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## Teaching in the School in Hospital (SiH) in Malaysia: A Literature Review of Challenges and Pedagogical Approaches

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**Abstract.** The School in Hospital (SiH) initiative in Malaysia aims to ensure educational continuity and promote student well-being for those undergoing long-term medical treatment. Despite its significance, the SiH programme faces multiple challenges that compromise the quality of teaching and learning. These include limited instructional time, emotionally vulnerable learners, inadequate teacher training and the absence of conventional classroom environments. This literature review synthesises 35 selected studies retrieved from Scopus, Google Scholar, and ResearchGate, with additional references used to enrich and support the discussion. The findings highlight that adaptive, student-centred pedagogical approaches such as edutainment, needs-based learning, self-directed strategies and the teacher as facilitator model enhance both student engagement and emotional resilience. The review is framed by Social Cognitive Theory and grounded in the principles of inclusive education, with an emphasis on teacher self-efficacy and psychosocial support. Although several promising strategies have been identified, the

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study underscores the urgent need for structured professional development, greater integration of technology and a context-specific pedagogical framework tailored to hospital-based education. This paper offers valuable insights for policymakers, educators and healthcare education stakeholders to improve the quality, consistency and equity of teaching and learning within Malaysian hospital settings.

**Keywords:** School in Hospital (SiH); inclusive education; hospital pedagogy; teaching strategies; student well-being.

## 1. Introduction

The School in Hospital (SiH) is a special education initiative introduced by the Ministry of Education Malaysia (MOE) in collaboration with the Ministry of Health Malaysia (MOH) and the Yayasan Nurul Yaqeen (YNY) in 2011. The main goal of this programme is to ensure that students undergoing long-term hospital treatment are not left behind in their education and can continue learning formally, even outside of a conventional classroom setting. The SiH program in Malaysia aims to provide continuous education for hospitalized students, including those with chronic illnesses (Buyong & Othman, 2018). Research highlights challenges in implementing inclusive education in hospital classrooms, such as educational limitations, social emotional needs and the demand for adaptive pedagogical practices (Palacios Zumba et al., 2024).

Studies show that SiH teachers are generally capable of implementing effective teaching and learning, including for students with special needs such as dyslexia (Buyong & Othman, 2018). Innovative approaches, such as bibliotherapy using children's literature, have been found to motivate hospitalized students, enhance their language and cognitive development and improve academic performance (Omar, 2018). To address the challenges, interdisciplinary collaboration and integration between education and healthcare services are recommended, transforming hospital classrooms into holistic recovery spaces that promote well-being (Palacios Zumba et al., 2024).

The SiH model, adapted from Australia's hospital education system, is tailored to Malaysia's sociocultural and healthcare context. It is designed not only to support academic development but also to enhance students' emotional and psychosocial well-being (Phin, & Yasin, 2019). As of today, more than 15 public hospitals across Malaysia, including those in Sabah and Sarawak have adopted the SiH programme.

**Table 1: List of hospitals with School in Hospital (SiH) programmes in Malaysia**

No	Name of Hospital (Year Established)	Location
1.	SDH Hospital Serdang (2011)	Selangor
2.	SDH Hospital Kuala Lumpur (2011)	Kuala Lumpur
3.	SDH Hospital Ampang (2011)	Kuala Lumpur
4.	SDH Pusat Perubatan UKM (2012)	Kuala Lumpur
5.	SDH Hospital Sultanah Aminah (2012)	Johor
6.	SDH Hospital Sultan Haji Ahmad Shah (2012)	Pahang
7.	SDH Hospital Universiti Sains Malaysia (2012)	Kelantan
8.	SDH Pusat Perubatan UM (2013)	Kuala Lumpur
9.	SDH Hospital Selayang (2013)	Selangor
10.	SDH Hospital Pakar Sultanah Fatimah (2013)	Johor
11.	SDH Hospital Tuanku Jaafar Seremban (2014)	Negeri Sembilan
12.	SDH Hospital Umum Sarawak (2014)	Sarawak
13.	SDH Hospital Wanita dan Kanak-Kanak Likas (2014)	Sabah
14.	SDH Hospital Tawau (2015)	Sabah
15.	SDH Hospital Sultanah Nur Zahirah (2015)	Terengganu

