figure 2.

The findings show that students generally demonstrated positive attitudes toward peers with disabilities across cognitive, affective, and conative dimensions. They reported understanding disability-related conditions, expressed empathy, and indicated willingness to interact and cooperate with peers with disabilities in school activities. These results suggest that students in the participating schools exhibit relatively positive interpersonal dispositions toward inclusion. This is an important finding because peer attitudes are closely related to the social quality of inclusion. Earlier work has shown that peer acceptance is strongly linked to the classroom experiences and self-concept of students with disabilities, and that social participation remains a central indicator of whether inclusive education is functioning beyond physical placement. At the same time, the current findings should be interpreted carefully. Research has shown that positive attitudes toward students with disabilities do not always eliminate differences in social integration or peer status within inclusive classrooms [15], [21], [22]. The present results therefore suggest that encouraging peer acceptance is an important strength of the participating schools, although it should not be assumed to represent fully developed inclusive readiness on its own.

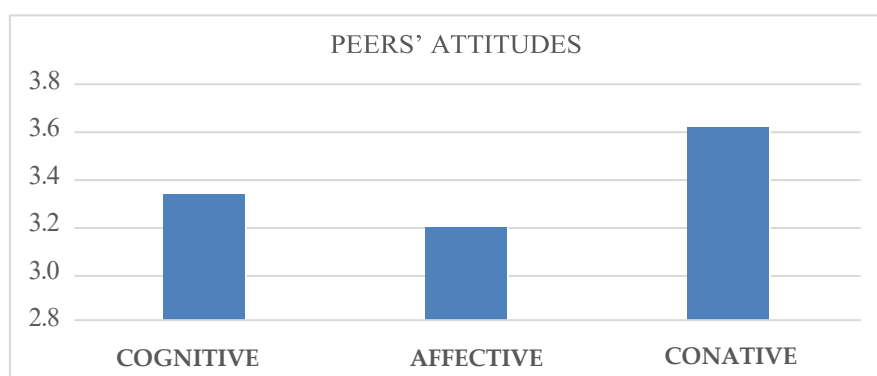


Figure 2. Peer acceptance of students with disabilities

3.5. Teachers' perceptions and correlational findings

Teachers play a central role in the implementation of inclusive education because they translate policy expectations into classroom practice. Their perceptions, knowledge, confidence, and prior experience with disability influence how they interpret learner diversity and how willing and prepared they are to apply inclusive teaching strategies [5], [8], [23], [24]. To further examine factors associated with teachers' perceptions toward inclusive education, correlation analysis was conducted. The results of the analysis are summarized in Table 3.

The results indicate that several background variables were significantly associated with teachers' perceptions toward inclusive education. In particular, experience interacting with individuals with disabilities, understanding of disabilities, and understanding of disability-related needs and services showed positive and significant relationships with teachers' perceptions. These findings suggest that professional exposure and disability-related knowledge are important factors in shaping teachers' readiness to support inclusive learning environments. This pattern is supported by previous literature showing that teachers' attitudes toward inclusion are influenced by knowledge, training, and direct experience with disability-related contexts [5], [25]. Similarly, research on teacher efficacy for inclusive education has found that prior contact with disability, professional learning, and inclusive education knowledge contribute to stronger confidence and readiness for inclusive practice [13], [26]. By contrast, age and years of teaching experience in the

present study were negatively associated with teachers' perceptions. This suggests that demographic or career-length variables do not necessarily translate into stronger inclusive readiness. A possible interpretation is that experience becomes beneficial only when it includes meaningful engagement with inclusive practice, disability-related knowledge, or targeted professional development. This interpretation is consistent with prior work indicating that general teaching experience alone is not always a reliable predictor of positive inclusive attitudes, whereas more specific forms of disability-related exposure and efficacy are more consistently associated with readiness for inclusion [12], [27], [28]. Overall, the findings reinforce the importance of teacher training and professional development that focus specifically on inclusive education and disability-related needs.

