

Adapting Education Shifts in Malaysia After COVID-19: A Comprehensive Review of Flexible Assessments, Lifelong Learning Initiatives, and Diversified Learning Trajectories

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Abstract

In the wake of the COVID-19 pandemic, Malaysia's education system has witnessed a significant transformation, prompting a shift towards lifelong learning and greater flexibility in learning assessments. A comprehensive analysis was conducted on 86 relevant studies conducted between 2013 and 2023 to provide an overview of important advancements and patterns in the areas of education transformation in Malaysia, flexible assessments, and lifelong learning. The reviewed journals were chosen from peer-reviewed scientific journals, books, conference proceedings, and renowned internet databases such as JSTOR, Google Scholar, and the Directory of Open Access Journals (DOAJ). Articles that were not authored in English or were published outside the specified timeline and criteria were excluded. The findings indicate a significant focus on the implementation of online and mixed learning, with a focus given to digital platforms and micro-credentialing. The important contributions of Recognition of Prior Learning (RPL) efforts and collaborative ventures with industry and communities have also been identified as beneficial. The importance of teacher training and continuous professional development was emphasized for its pivotal role in promoting lifelong learning. The review confirms that these instructional changes have a positive effect on student engagement and the alignment of skills with real-world requirements especially the professional settings. These initiatives serve as a significant benchmark for other nations grappling with educational issues in the aftermath of COVID-19, establishing Malaysia as a frontrunner in pioneering educational practices.

Keywords: *Education Transformation, Flexible Assessments, Impact, Lifelong Learning, Post-COVID-19, Malaysia*

INTRODUCTION

It is crucial to promote continuous learning and improve the adaptability of learning assessments in Malaysia, especially in the post-COVID-19 age, to adjust to the evolving educational environment (Abdullah et al., 2020; Chan et al., 2022). The disruptions caused by pandemic highlight the imperative of adopting lifelong learning and adaptable evaluations. However, attaining continuous teacher professional development necessitates a substantial transformation in culture and institutional modifications that require actions, not empty promises (Sangiuliano Intra et al., 2023). It is imperative to recognize that the implementation of educational reforms encounters obstacles such as resistance, constraints of budget, and the complex dynamics of established educational institutions. The necessity for innovative assessment approaches that facilitate lifelong learning is apparent in the Education Blueprint 2021–2030 in Malaysia (Tee, 2023). The objective of this blueprint is to address the challenges within the educational system by establishing a fair and comprehensive framework that equips students for the demands of the 21st century adequately.

Nevertheless, persistent challenges occur which include an excessive focus on rote learning, insufficient assistance for analytical thinking and problem-solving, disparities in educational opportunities, and a scarcity of educators (Tee, 2023; Sirat et al., 2020). These challenges suggest the imperative for reforms in the education system. As suggested by Yea et al. (2021), it is crucial to reassess using flexible assessment methods and adjustable learning paths to adapt the changing educational landscape after COVID-19. The COVID-19 epidemic has had a substantial impact on education worldwide, including Malaysia, leading to measures being taken to improve fairness and excellence in the education system (Bakar, 2022). Such phenomenon has highlighted the ongoing challenges and underscores the significance of synchronizing educational objectives with industrial demands to provide students with pertinent competencies (Tee, 2023). It is necessary to prioritize the advancement of lifelong learning and the enhancement of the flexible learning assessments to improve the overall competitiveness and inclusiveness of the nation.

The diverse races and cultures in Malaysia underscore that there should not one assessment approach only. The incorporation of lifelong learning and flexible assessments can cater to diverse learning paces and preferences, hence promoting inclusion among all students (Sirat et al., 2020). The COVID-19 pandemic has brought about weaknesses in traditional education, highlighting the capacity of digital platforms, flexible assessments, and flexible learning paths to enhance the education landscape (Nordin & Nordin, 2020). According to Annamalai et al. (2022) and Ahmad and Chua (2015), digital platforms facilitate flexible learning, inculcate innovative abilities, and enable personalised learning despite time and space constraints. Personalized learning environment that enables students to learn at their own speed and schedule yields noteworthy outcomes (Sirat et al., 2020). Aside from the potential challenges due to diverse background in Malaysia, the evolving educational landscape requires adjusting to unforeseen obstacles, such as natural calamities or pandemics.

