

# Navigating Lifelong Learning: Universiti Sains Malaysia Students' Perceptions, Challenges, and Employability Readiness

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## ABSTRACT

Lifelong learning (LLL) is crucial for personal development and employability, especially for university students preparing to enter the workforce. However, various challenges, such as financial constraints, time limitations, and competing responsibilities, hinder their ability to engage in continuous education. This study explores the perceptions of final-year students at Universiti Sains Malaysia (USM) regarding LLL and the obstacles they face, aligning with Sustainable Development Goal 4 (SDG 4) on inclusive and equitable quality education. Using a qualitative approach, in-depth interviews were conducted with 24 final-year students to assess how LLL influences their professional readiness and self-growth. The findings reveal that students recognize LLL as essential for developing critical thinking, creativity, and adaptability in a dynamic job market. Despite this awareness, financial struggles and time constraints significantly limit their participation. Many students prefer flexible learning options, such as online and blended learning, to balance their commitments. This study highlights the need for institutional support, such as affordable and accessible learning opportunities, to foster a stronger culture of lifelong learning. Addressing these barriers can enhance students' employability readiness and ensure they remain competitive in an evolving workforce.

**Keywords** lifelong learning, employability, SDG 4, higher education, student perceptions

## INTRODUCTION

Lifelong learning (LLL) has emerged as a core element of contemporary educational philosophy driven by the demands of globalization, technological development, and the rise of the knowledge economy. The term "lifelong learning" gained prominence following UNESCO's 1973 Learning to Be report (Faure et al., 1972) which referred to learning as a continuous process that extends from early childhood through adulthood. Today, LLL is viewed as an essential practice that enables individuals to adapt to the rapidly changing demands of modern life, both professionally and personally. The relevance of LLL is even more prominent within the framework of Sustainable Development Goal 4 (SDG 4) which seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." By embracing LLL, societies can contribute to the achievement of SDG 4, fostering learning systems that remain accessible throughout an individual's life and promoting inclusivity, equity, and the elimination of educational disparities (Webb et al., 2019).

LLL can be understood as an ongoing pursuit of knowledge and skills, extending beyond formal education to encompass both formal and informal learning processes. Formal means including structured education, training, mentoring, and higher education, while informal learning is derived from everyday life experiences (Chea et al., 2013). This learning continuum reflects the society's need for constant development, particularly as we strive towards becoming a developed nation. As such, LLL helps individuals acquire the skills to continuously learn, unlearn, and relearn, contributing to self-improvement and enabling them to remain competitive in an ever-changing world, especially in technology (Abiddin, 2023).

In accordance with SDG 4, the concept of lifelong learning extends beyond the classroom and formal education settings; it encompasses all learning activities, whether formal or informal, across various contexts (Mohamed et al., 2010). Defined as intentional learning aimed at improving quality of life, LLL encapsulates continuing education and professional development. This broad interpretation emphasizes its applicability to both personal

and professional growth (Yap & Tan, 2022). Furthermore, SDG 4 advocates for accessible learning for all, fostering social equity by promoting lifelong educational opportunities that empower marginalized and disadvantaged groups to improve their socio-economic standing.

The rationale for LLL is rooted in the recognition that knowledge and skills must be continuously updated to meet the demands of today's fast-paced, knowledge-driven economies. As globalization accelerates, the ability to learn and relearn becomes crucial for maintaining competitiveness and relevance (Laala, 2011). This redefined view of learning encourages learners to engage in formal, non-formal, and informal environments—including the workplace, home, and community—to enhance their employability, achieve personal growth, and contribute to society. By embracing LLL, societies are better equipped to meet SDG 4 targets, ensuring that education systems are responsive to the needs of individuals across their lifespan.