SDH: Sekolah Dalam Hospital

*Note.* Ministry of Education Malaysia, 2025

However, SiH teachers face distinct challenges that are not typically encountered in mainstream schools. The students are often dealing with unstable health conditions, rigid treatment schedules, and emotional distress (Nagandran et al., 2021). Moreover, teachers must deliver instruction within limited time frames and in non-traditional classroom environments. Compounding this is the lack of specialised training and support systems for teachers assigned to SiH, many of whom begin service without orientation in hospital-based education (Nagandran et al., 2021). Furthermore, the absence of a standardised pedagogical model often forces teachers to rely heavily on personal initiative and adaptive strategies (Phin & Yasin, 2019).

Nevertheless, various studies have shown that SiH teachers display strong self-efficacy and can implement creative and effective instructional methods (Buyong & Othman, 2018). Approaches such as edutainment, needs-based learning, educational technology and facilitative teaching have proved effective in supporting student engagement and learning flexibility (Barnett et al., 2020). Bibliotherapy has been found to be a powerful tool in motivating students, improving their language and cognitive development and fostering emotional resilience during hospitalisation (Omar, 2018).

To address these multifaceted challenges, researchers recommend stronger interdisciplinary collaboration between education and healthcare professionals. Such integration could transform hospital classrooms into holistic recovery spaces

that nurture both academic growth and emotional healing (Palacios Zumba *et al.*, 2024).

## 2. Research Gap

Although the SiH programme has been implemented in Malaysia for over a decade, research on its practices and outcomes remains relatively limited. Most existing studies focus on general descriptions or small-scale observations, leaving a gap in large-scale empirical evidence that explores the lived experiences of SiH teachers across diverse contexts. Furthermore, there is no standardised pedagogical model or teaching framework specifically designed for hospital-based education in Malaysia. This lack of structure results in teachers relying on their own creativity and improvisation, often without proper training or support systems.

Additionally, discussions on high impact teaching strategies in SiH settings are often brief and fragmented with limited depth or comparative analysis. While various innovative approaches have been noted, few studies have evaluated their effectiveness in a systematic way. There is also a clear need for more research into the professional development needs of teachers assigned to SiH, including how training can be structured to prepare them for the emotional, instructional, and logistical challenges that are unique to hospital education settings.

### 2.1 Objectives of the Study

Based on this background, this study aims to:

1. Identify the main challenges faced by teachers in implementing teaching in the SiH context.
2. Analyse effective teaching strategies and approaches used in hospital education settings.
3. Synthesise both local and international literature to propose improvements for SiH implementation in Malaysia.

### 2.2 Research Questions

The study addresses the following three research questions:

1. What are the main challenges faced by teachers in SiH?
2. Which effective teaching strategies have been identified within the SiH context?
3. What suggestions can be made based on the existing literature review?

## 3. Theoretical Framework

The implementation of teaching and learning in the SiH setting cannot be considered equal with conventional classroom teaching methods. Therefore, it is essential to understand the appropriate educational theories that align with this unique context in order to establish a strong foundation for more effective teaching strategies.

### 3.1 Social Cognitive Theory

Social Cognitive Theory (SCT), introduced by Albert Bandura, has been widely applied in behavioural change research, particularly in the contexts of health and physical activity. SCT proposes that behaviour is influenced by several factors, including self-efficacy, outcome expectations, social-structural factors and individual goals (Beauchamp et al., 2019). In chronic disease management among the elderly, SCT has been used to design interventions where self-efficacy and expected outcomes are identified as key components (Sell et al., 2016). Similarly, in the case of heart failure patients, SCT is seen as a useful framework to promote adherence to exercise routines, considering physical changes, emotional responses and interpersonal influences (Tierney et al., 2011).