Encouraging continuous learning throughout one's life is crucial for individual and career development, job prospects, active participation in society, and personal satisfaction (Chea et al., 2013). Students are benefited from flexible learning and evaluation, since it allows them to choose their preferred learning strategies and advance at their own pace (Wanner and Palmer, 2015). Nevertheless, it is imperative to address challenges such as digital literacy and self-management, particularly considering the hardships brought about by the COVID-19 pandemic (Yap and Tan, 2022).

Essentially, the objective of education reform in Malaysia is to cultivate a growth mentality and enhance adaptability among students and the workforce (Bohari et al., 2021). Currently, the primary objective of lifelong learning courses is to provide students with practical skills that may be useful in professional settings (Hee et al., 2022). Aligned with Malaysia's aspiration to position itself as a leading education hub regionally and globally suggests the importance of implementing lifelong learning initiatives to equip individuals with the necessary skills for achieving success in their careers and personal lives (Kamaluddin et al., 2021). An analysis of Malaysian learners' preferences and enduring the qualities of learning demonstrates a direct association, underscoring the significance of lifelong learning characteristics in adult lifelong learning education (Abiddin, 2023).

Underlying this significance, promoting flexible assessment methods and lifelong learning in Malaysia yields advantages that reach beyond the confines of the classroom. The COVID-19 epidemic has increased the preference towards lifelong learning, fostering individual and occupational advancement (Elfadni & Abdelrahman, 2020). For instance, the availability of cost-effective webinars and online seminars has expanded the possibilities for lifelong learning, promoting a broad and inclusive approach to lifelong education (Hee et al., 2022). This review critically analyzes Malaysia's educational reform efforts, with a specific focus on flexible assessments and lifelong learning, taking into account the influence of globalization, aging populations, and technological advancements. The post-COVID-19 comprehensive assessment identifies potential areas for improvement and challenges, offering valuable insights and recommendations to enhance the adaptability and inclusiveness of education. The objective of the review is to offer Malaysian educators and policymakers in comprehending the worldwide impact of these educational changes, serving as a valuable source for nations considering improvements in their education systems.

METHODOLOGY

This section provides a thorough analysis of 86 relevant studies conducted between 2013 and 2023. The objective is to give an overview of important advancements and patterns in the areas of education transformation, flexible assessments, and lifelong learning. The review adheres to a systematic literature review approach to examine the transformation of education post COVID-19. A combination of purposive and random sampling methods was employed to ensure a representative sample (Suen et al., 2014). The main sources of information were peer-reviewed scientific journals, books, conference proceedings, and renowned internet databases such as JSTOR, Google Scholar, and the Directory of Open Access Journals (DOAJ) (Martin-Martin et al., 2018). The process of purposive sampling entailed doing focused keyword searches, specifically targeting terms such as “education transformation,” “flexible assessments,” and “lifelong learning.” The purposive sampling method involves selecting articles based on predetermined criteria while the random sampling method involves randomly selecting literature from a larger population to locate relevant articles (Berndt, 2020).

The selection procedure involved using inclusion criteria and exclusion criteria (Patino & Ferreira, 2018). This review included studies that are relevant to the field of education, notably focusing on flexible assessment and lifelong learning, and published in English between 2013 and 2023. The exclusion criteria included articles that were not written in English or were published beyond the stipulated timeframe and criteria. The selection procedures consisted of a two-stage assessment. In the initial step, the abstracts were carefully examined to determine their relevance to the topic. Subsequently, in the second phase, the whole texts were assessed to determine their acceptability for inclusion (Booth, 2016). By employing a systematic literature review methodology, it was possible to discern trends, patterns, and comprehensively evaluate the existing literature on education transformation, flexible assessments, and lifelong learning within the designated timeframe.

FINDINGS

This comprehensive review analyses four key areas: the significant impact of COVID-19 on the educational system in Malaysia, the transformation of education in Malaysia after COVID-19 with four sub-themes, the implementation of flexible assessment in the educational landscape of Malaysia, and the importance of lifelong learning for professional and personal growth. In addition, each area not only presents suggestions for a future that is more comprehensive and vibrant, but also provides significant insights on the changing education landscape. To enhance the comprehensibility of the primary findings, Figure 1 is illustrated below.