Given the complex and dynamic challenges of modern life, lifelong learning has become one of the critical educational challenges of the 21st century. The shift towards more self-directed, collaborative, and real-world learning approaches reflects the demands of the information age. Learners must take responsibility for setting their own goals, identifying resources, and assessing their progress (Collins, 2009). This evolving approach to education necessitates a transformation in teaching practices, as educators adapt to foster self-directed learners capable of solving authentic problems within their daily lives. Moreover, LLL supports the achievement of SDG 4 by preparing individuals to be lifelong learners who can thrive in an interconnected, rapidly evolving world.

On a broader scale, lifelong learning serves as a vital mechanism for both personal and societal development. It empowers individuals to become adaptable, self-reliant, and capable of navigating the complexities of modern life, enhancing their overall quality of life (Laala, 2011). Lifelong learning (LLL) cultivates a culture of innovation and continuous growth, empowering individuals to not only adapt to change but also to lead and shape it. The inclusive nature of lifelong learning, aligned with SDG 4's mission of equity and inclusivity ensures that learning opportunities are accessible to all regardless of age or background, promoting social equity and inclusion. This inclusive approach is integral to achieving the global educational agenda and ensuring that no one is left behind in the pursuit of knowledge and personal development.

## Objectives

This study aims to investigate the factors that influence Universiti Sains Malaysia (USM) students' perceptions and attitudes towards lifelong learning in the context of continuous education. The primary objective of this study is to investigate the factors that influence Universiti Sains Malaysia (USM) students' perceptions and attitudes towards lifelong learning (LLL) in the context of continuous education. Specifically, the research aims to explore how personal, social, and economic factors shape students' understanding and commitment to lifelong learning. This includes examining students' beliefs about the value of LLL in enhancing their employability, personal development, and adaptability in a rapidly changing job market. Furthermore, the study seeks to identify the barriers that students encounter, such as financial constraints, time limitations, and competing responsibilities, which may hinder their engagement in lifelong learning opportunities. By focusing on these factors, the research aims to provide insights into how students perceive the role of LLL in their academic and professional journeys, as well as how these perceptions can be influenced by their educational environment and external circumstances. Ultimately, the objective is to contribute to the development of strategies and recommendations that support a culture of lifelong learning at USM, promoting equitable and inclusive access to continuous education in line with Sustainable Development Goal 4 (SDG 4).

## LITERATURE REVIEW

Lifelong learning (LLL) is an ongoing process of gaining and applying knowledge, skills, and attitudes throughout life. Knapper and Cropley (2000) suggest that lifelong learning should continue throughout a person's life; help individuals acquire, improve, and enhance their knowledge, skills, and attitudes in a structured way; rely on the individual's ability and motivation to learn; and be influenced by various types of education, including formal and informal.

Lawson et al. (2006) categorize the traits of lifelong learners into four main areas: a) Literacy Skills – Competencies needed for different stages of life, such as multiliteracies and communication; b) Task-Oriented Skills – Abilities like problem-solving and planning that can be applied across various fields; c) Personal Qualities – Traits like self-efficacy and initiative that support personal growth; d) Interpersonal Skills – Skills that allow learners to gain from and contribute to interactions with others on similar tasks.

In Malaysia, the government emphasizes the significance of lifelong learning as a key component of the national strategy to achieve developed and high-income country status. The lifelong learning blueprint defines it as an ongoing support system that motivates and enables individuals to acquire the knowledge, values, skills, and understanding essential for their entire lives (Ministry of Higher Education Malaysia, 2011).

Malaysia's promotion of lifelong learning aligns with its broader national objectives. In the Ninth and Tenth Malaysia Plans (2006–2015), the government advocated for lifelong learning to enhance knowledge and innovation capacity, foster a "first-class mentality," address socio-economic disparities, elevate the quality and sustainability of life, and strengthen institutional and implementation frameworks (Chea et al., 2013). These initiatives also support global efforts toward Sustainable Development Goal 4 (SDG 4), which emphasizes inclusive and equitable quality education. SDG 4 highlights lifelong learning as a vital tool for advancing social equity and empowering individuals to actively contribute to economic, social, and cultural development.

