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## ROLE AND IMPACT OF OPEN AND DISTANCE LEARNING (ODL) IN ENHANCING LIFELONG LEARNING AMONG ADULT LEARNERS IN MALAYSIA

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### Abstract:

This study aims to examine the impact of Open and Distance Learning (ODL) on adult education in Malaysia, particularly in the context of higher education institutions. Alongside the transformation of the post-pandemic educational landscape, ODL has increasingly been recognized as a primary educational approach that offers flexible learning opportunities for adults. However, adult learners face various challenges, including time constraints, limited access to technology, and significant psychological pressures, all of which affect the effectiveness of the learning process. This research employed a quantitative approach with a survey design targeting adult learners aged 25 and above who were enrolled in either part-time or full-time ODL programs. Data were collected through an online questionnaire involving 100 respondents. The data were analysed using descriptive and inferential statistics, including t-tests and ANOVA, to identify the relationship between demographic variables and learners' perceptions of technological, pedagogical, and psychological aspects of ODL. The findings indicate that the effectiveness of ODL for adult learners is strongly influenced by their level of digital literacy, the appropriateness of pedagogical methods grounded in andragogical principles, and psychological well-being that sustains motivation and learning commitment. The study recommends improvements in curriculum design to better address adult learners' needs, enhanced digital literacy training, and effective emotional support systems to strengthen online learning experiences. The results of this study are expected to serve as a reference and guideline for higher education institutions and policymakers in developing more inclusive, flexible, and sustainable ODL implementations to maximize adult learning outcomes.

**Keywords:**

Open and Distance Learning (ODL), Adult Learners, Higher Education, Andragogy, Educational Technology, Digital Literacy, Learner Perceptions, Psychological Well-being, Flexible Learning, Post-pandemic Education

## Introduction

The rapid advancement of information and communication technology (ICT) has profoundly reshaped the global educational landscape. One notable approach that has gained increasing prominence is Open and Distance Learning (ODL), which facilitates the delivery of education without the necessity of physical presence in formal institutions (Moore & Kearsley, 2011). The ODL model is grounded in the principles of flexibility, open access, and self-directed participation, rendering it highly relevant in the present digital era (UNESCO, 2023). In Malaysia, the implementation of ODL has become increasingly significant, particularly during and in the aftermath of the COVID-19 pandemic, which compelled educational institutions to transition abruptly to online modes of delivery (Nordin, Embi, & Yunus, 2020). Recognising this shift, the Ministry of Higher Education has positioned ODL as a cornerstone within the *Higher Education Digitalisation Plan 2023–2030*, aimed at ensuring broad and impactful access to education (Ministry of Higher Education [MOHE], 2023). For instance, institutions such as Open University Malaysia (OUM) and Asia e University (AeU) have expanded ODL-based programmes specifically tailored to meet the needs of working adult learners. Adult learners often face unique challenges in pursuing higher education, including work-related commitments, family responsibilities, and financial constraints (Knowles, Holton, & Swanson, 2015). ODL provides a flexible solution to these challenges through asynchronous delivery modes and modular course structures. According to the *MyDigital Learning Outlook 2025* report, nearly 68% of adult learners in Malaysia prefer fully online learning platforms over traditional physical modes (Malaysia Digital Economy Corporation [MDEC], 2025).

Nevertheless, the effectiveness of ODL remains contingent upon several critical factors, particularly technological accessibility (e.g., reliable high-speed internet and adequate digital devices), pedagogical competence in online curriculum design, and psychosocial support such as learner motivation, time management, and self-regulated learning strategies (Ali, 2021; Zakaria & Yusof, 2022). A notable example is the persistent digital divide between rural and urban adult learners, which contributes to disparities in learning experiences and outcomes (Rahim, 2024). Against this backdrop, the present study seeks to examine the impact of ODL on adult education in Malaysia by analysing three interrelated dimensions: technological, pedagogical, and psychological. The findings are expected to contribute towards the refinement of policies and practices in lifelong learning, thereby promoting a more inclusive and sustainable educational ecosystem. Although Open and Distance Learning (ODL) has emerged as a critical enabler of educational access in Malaysia, particularly for adult learners, its implementation continues to face substantive challenges that may undermine its effectiveness. Existing research underscores that while ODL offers flexibility and accessibility, adult learners frequently encounter barriers related to technological infrastructure, pedagogical design, and psychosocial readiness (Ali, 2021; Zakaria & Yusof, 2022).