1. COVID-19 Impact in Malaysia

The pandemic has sparked a radical change in education, leading to the sudden closing of schools and the quick uptake of remote learning. This has revealed the vulnerabilities in the educational system and given rise to creative renovation possibilities. The studies conducted by UNESCO (2020) underscore the disruptive effects of the pandemic while also highlighting opportunities for development such as the growing usage of digital resources and the appreciation of blended and online learning. In addition, students with physical disabilities now have more flexibility to engage in virtual learning thanks to online learning (Basilaia & Kyavadze, 2020). These transformative efforts are further strengthened in the Malaysian context by the incorporation of flexible learning assessments and the encouragement of lifelong learning. The flipped classroom approach—which involves providing resources before class via articles, videos that have already been filmed, and connections to YouTube—has been examined by Doucet et al. (2020) which has deepened discussions between peers and teachers during virtual sessions. This strategy has improved the relationship between teachers and students while also encouraging collaborations among educators to further online instruction. According to Doucet et al. (2020), this time has offered unparalleled opportunities for collaboration, innovative thinking, and a readiness to pick up knowledge from others—particularly in the context of Malaysian education, where stakeholders have comparable backgrounds.

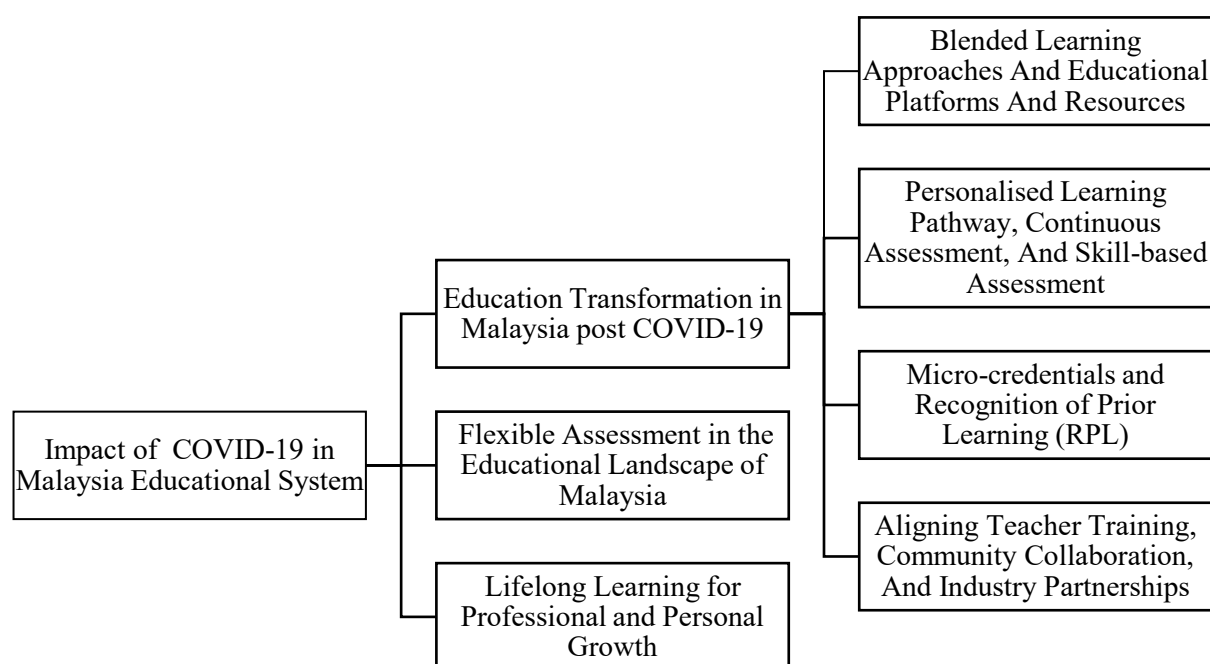


Figure 1 Main Findings of the Comprehensive Review

2. Education Transformation

Malaysia is currently undergoing a significant systemic change in education, bringing its system into line with international practices to support a variety of learning pathways. This change includes the incorporation of digital learning resources, micro-credentialing, and the integration of vocational and technical education (Abuhassna et al., 2020). The following section delves into the different transformations and learning resources employed in the educational system to navigate the perilous challenges posed by the post-COVID-19 era.

3. Blended learning approaches and educational platforms and resources

According to Al Lily et al. (2020), a crucial component of this shift is making investments in digital infrastructure for online learning. Malaysia endeavours to ensure students have access to a diverse range of engaging materials by producing high-quality digital learning resources and promoting self-directed learning (Hodges et al., 2020; Pane et al., 2015). In addition to addressing students' educational needs, the goal is to advance a culture of self-directed learning, giving them the learning tools they need to take control of their education and develop a lifetime of learning habits. Through the allocation of resources and promotion of self-directed learning, Malaysia aims to augment the flexibility and independence of its students in the always-changing field of education.