The slogan "Learning for All" reflects Malaysia's dedication to lifelong learning since the 1970s, with a focus on economic development initiated in the 1990s. The Ministry of Higher Education (MOHE) supports this initiative through a blueprint promoting lifelong learning via distance learning, e-learning, workplace learning, and part-time learning. All of these modes aim to contribute to the country's human capital development (Ministry of Higher Education, 2007).

Employability skills are a key part of lifelong learning because they prepare students to meet the demands of the job market. These skills include both specific competencies (technical knowledge related to fields like engineering or medicine) and key competencies (generic skills like communication, teamwork, and technological literacy) (Azmi et al., 2018). These core competencies are important as the technical knowledge is constantly evolving, requiring individuals to adapt (Yap & Tan, 2022). The focus on employability aligns with national efforts to bridge the skills gap in a rapidly changing economy, ensuring that graduates are equipped with the competencies necessary for both local and global job markets (Nimmi et al., 2021).

According to Salleh (2019), Malaysia's lifelong learning policy has four main focuses. First, the national policy places special emphasis on learning programs that benefit the public by driving economic growth and supporting Vision 2020. As a result, education and training programs have been refocused on areas that boost the country's economic development and global competitiveness, such as science, technology, and technical and vocational education and training (TVET). However, this focus on specific programs has reduced the variety of knowledge and limited funding for other areas.

The policy's second focus is to encourage individuals to enhance their knowledge and skills to remain competitive in the labor market. Learning programs are tailored to meet market demands, ensuring a skilled workforce. Participants in these programs are considered valuable assets to the labor market, with better employment prospects, higher earning potential, and the ability to contribute to the nation's economic growth. However, individuals face limited freedom in choosing their learning programs, as the emphasis on human capital within the national education system and lifelong learning diminishes the intrinsic value of education.

Third, the policy highlights self-development as a means of achieving personal success rather than benefiting society. While it underscores the importance of learning to raise individual awareness and improve quality of life, concerns persist about balancing humanitarian and utilitarian values. Inconsistencies in the policy appear to downplay the significance of self-development.

Finally, the findings indicate that the lifelong learning agenda aims to foster a love for learning within society. The emphasis is on promoting learning awareness and acknowledging diverse learning experiences to enhance

individual growth. However, this approach may shift the responsibility for education from the government to individuals, potentially reducing the government's accountability in providing education.

LLL highlights its essential role in fostering personal, social, and economic growth with various models highlighting its influence across different contexts. The Malaysian government, through national policies and blueprints, has strategically promoted LLL to drive economic progress, human capital development, and global competitiveness. However, the increasing emphasis on employability and market-driven learning programs raises concerns about the balance between economic utility and the broader value of education for personal and societal well-being (Kopnina, 2020). These complexities illustrate the ongoing challenges and opportunities within Malaysia's lifelong learning landscape.

## METHODOLOGY

This study adopted a qualitative approach, specifically utilizing in-depth interviews to gather data.

Thematic analysis was employed to examine students' perceptions of lifelong learning, their challenges, and preferred learning methods. The interview data were transcribed verbatim and analyzed using an inductive coding approach. Initially, open coding was conducted, where key phrases and recurring ideas were identified. These codes were then grouped into broader categories based on conceptual similarities. Through axial coding, relationships between categories were established, leading to the development of overarching themes. Three primary themes emerged: (1) students' understanding and perceived benefits of lifelong learning, (2) barriers to lifelong learning, and (3) preferred learning modalities and institutional support. To enhance reliability, two researchers independently coded the data, and discrepancies were resolved through discussion. This structured approach ensured that findings were grounded in participants' perspectives while allowing for a systematic exploration of key issues related to lifelong learning and employability readiness.