In the SiH context, this theory plays a vital role in understanding how hospitalised students engage in learning. SCT emphasises learning through observation, imitation, and social interaction. One of its most critical concepts is self-efficacy, the belief in one's ability to overcome challenges and achieve goals. Teacher self-efficacy within SIH is crucial, as it directly influences the effectiveness of teaching delivered to students with health and emotional challenges. Teachers with high self-efficacy are more likely to adapt their teaching methods according to students' conditions, provide motivation and sustain their teaching spirit even in highly demanding environments (Bandura, 1986).

Overall, the SCT provides a relevant framework to explain how factors like self-efficacy and social learning affect the behaviour and academic engagement of students in SIH. Teachers with higher self-efficacy are more likely to implement adaptive strategies and support students emotionally, while positive peer interactions can further reinforce learning. Hence, this theory is highly relevant in designing and evaluating hospital-based education programs, which aim to support students' emotional and physical recovery while ensuring continuous academic development.

### 3.2 The Concept of the Teacher as a Facilitator

Especially regarding English language teaching in Malaysia, recent studies have highlighted a shift in the teacher's role from traditional knowledge providers to facilitators. Pre-service teachers in Malaysia perceive facilitators as those who promote group work and self-directed and independent learning (Hasim et al., 2016). The 21st-century education approach in Malaysia also reinforces the role of the teacher as a facilitator and guide, encouraging student-driven learning (Zakaria et al., 2017). This role includes providing learning tools, acting as a learning partner and engaging students without being authoritarian. Research shows that this facilitator role significantly influences students' learning effectiveness (Rahmawati & Suryadi, 2019).

According to Peng (2023), teachers today are no longer just knowledge transmitters but also facilitators who guide the learning process. In the context of SiH, this role becomes even more important as teachers support students facing health challenges. They must guide, assist and adjust lessons according to the needs and conditions of the students.

This approach requires teachers to use flexible teaching methods, such as one-on-one instruction, self-directed learning and SeDAAP strategies (Self-Directed, Self-Accessed, Self-Assessed, Self-Paced), which allow students to learn at their own pace. In SIH, teachers serve as a bridge between medical treatment and education, supporting students emotionally, motivationally and personally. The role of the facilitator is not limited to academics but also involves promoting psychosocial well-being for students dealing with medical challenges. This demands that teachers have high awareness and skill in tailoring their approaches to ensure meaningful learning even in constrained environments. In summary, this paradigm shift in the teacher's role is key to successful education in SiH. With the right support, teachers can help students overcome emotional and health-related obstacles, enabling them to stay engaged in meaningful and effective learning.

### 3.3 Edutainment Approach

The edutainment approach combines elements of entertainment and learning in a fun, interactive and creative environment. This approach has proved to be effective in enhancing the teaching and learning process. It creates a positive classroom environment that is comfortable and exciting, which in turn increases student interest and engagement (Panse, Verma et al., 2018; Feiyue, 2022). This method incorporates various techniques such as games, interactive discussions and creative activities to improve subject understanding and its application to real life (Panse, Verma *et al.*, 2018).

Studies show that edutainment improves student achievement, particularly in reading and writing skills (Feiyue, 2022). It has also proven to be highly beneficial in early childhood education, where learning through play is critical for development and growth (Santoso, 2018). In foreign language education, edutainment has been found to be more effective than traditional methods, as it promotes language fluency and achievement through interactive and communicative strategies (Salman, 2018).

In the context of SiH, the edutainment approach is highly appropriate due to the challenges faced by students undergoing medical treatment. These approaches aim to transform the often dull and non-conducive hospital environment, potentially reducing stress and trauma while supporting continued education for students facing medical challenges (Almazroui 2023; Phin & Yasin, 2019). Edutainment can act as a natural therapeutic tool that supports emotional and mental recovery (Barnett et al., 2020). Elements such as games, music, roleplay and colourful visuals help sustain interest and focus among students who are often physically or emotionally unstable. These activities also provide opportunities for students to learn in a relaxed and enjoyable way, which is essential for their cognitive and emotional development.