Malaysia's educational landscape has become increasingly reliant on blended learning models, which are purposefully created to accommodate the many learning styles of the modern learner. According to Garrison and Kanuka (2004) and Graham et al. (2013), these models provide both synchronous and asynchronous alternatives, making them a flexible method. This flexibility maximises accessibility by enabling students to interact with instructional materials at their own pace as well as their personal preferences. Bouilheres et al. (2020) assert that blended learning combines the best features of both online and offline learning modes to provide a learning experience that is distinctive for students. With more accessibility and flexibility, blended learning allows students to interact and collaborate on projects, and reciprocal learning is made easier by this strategy, which encourages increased involvement and interaction between students, teachers, and the learning resources. Additionally, the customised aspect of blended learning meets the needs of each student by utilising a variety of instructional strategies and assessment techniques. This flexibility promotes self-awareness

in learners and facilitates active learning and reflection by allowing students to apply theoretical information to real-world situations.

Bozkurt and Sharma (2021) present a paradigm of "augmented blended learning" that argues for a more adaptable and individualised approach to blended learning. This strategy aims to improve offline activities with online components rather than replace them, in contrast to conventional 50/50 divisional approaches. With this enhancement, students can participate in online activities at their convenience and speed, giving them more flexibility. The authors list several advantages, such as the possibility of improved learning results since online exercises support offline ones and encourage self-paced study and practise. Furthermore, educators can customise online assignments to meet the needs of specific students. Interestingly, by reducing the need for in-person instruction, augmented blended learning may also help schools cut costs.

Cobo-Rendón et al. (2022) investigate how blended learning can be used in university classrooms in the wake of the pandemic, highlighting how it can be used to combine the benefits of in-person instruction with the flexibility of online learning. Among the main advantages highlighted by the authors is increased flexibility, which enables teachers and students to adjust to a variety of learning contexts. The ability to customise blended learning to meet the requirements and preferences of each unique student is highlighted. Additionally, the method is acknowledged for encouraging participation and communication between learners, teachers, and course materials. The authors specifically highlight how well-blended learning supports the successful learning outcomes of students.

4. Personalised learning pathway, continuous assessment, and skill-based assessment

From traditional rote memorization to a focus on skill-based assessment, which fosters critical thinking and practical ability, there has been a considerable shift in educational practises (Pellegrino, 2001). Simultaneously, there is a focus on adopting learner-centered education and offering students adaptable learning routes so they can actively design their educational paths (McCombs, 2013; Quintana et al., 2013). It is reported that using Personal Learning Environments (PLEs) in classroom settings presents a realistic and balanced viewpoint while addressing the challenges involved such as access to the internet and training the teachers. They contend, therefore, that PLEs provide chances for breakthroughs and can revolutionise education despite these challenges (Mohd & Shahbodin, 2015). In more recent work, Sharef et al. (2020) criticise the limited capacity to forecast final grades and the overemphasis on descriptive analytics in current personalised learning solutions. Their suggested method uses an intelligent simulator that combines chatbots, learning analytics, and the Internet of Things (IoT) to provide students with active support and real-time feedback. The finding showed that students demonstrated positive engagement and improved performance attributed to the personalised learning experiences.

Furthermore, Yahya and Yamin (2014) highlight the various ways that Malaysian institutions employ Continuous Assessment (CA) techniques, which include quizzes, presentations, assignments, and projects. This method seeks to evaluate students' affective and cognitive learning outcomes while also building their learning skills and giving them frequent feedback. Nevertheless, to assess how well these approaches work towards accomplishing all-encompassing learning objectives and equipping students for real-world problems, a critical analysis is required. Similarly, Day et al. (2018) investigated the connection between success, student characteristics, and continuous assessment techniques. They found that a variety of assessment methods, including tests, assignments, and presentations, had a substantial impact on students' progress, with students who underwent a variety of assessments outperforming those who only underwent exams.