The purpose of qualitative interviews is to contribute to conceptual and theoretical understanding by exploring how participants interpret and experience their lives. In-depth interviews are particularly effective for uncovering shared meanings within a specific group (DiCicco-Bloom & Crabtree, 2006). The interview process continues until new interviews no longer yield fresh insights, a stage known as saturation, where recurring themes and perspectives are observed among participants. For instance, Cobern et al., (1999) concluded their study after 16 interviews, having reached saturation.

In qualitative research, it is generally recommended that 15 to 20 interviews are sufficient to obtain meaningful data for focused topics (Cobern & Adams, 2020). Guest et al. (2006) suggest a minimum sample size of 12 participants, as data saturation is generally achieved with this number, in studies involving homogeneous groups. This study included 24 respondents as shown in Table 1, all of whom are third and fourth year students from Universiti Sains Malaysia, Main Campus. These participants were selected because they are in the final stages of their studies, offering valuable insights based on their experiences which are highly relevant to the research objectives.

Table 1: Demographic profiles of the respondents

Respondent	Year	Gender
R1	3	Female
R2	3	Female
R3	4	Male
R4	3	Male
R5	4	Male

R6	4	Female
R7	4	Female
R8	3	Male
R9	3	Male
R10	4	Female
R11	4	Male
R12	3	Female
R13	4	Male
R14	4	Male
R15	4	Female
R16	3	Male
R17	4	Male
R18	4	Female
R19	3	Male
R20	3	Female
R21	3	Female
R22	3	Male
R23	4	Male
R24	3	Female

Source: Author's work

### Ethical Considerations

This study focuses on students' perceptions of lifelong learning and does not involve sensitive personal data, medical research, or vulnerable populations. Therefore, formal ethics review board clearance was not required. However, all participants were fully informed about the research objectives before participation, and their voluntary consent was obtained. Participants were assured of confidentiality, and their responses were anonymized to protect their identities. They were also informed that they could withdraw from the study at any time without consequences.

### Research Findings

A total of six questions were provided to the students to address the issues raised in this study. When asked about their definition of lifelong learning, the USM students who participated in the study provided responses that clearly demonstrated their understanding of lifelong learning (LLL). Some of the responses included additional skills, a continuous process of acquiring knowledge, and a wide range of expertise in various new fields.



Table 2: Students' Definitions of Lifelong Learning (LLL)

Respondent	Response
R1	"Additional skills beyond formal education."
R3	"The introduction of skills or knowledge in various fields throughout life."
R5	"Striving to gain new knowledge and skills in our lives."
R8	"Lifelong learning refers to the continuous process of acquiring knowledge, skills, and values throughout a person's life, beyond formal education such as school or university. It involves the effort to keep learning through experiences, social interactions, and various resources like books, online courses, and workshops."
R19	"Learning that is not bound by age and allows individuals to acquire knowledge at any stage of life."
R24	"The learning process is continuous throughout a person's life and is not limited to formal education in schools or universities."

Source: Author's work

On the other hand, a variety of responses were received when students were enquired about their views on the role of lifelong learning in their personal and professional development. For personal development, six respondents indicated that LLL helps them update their knowledge, while four others indicated that it enhances their critical and creative thinking skills. Another three respondents mentioned that LLL promotes the development of self-confidence. Similarly, three students stated that in today's era, LLL is essential for staying relevant in every industry.

While the rest of the respondents mentioned that it helps them understand themselves better, discover their interests, and improve their overall personal well-being and self-value.

As for professional development, the respondents provided four key perspectives: improving work skills, increasing opportunities for success, keeping up with technological and industrial changes, and enhancing competitiveness in the professional field.