By using edutainment, teaching in SIH does not only focus on academic content but also prioritizes emotional and psychosocial well-being. This approach helps create a more supportive and friendly learning environment for students facing health challenges, making it easier for them to remain engaged in learning without feeling burdened or overwhelmed.

### 3.4 Needs-based learning

Needs-based learning is an approach that customises education according to the specific needs, abilities and interests of each student, with the potential to improve their academic performance (Mirari, 2022). This personalized learning strategy aims to cater to individual uniqueness by tailoring educational experiences to each student's strengths and needs. (Inthanon & Wised, 2019). Individualised Learning Plans (ILPs) play a key role in facilitating student-centred learning across various education levels (Lockspeiser & Kaul, 2016). This approach extends beyond education to personalized medicine, exploring genetic, neural, and behavioral factors affecting learning differences (Wong *et al.*, 2017).

Although needs-based learning shows great potential, there are also challenges in implementing it fully (Mirari, 2022). Full personalisation requires advanced educational technologies such as web-based systems and intelligent robotics (Inthanon & Wised, 2019). Despite these limitations, this approach can significantly improve learning outcomes across multiple domains, including language proficiency (Wong *et al.*, 2017).

In the SiH context, needs-based learning must be adapted to several important factors. First, learning should be tailored to each student's readiness and academic level. Hospitalised students often have varying levels of preparedness depending on their health conditions. Second, flexible scheduling is vital. Students in SiH usually follow tight medical routines, which means teaching needs to be arranged around treatment without compromising educational needs. Third, small group or individual instruction is more suitable than large class teaching as it allows teachers to give personalised attention and better respond to students' specific needs (Nagandran *et al.*, 2021).

This framework shows that effective teaching in SiH does not only rely on technical skills, but also on several critical factors:

1. Teachers' understanding of learning theory: Teachers must grasp theoretical concepts that help them adjust their teaching for diverse student needs.
2. Teachers' ability to adapt to non-traditional environments: Hospital-based teaching is very different from standard classrooms, requiring flexible and creative methods.
3. Support for students' emotional and psychosocial development: Empathetic, flexible, and engaging pedagogy helps students stay motivated and emotionally well, progressing beyond just academic success.

Needs-based learning in SiH focuses on emotional well-being and psychosocial support while ensuring students continue to progress in a challenging environment. This tailored approach improves the hospital learning experience and ensures students are not left behind in their education.

**Table 2: Framework/Theory (SiH) In Malaysia**

Framework/Theory	Main Idea	Relevance to SiH
Social Cognitive Theory (Bandura, 1986)	Emphasizes learning through observation, imitation, and social interaction; key concept is self-efficacy.	Teachers with high self-efficacy are better able to adapt teaching, support students emotionally, and function effectively in difficult settings.
Teacher as Facilitator (Peng, 2023)	Teachers are not just knowledge deliverers, but facilitators who guide independent learning and support students' well-being.	Teachers support students' emotions and motivation using flexible methods like SeDAAP and build meaningful teacher-student connections.
Edutainment (Panse, Verma et al., 2018 ; Phin & Yasin 2019)	Combines entertainment and learning to create an engaging, stress-free environment.	Suitable for ill students by helping emotional recovery and improving interest and focus in learning.
Needs-Based Learning (Mirari, 2022; Wong et al., 2017)	Customises education to match student needs and readiness using ILPs and self-paced learning.	Allows students to learn at their own pace, adapted to their health status and treatment schedule.

ILP: Individualised Learning Plan; SeDAAP: Self-Directed, Self-Accessed, Self-Assessed, Self-Paced

In summary, these theories collectively underscore the importance of student-centred, flexible and emotionally responsive pedagogy in the SiH context by using SCT, teacher as failitator, edutainment and needs-based learning.