Preciado-Babb et al. (2018) highlight three essential strategies for efficient teacher response in continuous assessment. Firstly, students benefit greatly from receiving constructive criticism since it helps them understand their strengths and weaknesses and pinpoint areas where they may grow. Secondly, students learn from their mistakes through continuous assessment. This entails allowing them to review their work, collaborate with classmates, and reflect on their educational experiences. Finally, it motivates every student by giving them assignments that are catered to their ability levels and encouraging them to take chances. All of these methods work together to create a vibrant and encouraging learning environment. Not only continuous formative assessments, but skill-based assessments are also becoming increasingly important in today's educational environment. This

acknowledgment results from their capacity to provide students with timely and helpful feedback, enabling the validation and development of their competencies (Mandouit & Hattie, 2023). These methods support the development of an active and responsive learning environment where students can address areas for growth, actively participate in their education, and get insightful knowledge about their academic path. The focus on instant feedback is consistent with modern educational approaches that place a high value on tailored and efficient learning opportunities.

Ab Kadir et al. (2022) discovered that during the COVID-19 epidemic, teachers used innovative methods to measure student learning in skill-based courses. These methods included online portfolios, e-learning simulations, and peer assessment. This is an example of the proactive response from educators, showing their adaptability and commitment to improving the learning process to assess students' skills properly. According to Ali et al. (2022), there is a clear correlation between students' readiness for online learning and their satisfaction with skill-based hospitality courses that are offered online. They stress how important it is to use a variety of assessment methods to ensure fair and accurate assessments that let students demonstrate their abilities. In the context of online learning, it is essential to match assessment design with course-specific competencies to produce meaningful and pertinent evaluations as it is about skill-based content and knowledge.

In short, personalised learning environments, continuous assessments, and skill-based assessments can all work together to create a learning environment where students are continuously encouraged and challenged as they grow. Students are more likely to be motivated and involved in their learning if they are given the chance to obtain micro-credentials in areas of interest and receive prompt feedback on their efforts. This holistic approach not only revolutionises assessment techniques but also supports the overarching objective of developing learners' critical and adaptive thinking abilities.

5. Micro-credentials and Recognition of Prior Learning (RPL)

Alternative routes to formal qualifications are offered via micro-credentials and recognition of prior learning (RPL), which bridge the gaps between traditional credentials and abilities acquired through employment and life experience. According to Ahmat et al. (2021), there are several benefits that higher education institutions can benefit from implementing micro-credentials. These benefits include easier access to training and education, more adaptability and customization of the learning process, improved employability, career advancement, and the possibility of generating new income streams for educational institutions. These prospects demonstrate the wider influence and possible advantages that micro-credentials may have in the changing context of higher education. Besides, Navanitha et al. (2022) assert that a variety of institutions, including universities, colleges, and private providers, offer micro-credentials. These certificates can be pursued separately or in conjunction with standard degrees; they are usually short-term and concentrate on certain information or skill sets. Employers looking for personnel with specific talents are said to be the reason behind the growing popularity of micro-credentials. Through several programmes, the Malaysian government aggressively promotes micro-credentials. Their effectiveness and widespread acceptance are, however, hampered by issues like standards, quality assurance, employer recognition, and a lack of knowledge.

Recognition for Prior Learning (RPL) is still in its infancy in Malaysia, where it faces obstacles such as poor awareness, convoluted processes, inadequate capacity for evaluation, and inadequate collaboration between businesses and higher education institutions (HEIs). Despite these challenges, the necessity for flexible learning, the emphasis on lifelong learning, and the requirement for workforce upskilling are driving an increasing amount of interest in RPL (European Commission, 2020). Evidence from Murad et al. (2021) highlights the effectiveness of recommendation systems that are based on recognition of prior learning (RPL) in influencing the curriculum design of online higher education. The results show that students who make use of these RPL-based systems tend to graduate earlier and do better academically than their peers who do not use these systems. This points to a possible direction for raising the effectiveness and academic results of online learning.

Similar to RPL, in Khan's (2021) earlier work, the author studies on Accreditation of Prior Experiential Learning (APEL) in Malaysian higher education institutions. The majority of applications were from adults looking to upskill or reskill. Additionally, the report draws attention to implementation issues with APEL, such as low awareness, complicated processes, limited capacity for assessment, and inadequate collaboration between companies and universities. More recently, according to Khan et al.

(2022), due to the growing need for flexible learning pathways, the emphasis on lifelong learning, and the requirement to upskill and reskill the workforce, there is an increasing interest in RPL in Malaysia. The authors proposed that to facilitate a wider acceptance of RPL, it is suggested that awareness and understanding be raised, simplify and streamline the procedures, and assessment capacity be increased, and employers and HEIs collaborate better. Overcoming obstacles and expanding RPL implementation in Malaysia need to address these important issues.