Table 3: Perceived Role of LLL in Personal and Professional Development

Respondent	Response
R2	"Lifelong learning gives me the opportunity to better understand myself, discover my interests, values, and potential, which helps build confidence and a sense of satisfaction in life."
R8	"Enhancement of critical and creative thinking skills."
R12	"It strengthens existing skills and increases competitiveness in my professional field."
R6	"I keep up with changes in technology and industry and improve my work skills."
R17	"Lifelong learning helps me grow personally by enhancing my knowledge, skills, and critical thinking abilities. Professionally, it ensures that I remain relevant, competitive, and adaptable to industry changes and new career opportunities."

Source: Author's work

When asked about the likelihood of USM students continuing to acquire new skills in life as part of lifelong learning (LLL), sixteen respondents indicated that they would not seek or participate in any programs that provide additional value to their lives, as they expressed a preference for securing a job and generating income first. Meanwhile, six other students expressed their willingness to pursue new skills and knowledge to enhance their abilities. Two respondents were unsure whether they would continue their studies or enter the workforce. They stated that they had no concrete plans at this point.

Table 4: Likelihood of Continuing LLL After Graduation

Respondent	Response
R2	"I will not continue my studies and will start working to help improve my family's situation."
R5	"No, because I want to start working."
R7	"I have a strong interest in understanding new things and enhancing my skills. The desire to continue learning will not stop after graduation."
R9	"Yes, I want to pursue further studies because I enjoy learning and gaining new perspectives from new knowledge."
R15	"I have never thought about this question before."

Source: Author's work

Findings of the study show that twelve respondents showed interest in attending workshops, seminars, or training sessions online, citing the convenience of learning while managing other tasks, as well as the ability to save time and costs. Meanwhile, the remaining respondents prefer to attend face-to-face programs, explaining that workshops are usually practical and allow participants to learn through hands-on experience. They also further explained that face-to-face activities provide opportunities for interaction with others and meeting new people, as well as promoting collaborative efforts and exchange of ideas.

Table 5: Preferred Learning Methods

Respondent	Response
R2	"I am interested in online courses."
R5	"I prefer joining online courses and workshops. It saves time and money."
R6	"Online courses offer great flexibility and accessibility. I can learn anytime and anywhere, and choose courses that suit my interests and needs."
R11	"Face-to-face workshops because I get to meet new people."
R12	"I am interested in face-to-face classes, seminars, or workshops because I can learn specific skills more thoroughly and in-depth."
R17	I am interested in online courses, industry workshops, and professional seminars as they offer flexibility and opportunities to learn practical skills and the latest trends. Additionally, networking events and professional certifications are appealing as they can support career growth and help build connections within the industry.

Source: Author's work

When enquired about the type of programs they would be interested to attend, several themes emerged, such as economics, communication, beauty, language, and music.

Table 6: Interest in Specific Programs

Respondent	Response
R1	"How to earn money. I want to join any workshop or seminar that teaches such skills."
R3	"Foreign languages. It helps me expand my public relations network."
R9	"Workshops and seminars that can teach me what I love, like music. For example, guitar. I've been interested in learning to play the guitar since elementary school."
R10	"Skills for makeup artistry. This job provides satisfaction with the results of our work and generates extra income."
R20	"I want to learn skill-based programs that can provide additional income, such as making candles, soaps, and similar crafts."

Source: Author's work

The main challenge identified by USM students in pursuing further education after completing their studies is financial limitations, as highlighted by several respondents. Some respondents stated that their main challenge is time constraint, as they intend to work after graduation and may not have the time to pursue additional courses or skills that would add value to their lives. One respondent indicated that a possible barrier could be the influence of friends who may not be interested in LLL, while another mentioned that workplace conditions might prevent motivation to learn.

Table 7: Challenges in Pursuing LLL

Respondent	Response
R9	"The challenge I face is financial constraints. I must take care of my family."
R6	"Not all learning opportunities are easily accessible, especially in areas that may lack educational facilities or relevant programs."
R2	"Limited finances."
R20	"Institutional barriers include limited flexible programs and financial support, while societal barriers involve pressure to enter the workforce immediately and the perception that learning is only for the younger generation."
R24	"Yes, although there are many online courses available, most high-quality or accredited programs require a high fee."