#### 4. Research Methodology

This study adopted a literature review approach to identify the challenges and effective teaching strategies in the context of SiH. This approach allows the researcher to collect information from various previous studies in a detailed and structured manner, in order to build a comprehensive understanding of the issues being studied.

##### 4.1 Article Search Strategy

The article search process began by identifying key academic databases that are relevant to this study: these were Google Scholar, Scopus and ResearchGate. The keywords used were: "School in Hospital," "teaching in hospital," "hospital teaching strategies," "hospital teachers Malaysia," and "education for sick students." The search focused on journal articles, conference papers, and book chapters published between 2010 and 2024. Only articles published in either Malay or English were selected, and they had to be directly related to teaching and learning in hospitals or similar special education settings. A total of 35 articles were identified as relevant after screening more than 150 sources found in the initial search. The researcher also used other articles that support the discussion, even if they are not fully focused on SiH.

##### 4.2 The Criteria for Selection and Rejection

The selected articles needed to be directly related to teaching and learning in hospitals. Studies that were too general or did not focus on education in hospitals

were excluded. This process was carried out to make sure that the data that were analysed contributed to the goals of the study. Articles were also selected based on relevance, credibility, peer-reviewed status, and clarity of methodology.

Table 3 presents the criteria that were used in the article selection process.

**Table 3: Literature Selection Criteria**

Criteria	Description
Topic	The study must focus on teaching and learning in the context of SiH and related hospital education issues.
Research Basis	The literature must discuss teacher experiences, special teaching strategies, challenges in hospital teaching or teaching approaches in SiH environments.
Reliability & Validity	The selected studies must be published by trustworthy and reputable academic institutions or organizations and demonstrate a clear research design and valid and verifiable findings.
Research Questions	The articles must provide relevant information to answer the main questions of this study, specifically about teaching challenges and strategies.

Note: The criteria used in this table are informed by general principles from Higgins and Green (2009), but have been adapted to suit a narrative literature review approach.

### 4.3 Analysis Method

A narrative thematic analysis was employed to synthesise findings from the selected literature. Articles were reviewed individually to identify recurring patterns, concepts, and strategies related to teaching in hospital-based settings. These were then coded and categorised into key themes. Prominent themes that emerged include limited instructional time, disruption due to treatment schedules, lack of teaching resources, emotional support needs, teacher adaptability and the integration of educational technology.

### 4.4 Research Limitations

This review is limited to publications in English and Malay. It also focuses primarily on the Malaysian context. As a result, the findings may not be fully generalisable to other countries with differing healthcare or educational systems. Furthermore, the availability of literature specifically on SiH in Malaysia remains limited, necessitating the inclusion of international studies with comparable settings. This contextual focus limits the generalizability of findings to other countries with differing educational or healthcare systems.

## 5. Findings

Based on the analysis of selected articles related to the School in Hospital (SiH), several important themes have emerged concerning the challenges faced by teachers and the teaching strategies adopted. Teaching in SiH requires not only an understanding of academic content but also the ability to manage the emotional and physical needs of students undergoing treatment.

The findings indicate that time constraints and insufficient physical learning spaces pose significant challenges to effective instruction. Students receiving medical treatment often have unpredictable schedules which disrupt teaching continuity and hospital environments are generally not conducive for classroom activities (Phin, J. Y., & Yasin 2019). Additionally, many students experience emotional instability and psychological stress due to pain, anxiety or the clinical environment, which negatively affects their ability to concentrate and engage in learning (Sugendran et al., 2021). In such situations, teachers are expected to assume broader responsibilities that go beyond delivering lessons, such as providing emotional reassurance and establishing trust.