Additionally, Iyer (2022) emphasises how important recognition of prior learning (RPL) is to the future of higher education. RPL increases access to and equity in higher education by recognising and incorporating people's prior knowledge and experiences. Future success is guaranteed for institutions that successfully apply RPL. Winstanley and Cunningham's (2023) research offers a descriptive literature analysis of the state of recognition of prior learning (RPL) in the field of emergency medical treatment for vocational learners. Wider adoption of RPL is made possible by the study's identification of opportunities, which include the need to upskill and reskill the workforce, the growing desire for flexible learning routes, and the emphasis on lifelong learning. Even though RPL is still in its infancy as a technology, there is increasing interest in using it to advance emergency medical professionals' careers.

6. Aligning teacher training, community collaboration, and industry partnerships

A thorough understanding is essential for optimising educational landscapes in the investigation of the interconnected domains of teacher training, community collaboration, and industrial collaborations within education. Darling-Hammond (2017) emphasises the significance of providing teachers with the necessary resources and expertise in online teaching methods in the field of teacher training and development. This will allow them to assist students in traversing a variety of learning paths. This strategy is in perfect harmony with the findings of Dweck's (2006) research, which highlights the benefits of instructors adopting a growth mindset.

According to Karia et al. (2023), teacher training programmes play a major role in the development of a variety of lifelong skills, including public speaking, critical thinking, problem-solving, leadership, cooperation, communication, and teamwork. The results highlight how engaging in peer teacher training fosters a greater feeling of self-efficacy in addition to increasing students' confidence. Such training is reported as an effective means of encouraging lifelong learning and workforce development, thereby equipping students for success in a variety of settings, including the workplace, the classroom, and personal relationships.

Furthermore, as the Cedefop (2015) has pointed out, it is crucial to acknowledge the critical role that corporate and community partnerships play. Industry engagement is essential for identifying knowledge and skill gaps that should be addressed in curriculum development. Furthermore, Bose et al. (2023) highlight that internship experiences give students real-world experience and practical skills that they can use to apply their theoretical knowledge in real-world situations, which makes them more marketable to employers. Furthermore, by exposing students to a variety of businesses and jobs, these experiences aid in the clarification of their professional aspirations. This all-encompassing strategy represents a deliberate attempt to close the divide for a comprehensive and flexible educational framework between educational establishments, the community, and industrial stakeholders.

Another study by Sa-Nguanmanasak and Khampirat (2019) on Malaysian Technical and Vocational Education (TVE) students provides evidence of the significant advantages of integrating corporate with the school through the Work-Integrated Learning (WIL) programmes. Through real-world exposure and hands-on experience, WIL not only improves students' employability skills—particularly in areas like initiative, cooperation, collaboration, and communication—but also aligns educational programs with industry demands. Students' ability to close the knowledge gap between theory and practise is made possible by WIL's immersion approach, which also helps them become more prepared for success in the workplace later on.

The significant influence of these partnerships on promoting student learning and accomplishment is highlighted by Valli et al. (2018) study on school-community partnership models and leadership. Six major partnership types are identified by the study: school-business collaborations, parent-teacher associations, community-based learning, after-school programs, school-based health centres, and service learning. These collaborations help students and teachers develop their leadership

abilities while also raising academic achievement, lowering dropout rates, and raising school engagement. Moreover, Azhar (2021) holds that corporate social responsibility (CSR) in Malaysian primary schools is one way that businesses help local communities, improve the quality of education, and promote their brand image. Financial support, educational material donations, teaching expertise volunteers, and the implementation of programmes centred around financial literacy, environmental awareness, and job development are all ways in which these projects benefit students. The report demonstrates how business involvement enhances students' educational possibilities and experiences.

7. Flexible assessments

The COVID-19 pandemic has created significant disruption, which has highlighted the vital importance of flexible assessments in the field of education. Teachers have had to quickly adjust to this new reality as learning suddenly moved to an online and mixed learning environment. According to Strawser (2018), this dedication is motivated by a sincere wish to accommodate the various requirements and preferences of pupils in addition to the necessity of evaluating learning. This flexibility in assessment techniques supports the larger goal of developing inclusive and productive learning environments in addition to meeting the urgent issues brought up by the pandemic.