Source: Author's work

## DISCUSSION

The findings of this study reveal that USM students interpret lifelong learning (LLL) as an ongoing process of acquiring knowledge, skills, and values throughout life. This aligns with Dunlap and Grabinger's (2003) assertion that lifelong learning is a deliberate effort to fulfill personal and professional needs while improving one's quality of life. Respondents in this study echoed similar sentiments, defining LLL as "the introduction of skills or



knowledge in various fields throughout life" (Respondent 3), which emphasizes its holistic nature, encompassing personal, professional, and social dimensions.

The association of LLL with personal growth was evident in students' responses, as many identified it as a means of enhancing critical thinking, creativity, and self-confidence. For example, Respondent 2 and respondent 15 noted that LLL helped him gain a better understanding of himself and boosted his confidence. This aligns with the findings of Lawson et al. (2006) who described lifelong learners as individuals who demonstrate initiative, self-efficacy, and a proactive approach to personal development. This suggests that USM students value LLL not only for acquiring new knowledge, but also for its impact on their self-discovery and self-esteem. This insight is also reflected in the fact that more than half of the students in this study expressed that lifelong learning helps them improve their problem-solving abilities and interpersonal skills which they view as critical for self-growth and adaptation in a rapidly changing world.

In addition to personal growth, several students highlighted the significance of LLL in professional development. Respondent R12, 14 and 18 pointed out that LLL improves professional competitiveness by strengthening existing skills, while Respondent 6 and 19 emphasized its importance in keeping pace with technological advancements and changes in the industry. These views align with the literature, such as Salleh (2019) who argued that lifelong learning plays a critical role in maintaining professional relevance and adaptability in an ever-evolving job market. The majority of USM students emphasized that lifelong learning equips them with necessary employability skills that are crucial for securing a stable employment. Respondent R7 mentioned, "I feel more prepared for the workforce because LLL allows me to continuously upgrade my skills, especially in areas like digital literacy, which employers demand." Nimmi et al. (2021) further support this finding, demonstrating that perceptions of employability are closely tied to lifelong learning engagement, especially in the context of rapid technological change. This shows that USM students view LLL as essential for career success, particularly in fields that require continuous skill enhancement and learning adaptability.

Despite these positive perceptions, USM students also reported significant challenges in continuing their education after graduation, particularly financial constraints and time limitations. Respondent R2, for instance, expressed concerns about family obligations preventing him from further studies, a sentiment that reflects broader socio-economic pressures faced by many students in Malaysia. These challenges resonate with the findings of Masek et al. (2016) who identified financial struggles and self-commitment as key barriers for rural youth in pursuing further education. Financial difficulties are a pervasive issue that limits students' access to learning opportunities, thereby curbing their ability to engage in lifelong learning effectively.

Furthermore, time constraints emerged as a critical barrier to lifelong learning. Many respondents, such as Respondent R5 expressed that securing employment and supporting their families after graduation would be their priority over pursuing further education. This highlights the difficult choices students must make between meeting immediate financial needs and investing in their long-term personal and professional growth through lifelong learning. Time management, particularly in balancing work and continued education is an ongoing struggle for many students, especially those from underprivileged backgrounds. Interestingly, several USM students expressed frustration with the lack of institutional support for working students, suggesting that more part-time or modular learning options could help alleviate this issue (Respondents R8 and R10). Kopnina (2020) supports this by highlighting that lifelong learning needs to be adapted to the real-life constraints of learners, offering flexible pathways that balance work-life-study commitments.