The review also reveals that most teachers assigned to SiH do not receive structured professional training prior to placement. Without specific orientation, they are often left to rely on personal experience and improvisation when dealing with sensitive and unpredictable student needs (Nagandran et al., 2021). Despite these constraints, teachers have demonstrated creativity and resilience in their practice. Various strategies such as edutainment, self-directed learning and the use of educational technology have been employed effectively. The teacher's role as a facilitator focusing on empathy, flexibility and relationship building and emotional well-being during their hospitalisation.

## 6. Discussion

The findings highlight the importance of tailoring teaching methods to the specific and fluctuating needs of students in hospital settings. Moreover, SiH teachers must go beyond their conventional roles by integrating care, flexibility and psychological understanding into their teaching. This reflects a broader shift from traditional instruction towards a more human-centred approach to education. However, such transformation requires not only personal commitment from educators but also institutional support in the form of structured training and pedagogical guidelines.

In recent years, the advancement of educational technology, particularly artificial intelligence (AI), offers promising pathways for enhancing the quality of learning in hospital-based education. In the learning environment, AI-driven platforms can personalize learning experiences, track student progress, and offer real-time feedback, enabling students to learn at their own pace and ability (Jian, 2023). Additionally, tools such as virtual reality (VR) and augmented reality (AR) allow for immersive learning that replicates classroom-like environments. These innovations can help reduce learning loss and maintain student motivation despite physical absence from school (Sakr & Abdullah., 2023)

Furthermore, comparative insights from international hospital education models suggest areas for improvement in Malaysia's SiH programme. In the United Kingdom, for example, hospital schooling is supported by reintegration plans and curriculum continuity frameworks. In the United States, strong liaison systems between hospitals and home schools ensure that student learning is monitored and aligned with national standards. These examples show that beyond

pedagogical strategies, policy design, stakeholder collaboration and psychosocial infrastructure are equally vital. By adapting and localising global best practices, Malaysia can further refine its SiH implementation to become a more robust and responsive educational model.

The Malaysian SiH model draws inspiration from Australia's approach. However, hospital education systems in countries like the United Kingdom and the United States also offer valuable insights. In the United Kingdom, hospital schools are integrated within the national education framework and often emphasise reintegration plans that ease students' transition back into mainstream schooling (Department for Education UK, 2017).

Meanwhile, in the United States, liaison services that connect hospitals and home schools are commonly implemented to ensure curriculum continuity and provide emotional support to students during prolonged medical treatment (Shaw & McCabe, 2008; Kaffenberger, 2006). These international models demonstrate that beyond instructional strategies, structural policy design, inter-agency coordination, and psychosocial frameworks are essential in creating an effective hospital-based education system. Incorporating such comparative insights can help refine Malaysia's SiH framework and inform long-term national strategies.

## **7. Conclusion**

This literature review has examined the current understanding of teaching practices within the SiH context, with a particular focus on pedagogical strategies that support students undergoing medical treatment. The review has revealed key gaps in research and practice, particularly regarding teacher preparedness, the absence of a structured instructional framework, and the limited integration of emotional and psychosocial support in hospital-based learning environments.

Moving forward, it is essential to recognise that hospitalised students require more than academic instruction. They need empathetic, adaptable, and student-centred teaching approaches that are sensitive to their fluctuating physical and emotional conditions. While this study has identified several promising strategies, their long-term effectiveness depends on systemic support, including structured professional development, curriculum adaptation, and inter-agency collaboration between the education and healthcare sectors.

Ultimately, the SiH programme should not merely replicate conventional teaching within hospital walls. Rather, it should be envisioned as a transformative educational model one that nurtures resilience, sustains academic engagement, and fosters hope during challenging circumstances. With continued innovation, policy reform, and a strong commitment to equity, hospital-based education in Malaysia holds the potential to evolve into a more compassionate, inclusive, and empowering system for all students in need.

## **8. Recommendations**

Based on the comprehensive review of existing literature, several key recommendations have been identified to enhance the effectiveness of teaching

and learning within the SiH environment. These recommendations focus on practical strategies for educators, as well as policy level considerations that aimed at addressing the unique challenges faced by students receiving education in hospital settings. The following sections elaborate on targeted teaching strategies and policy recommendations to support and improve the SiH framework.