One example from the context of Turkey as highlighted in Hannah et al. (2019) investigation on student assessment underscores the significance of using flexible assessment approaches. The current assessment system emphasizes on standardised tests, which limits the ability of the students to demonstrate a range of abilities. To address this, the research suggests creating a more flexible assessment system, along with new assessment tools, teacher professional development, national standards, and pilot programmes in different schools. Also, all students must have access to flexible assessments to realise their full potential. Performance-based tests, portfolios that track learning over time, and self-assessments that enable students to reflect and identify areas for growth are a few examples of flexible assessment techniques recommended. Likewise, Pan et al. (2021) propose that project-based assessments and ongoing formative assessments are effective strategic approaches that preserve the integrity of learning outcomes while providing students with the flexibility they need in these difficult times. Teachers are showing a strong dedication to presenting material in novel ways in response to the changing pedagogical environment in higher education. Teachers are showing a strong dedication to presenting material in novel ways in response to the changing pedagogical environment in higher education.

8. Lifelong learning

In the contemporary digital era, lifelong learning is becoming more and more acknowledged as an essential part of both professional and personal growth. This recognition is a result of the ever-changing needs of the labour market, which require people to constantly learn new skills to stay relevant. Scholars like Jarvis (2009) support the departure from conventional education and towards lifelong learning approaches, highlighting the need to provide individuals the flexibility and problem-solving abilities they need to thrive in the 21st century. Cabot (2016), Han et al. (2019), and Tasker (2017) explore distinct learning trajectories in this context, focusing on language-learning trajectories. According to Virkus (2019) and Rintala and Nokelainen (2020), students are given the freedom to design their educational route based on their own goals, interests, and preferences when they see learning as an ongoing and multidimensional activity that takes place across multiple settings. However, the effectiveness of this education depends on a stronger relationship between circumstances that happen inside and outside of the classroom. Although students are capable of handling this procedure on their own in a variety of situations, the roles of the teachers are still substantially crucial. As highlighted by Sharples (2015), Toh et al. (2017), and Dilger et al. (2019), teachers play a critical role in giving students the tools they need to establish a seamless learning environment that transcends traditional borders.

9. Awareness and government support for flexible assessments and lifelong learning

The nation's educational landscape is being shaped by the interwoven themes of lifelong learning, flexible assessments, the influence of COVID-19, education transformation, and Malaysia's significant

role. Scholars and politicians alike are beginning to recognise these themes' interconnectedness, highlighting their importance in solving the pandemic's current issues and preparing students for the ongoing changes in the global education paradigm. It is essential to launch public awareness efforts in tandem with educational reforms in response to the rapidly changing nature of contemporary education. Hattie (2007) and Finley & McNair (2013) have highlighted that these efforts ought to actively promote participation in non-traditional and alternative learning routes in addition to dispelling myths about education. Such initiatives are essential for developing a more comprehensive awareness of the range of educational options accessible, encouraging adaptability in the classroom, and motivating people to investigate novel strategies that are in line with the evolving dynamics of modern education.

Government policies that carefully align to promote flexible assessment methodologies and lifelong learning are essential to this educational revolution. The government is exhibiting a strong commitment to supporting educational innovation by allocating resources and money to programmes aimed at improving the flexibility of learning evaluations, as suggested by the guidelines of the European Parliament (2020). Malaysia aims to establish an inclusive education system that can accommodate the diverse learning styles of its citizens and make education a continuous pursuit rather than a one-time event. This goal is based on this strategic alignment. The Ministry of Education Malaysia's (2013) initiatives demonstrate Malaysia's leadership in educational innovation throughout Southeast Asia. The government's recognition of prior learning, strategic partnerships with industry, and upskilling efforts for educators are examples of its dedication to transformative education. Such unwavering commitment highlights Malaysia's continuous quest to create a more flexible and dynamic education system that meets the changing requirements of its heterogeneous communities.

Da Wan et al. (2018) argue that to foster flexibility in assessment, "authentic assessment," "alternative assessment," and "holistic assessment" should be adopted. They claim that these methods are more in line with 21st-century educational objectives. They contend that students' ability to think critically, be creative, and solve problems is greatly enhanced by these kinds of assessments because students should be given the chance to demonstrate their learning which could be attained from these more equal approaches. Through the integration of these innovative assessment methodologies, the goal is to provide an educational framework that surpasses traditional metrics, offering a more comprehensive and flexible system that more effectively equips people for pursuits of lifelong learning.