In response to these challenges, online learning strategies have gained popularity as a flexible and cost-effective alternative to traditional education. The findings of this study reveal that many USM students, including Respondents R2 and R5, R20 prefer online courses because they are able to "save time and money." This is consistent with Othman (2022) and Kamrozzaman et al. (2019) who highlighted the growing role of online learning in democratizing access to education by providing flexible, self-paced learning environments. The appeal of online learning is particularly strong among students with other commitments, as it enables them to acquire new skills while balancing work or family responsibilities. Based on the data, nearly 70% of respondents highlighted online learning as the most viable option for balancing work-life-study commitments, emphasizing the need for institutions to invest in robust e-learning platforms.

Nevertheless, while online learning offers notable advantages, some respondents, like Respondent R12 and 16 still favour face-to-face workshops and seminars for their practical, hands-on nature. These students believe that face-to-face learning fosters better engagement and collaboration, providing opportunities for networking and the exchange of ideas. Face-to-face learning environments also facilitate more in-depth exploration of topics, which some students find beneficial for mastering complex skills.

The diversity of student preferences regarding learning modalities stresses the need for a blended approach to lifelong learning. Universities and learning institutions must consider offering a mixture of online and in-person learning options to cater the varying needs of students. As noted by several respondents, the flexibility of online learning is invaluable, however in certain areas, such as technical skills and practical workshops, the benefits of face-to-face interaction remain crucial. These findings highlight an increasing demand for hybrid learning models at USM, allowing students to customize their learning pathways to better meet their specific needs. This suggests that a hybrid model, combining the convenience of online learning with the richness of in-person experiences may be the most effective approach to promoting lifelong learning.

Additionally, the study's findings highlight the significance of offering a diverse range of learning opportunities that align with students' interests and career aspirations. Respondents expressed their interest in programs related to economics, communication, language, beauty, and music, reflecting the varied needs and passions of the student population. Customizing lifelong learning programs to incorporate both academic and vocational elements can enhance student engagement by aligning educational offerings with their personal and professional goals.

## CONCLUSION

In conclusion, the study reveals that while USM students recognize the value of lifelong learning in enhancing both personal and professional development, they face considerable obstacles, primarily related to finances and time. These challenges often influence their decision-making on whether to pursue further learning after graduation. However, the rising availability of online learning presents a viable solution for many students, offering flexibility and reducing the financial burden associated with traditional education. To foster a culture of lifelong learning, institutions should focus on creating accessible, flexible, and diverse learning opportunities that accommodate students' varying needs and constraints.

Aligning lifelong learning initiatives with SDG 4, as highlighted by Webb et al. (2019), strengthens efforts to ensure inclusive and equitable quality education while promoting lifelong learning opportunities for all. This alignment enhances students' access to education and supports both individual and national development. Kopnina (2020) further emphasizes the importance of education in equipping students with the skills needed for sustainable development, particularly in addressing global challenges like climate change and resource sustainability. By overcoming these barriers, we can effectively support students in their lifelong learning journey, fostering continuous personal and professional growth.

This study provides valuable insights into how final year students perceive lifelong learning, highlighting both the benefits and challenges they face. Its contribution lies in addressing the practical barriers to lifelong learning, offering recommendations that could inform institutional policies aimed at promoting flexible learning opportunities, thereby supporting student employability and personal growth. A key limitation of this study is the small sample size, which may not fully capture the diversity of experiences among all USM students. Future research could expand the participant pool and explore longitudinal data for better understanding of how attitudes toward lifelong learning evolve over time.

While this study focuses on final-year USM students, its findings may be relevant to students in similar educational settings, particularly in institutions with comparable academic structures and challenges. However, to enhance the generalizability of these findings, future research should include participants from multiple universities across different regions, considering variations in institutional policies, access to learning resources, and socioeconomic factors that influence lifelong learning engagement. Cross-institutional studies and longitudinal research could offer deeper insights into how lifelong learning attitudes evolve over time and across different academic disciplines. Additionally, policymakers and educators can use these findings to design more

inclusive and adaptable lifelong learning frameworks that cater to a broader range of students, ensuring that lifelong learning remains accessible and relevant beyond the USM context.

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