Table 3. Correlations between teachers' background variables and perceptions toward inclusive education

No.	Aspects	r	sig
1	Experience with disabilities	0.6062	P<0.01
2	Understanding disabilities	0.4009	P<0.01
3	Understanding needs and services for individuals with disabilities	0.3802	P<0.01
4	Working experience	-0.4806	P<0.01
5	Age	-0.403	P<0.01

3.6. Integrated discussion

Taken together, the findings reveal a clear pattern of inclusive education readiness in the participating sub-urban primary schools. Structural readiness remains limited, whereas stakeholder-related readiness appears more encouraging. In other words, the schools studied show signs of social support for inclusion, but not yet the level of institutional provision required for fully accessible and sustainable implementation.

From a structural perspective, the schools demonstrated major gaps in accessibility features and support materials. Essential facilities such as ramps, special toilets, designated parking, hearing-related supports, and autism-related spaces were largely unavailable. These findings indicate that the school environment may still present physical and instructional barriers for students with disabilities, even where inclusive placement is taking place. This pattern is consistent with literature arguing that inclusive education cannot be reduced to enrolment or policy compliance alone, because school-level capacity and environmental accessibility remain central to meaningful participation [4], [7], [29].

From a stakeholder perspective, however, the study found more positive signals. Parents generally supported inclusive education, students showed favorable peer acceptance, and teachers' perceptions were more positive when supported by disability-related knowledge and experience [30]. These findings are broadly in line with earlier research showing that positive stakeholder attitudes, peer support, and teacher preparedness are important enabling conditions for inclusive practice. At the same time, the present study extends this literature by showing that these positive social conditions may coexist with incomplete structural readiness in sub-urban primary schools.

This study reveals a structural–social gap in inclusive education readiness that is not widely documented in Malaysian sub-urban primary schools. The schools appear to be more ready socially than materially. This is an important contribution because previous literature has often focused on teacher attitudes, stakeholder perceptions, or school barriers separately. The present study shows that inclusive education readiness should instead be understood as a multidimensional condition shaped by the interaction between physical accessibility, instructional support, social acceptance, and professional capacity. Positive attitudes among parents, peers, and teachers are clearly valuable, but they are not sufficient on their own when schools continue to face limitations in infrastructure and support-related provisions.

Accordingly, efforts to strengthen inclusive education in sub-urban primary schools should address both sides of readiness simultaneously. Structural improvements are needed to make school environments more accessible and better equipped for diverse learners, while professional development and school–family collaboration should be sustained to preserve the positive social conditions already evident in the findings. In this respect, the present study supports and extends previous literature by showing that successful inclusive education depends not only on willingness to include, but also on the practical capacity to do so consistently and equitably.

4. CONCLUSION

This study examined the readiness of sub-urban primary schools in Malaysia to implement inclusive education by focusing on school facilities, instructional support materials, teachers' perceptions, peer acceptance, and parents' perceptions. The findings show that although students, parents, and teachers

generally demonstrated positive attitudes toward inclusive education, structural readiness remained limited. Essential accessibility features and specialized support materials were still unavailable in many of the participating schools, indicating that the implementation of inclusive education continues to face important infrastructural and instructional constraints. At the same time, teachers' experience with individuals with disabilities and their understanding of disability-related needs and services were positively associated with more favorable perceptions toward inclusive education. Overall, the study reveals a structural–social gap in inclusive education readiness, in which supportive stakeholder attitudes are not yet fully matched by the material and institutional capacity required for sustainable inclusive practice.