One important finding highlighted in Bakar (2023) critical analysis, flexible assessment plays a crucial role in helping Malaysia achieve the objectives stated in the Malaysia Education Blueprint 2013–2025. He contends that the development of critical abilities like higher-order thinking, creativity, and problem-solving—all essential for success in the modern workforce—requires flexible assessment. In support of a change to a more flexible and all-encompassing educational system in Malaysia, the author also emphasises its ability to reduce the stress and anxiety brought on by high-stakes testing. All of which contribute to the promotion of lifelong learning.

DISCUSSION

Within the framework of Malaysia's educational system, embracing lifelong learning presents both opportunities and obstacles. The obstacles associated with traditional rote-learning methods are exacerbated by the requirement for teachers to undergo retraining to implement innovative teaching strategies. Despite these difficulties, developing critical thinking, problem-solving, and adaptability abilities is becoming more and more important for the modern workforce. The necessity for adaptable learning assessments was highlighted by the COVID-19 pandemic. Policymakers and educators were forced to reevaluate assessment practises due to the sudden shift to online and blended learning. This adaptation led to an increased focus on project-based assessments, online quizzes, and continuous formative assessments, providing students with enhanced flexibility and convenience (Day et al., 2018; Pan et al., 2021). To accommodate a variety of learning trajectories, Malaysia is actively updating its models for lifelong learning.

As emphasized by Bouilheres et al. (2020), the integration of digital learning platforms and resources is a crucial step in transforming Malaysia's educational environment. These platforms have had a beneficial impact on the educational system, encouraging adaptable assessment and cultivating

lifelong learning. Although the advantages are clear, acknowledging and addressing the inherent challenges associated to this shift is considered important. Essentially, Bakar (2022) highlights the urgent necessity of addressing concerns such as digital literacy and equal access to technology, to ensure that the benefits of digital education are available to all demographic groups. Furthermore, the increased popularity of micro-credentialing in the Malaysian educational system presents a hopeful means of promoting lifelong learning and enhancing skill acquisition (Navanitha et al., 2022). This method enables students to personalise their educational experiences, offering a modular and adaptable approach for developing skills and abilities. Nevertheless, as this method becomes more popular, encountering possible obstacles is inevitable, such as guaranteeing equitable availability and adapting to the changing requirements of different industries (Bakar, 2022).

Scholars and policymakers emphasise the need for public awareness campaigns in addition to educational reforms, as they recognise that government support plays a key role in determining the nation's commitment to innovation. Malaysia is leading the way in Southeast Asia by emphasising the improvement of learning assessments, which is in line with developing an adaptable and inclusive educational system (Da Wan et al., 2018). Scholarly recommendations for novel assessment approaches are in line with 21st-century learning goals and offer a framework that goes beyond conventional measurements. The importance of flexible assessments in helping students acquire the important skills specified in the Malaysia Education Blueprint fosters an inclusive educational environment that supports lifelong learning (Bakar, 2023). Malaysia's experiences can provide useful guidance to other countries tackling the post-COVID-19 education difficulties.

Malaysia's active initiatives in modernizing its models for lifelong learning are in line with the acknowledgment that flexible assessments are essential elements of a comprehensive lifelong learning framework. Through the adoption of these cutting-edge assessment techniques, Malaysia is not only addressing current obstacles but also establishing the groundwork for a more adaptable and forward-thinking education system. The incorporation of these flexible assessment methods is not only a temporary solution but a proactive step towards equipping students for a swiftly changing global environment, where essential skills like as critical thinking, adaptability, and problem-solving are crucial.

CONCLUSION

Malaysia's commitment to educational transformation is seen in its reaction to the challenges presented by the COVID-19 epidemic. The efforts made in promoting lifelong learning and flexible assessments is praiseworthy, nevertheless, a more comprehensive and discerning assessment is deemed necessary for a versatile educational landscape post COVID-19. The ability of Malaysia to adjust to new circumstances, but a more thorough analysis is necessary to evaluate the actual impact and long-term viability of these measures. To establish Malaysia as a leading global example of innovative educational hub, the needs to provide specific instances and conduct comparative evaluations for validation are paramount. To have a thorough knowledge, it is required to conduct a more detailed examination of the problems encountered, the outcomes obtained, and the prospective improvements that may be produced. A flexible assessment is crucial for international stakeholders, such as policymakers, educators, and learners, to gain useful knowledge from Malaysia's experiences in adapting to the changing education landscape after the COVID-19 pandemic.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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