### **8.1 Teaching Strategies**

Based on the literature reviewed, this study recommends that teachers in the SiH setting adopt flexible, personalised, and student-centred approaches that align with the complex and individualised needs of hospitalised students. Teaching in this context requires more than subject-matter expertise; it demands a deep understanding of how physical illness, emotional distress, and medical routines affect learning capacity and motivation.

Therefore, specialised professional training must be provided to equip teachers with skills in managing student emotions, designing flexible and modular lessons, applying trauma-sensitive pedagogy, and effectively integrating educational technology to support remote or interrupted learning. Teachers should also be given pedagogical autonomy to modify content and instructional methods in response to the students' ever-changing physical and emotional conditions. Instead of adhering rigidly to standardised curriculum sequences, SiH teachers should apply differentiated instruction tailored to each student's readiness, interest, and energy levels.

Moreover, teaching practices can be enhanced through interactive and creative methods such as collaborative learning, the use of physical manipulatives, reflective journaling, storytelling, and arts-based interventions. These techniques not only improve academic engagement but also foster emotional healing and identity development. Technology, particularly digital learning platforms, video-based lessons, and online collaboration tools, should be maximised to ensure continuity of learning when face-to-face instruction is not possible. Ultimately, effective SiH teaching requires a dual focus: delivering meaningful educational content while simultaneously fostering psychological resilience and student agency in highly constrained environments.

### **8.2 Policy Recommendations**

To ensure the sustainability and effectiveness of SiH implementation, a strong and supportive policy infrastructure is essential. The Ministry of Education is encouraged to develop and institutionalise a comprehensive national pedagogical framework dedicated specifically to hospital-based teaching and learning. This framework should provide clear guidelines on curriculum adaptation, assessment flexibility, psychosocial support integration and professional competencies for SiH teachers. It should also outline practical standards for instructional design, digital resource deployment and student reintegration strategies.

Beyond curriculum reform, inter-agency collaboration should be formalised through policy to ensure seamless coordination between teachers, school administrators, hospital personnel, school counsellors, parents and even mental health professionals. Creating interdisciplinary support teams within each SiH

centre can help address students' academic, emotional and social needs more holistically.

Furthermore, policymakers must invest in infrastructure and technological resources to support hybrid and digitally enhanced learning environments. This includes access to portable devices, reliable internet connectivity in hospital wards and cloud-based platforms that facilitate communication, content sharing, and progress monitoring. Investment should also be made in developing a centralised training programme and certification pathway for teachers who wish to specialise in hospital-based education.

With strategic planning, sufficient resource allocation and a commitment to inclusive educational values. The SiH model in Malaysia can evolve into a leading example of how education can be effectively delivered in non-traditional and highly challenging contexts. Such policy level reforms will not only benefit students undergoing medical treatment but will also strengthen the national education system's capacity to respond to the diverse and evolving needs of all learners.

## 9. Suggestions for Future Research

Since this study focuses on reviewing literature related to teaching and strategies in SiH, further empirical research is needed to test the actual effectiveness of these strategies in local contexts. Action research conducted by teachers in the field is also encouraged to ensure that the approaches developed are grounded in real-world experiences. Additionally, longitudinal studies could be useful in evaluating the long-term impact of students' participation in SiH programs on their academic performance and psychosocial well-being.

Future researchers may also explore subject-specific teaching in hospitals such as Science or Islamic Education to better understand how formal curriculum content can be adapted to informal learning settings. Comparative studies between SiH practices in Malaysia and other countries could also offer inspiration for building a more contextualised and sustainable local model. Lastly, the development of a theoretical framework or national model for hospital education should be advanced through interdisciplinary research involving teachers, education experts and healthcare professionals, to strengthen and expand inclusive education in Malaysia.

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