These findings suggest that efforts to strengthen inclusive education in sub-urban primary schools should not focus only on positive attitudes or policy commitment, but also on improving school-level structural support. Greater attention should be given to accessibility features, specialized instructional resources, and professional development related to disability and inclusive pedagogy. In practice, stronger collaboration among schools, teachers, and families is also necessary to sustain the positive social conditions identified in this study. Future research should expand the scope of investigation to a larger number of schools across different geographical contexts and consider mixed-method or longitudinal designs to examine how structural readiness, stakeholder perceptions, and inclusive practices develop over time.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Muhammad Afif	✓	✓		✓	✓	✓		✓	✓	✓	✓		✓	
Mohd Aris														
Siti Faizah Zainal	✓			✓			✓			✓	✓	✓		
Noor Asmina	✓	✓		✓	✓		✓			✓	✓	✓		
Mohd Rashid														
Mohd Muslim	✓	✓			✓	✓		✓		✓				
Md Zalli														
Mohd Ridhuan	✓	✓		✓			✓			✓		✓		
Mohd Jamil														
Mazarul Hasan	✓	✓		✓		✓				✓	✓			
Mohamad Hanapi														

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

The author declares that there is no conflict of interest regarding the publication of this paper.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author, [NAMR], upon reasonable request.

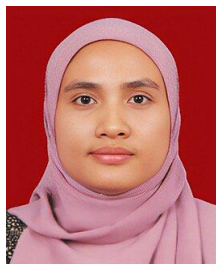
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BIOGRAPHIES OF AUTHORS



Muhammad Afif Mohd Aris    is a senior lecturer at the Faculty of Human Development, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. His academic work focuses on educational development, teacher professionalism, and learning in school contexts. He is actively involved in teaching, research, and academic supervision related to teacher education and educational practices. His research interests include inclusive education, teacher professional development, and educational psychology. He has contributed to several research projects and scholarly publications related to teaching, learning, and educational development. In this study, he was primarily responsible for the conceptualization, research design, data analysis, and manuscript preparation. He can be contacted at email: afif.aris@fpm.upsi.edu.my.



Siti Faizah Zainal    is a senior lecturer at the Faculty of Management and Economics, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. Her academic work focuses on management, educational administration, and organizational development within educational institutions. She has been involved in research examining organizational practices, leadership, and management in educational contexts. Her research interests include educational management, organizational leadership, and institutional development. She has contributed to several research projects and publications related to educational and organizational studies. She can be contacted at email: faizahz@fpe.upsi.edu.my.



Noor Asmina Mohd Rashid    is a senior lecturer at the Faculty of Human Development, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. Her academic work focuses on educational development and learning processes within school and higher education contexts. She is actively involved in teaching, research, and academic supervision related to human development and educational practices. Her research interests include inclusive education, educational psychology, and student development. She has contributed to several academic publications and research projects related to educational improvement and learner support. She can be contacted at email: noorasmina@fpm.upsi.edu.my.



Mohd Muslim Md Zalli    is a senior lecturer at the Faculty of Human Development, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. His academic work centers on educational research and teacher development. He has been actively involved in research related to teaching and learning practices, teacher professionalism, and educational innovation. His research interests include teacher education, educational psychology, and instructional development. He has contributed to various research projects and scholarly publications in the field of education. He can be contacted at email: muslim@fpm.upsi.edu.my.



Mohd Ridhuan Mohd Jamil    is a senior lecturer at the Faculty of Human Development, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. His academic expertise focuses on educational measurement, assessment, and research methodology. He has extensive experience in quantitative research and statistical analysis in educational studies. His research interests include educational assessment, psychometrics, and research methodology in education. He has been involved in various research projects and academic publications related to educational evaluation and measurement. He can be contacted at email: mridhuan@fpm.upsi.edu.my.



Mazarul Hasan Mohamad Hanapi    is a senior lecturer at the Faculty of Human Development, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. His academic work focuses on human development, educational psychology, and student learning. He has been actively involved in research examining learning development and educational practices in various educational settings. His research interests include educational psychology, student development, and learning processes. He has contributed to several academic publications and research projects related to education and human development. He can be contacted at email: mazarul@fpm.upsi.edu.my.