From a technological perspective, the uneven distribution of digital resources has given rise to a persistent *digital divide*, particularly between learners in urban and rural areas. Limited access to high-speed internet and appropriate digital devices not only restricts participation but also leads to unequal learning outcomes (Rahim, 2024). From a pedagogical perspective, the effectiveness of ODL depends heavily on the quality of online curriculum design and instructional delivery. Studies have revealed that many online programmes fail to sufficiently incorporate learner-centred strategies, resulting in reduced engagement and limited achievement of learning outcomes (Nordin et al., 2020). From a psychological perspective, adult learners often struggle with issues such as reduced motivation, ineffective time management, and limited self-directed learning strategies. These factors may hinder persistence and increase dropout rates, particularly among learners who must simultaneously balance academic pursuits with employment and family responsibilities (Knowles et al., 2015).

Given these challenges, there remains a pressing need for empirical investigation into the impact of ODL on adult education in Malaysia. Specifically, there is limited integrated research that holistically examines the technological, pedagogical, and psychological dimensions of ODL in shaping adult learners' experiences and outcomes. Addressing this research gap is crucial in informing more inclusive and sustainable policies, particularly in line with Malaysia's commitment to advancing lifelong learning through digital transformation in higher education (MOHE, 2023). Consequently, the research inquiries for this study are:

- i. To identify the level of readiness and challenges faced by adult learners in pursuing Open and Distance Learning (ODL), particularly in relation to technological competencies, time constraints, and access to infrastructure.
- ii. To evaluate the effectiveness of ODL approaches in meeting the learning needs of adult learners, with particular attention to the extent to which these approaches align with the principles of adult learning (andragogy).
- iii. To examine the psychological impacts and motivational factors influencing adult learners engaged in ODL, including dimensions such as digital fatigue, feelings of isolation, levels of engagement, and their overall academic achievement.

## Literature Review

To understand and enhance the effectiveness of Open Distance Learning (ODL) among adult learners, various educational models and theories have been applied. These models and theories not only assist in designing effective teaching strategies but also support understanding the psychosocial and technological needs of adult learners.

### *TPACK Model*

One of the frequently referenced models in online teaching is the Technological Pedagogical Content Knowledge (TPACK) model developed by Mishra and Koehler (2006). This model emphasizes the integration of three key domains in education: technological knowledge, pedagogy, and content. In the context of ODL, TPACK helps instructors design relevant and engaging teaching while using technology wisely to deliver course content effectively. According to Yuebo, Halili, and Razak (2023), the application of the TPACK model in ODL environments allow instructors to understand the relationship between technology and

pedagogy, thereby ensuring teaching approaches suitable for adult learners' backgrounds. This is important because adult learners require more practical, contextualized, and self-directed learning support.

### ***Knowles' Andragogy Theory***

The andragogy model introduced by Malcolm Knowles (1980) is a primary theory in adult education. This theory outlines several important assumptions about adult learners, including:

- i. Adult learners have a need for self-directed learning autonomy.
- ii. They bring rich life and work experiences into the classroom.
- iii. Learning must be directly relevant to their lives or work.
- iv. Adult learners tend to be intrinsically motivated.

In the ODL context, andragogy principles are highly relevant as they support the design of courses that allow learners to study at their own pace and style, as well as engage them in meaningful, experience-based activities.

### ***Social Constructivism Theory***

Vygotsky's (1978) social constructivism theory also plays a significant role in supporting adult online learning. This theory emphasizes that learning occurs through social interaction, collaboration, and meaningful communication with others. In the ODL context, this can be achieved using online forums, group discussions, and collaborative learning activities. Research by Ally (2019) shows that adult learning is more effective when learners actively engage in learning communities, share experiences, and co-construct knowledge. This not only strengthens conceptual understanding but also supports the psychosocial well-being of adult learners.

### ***Mezirow's Transformative Learning Theory***

Another important theory is Jack Mezirow's (1991) Transformative Learning Theory, which emphasizes shifting perspectives through critical reflection. Transformative learning is especially suitable for adult learners, who often re-enter the learning environment after complex life experiences. Reflectively designed ODL enables learners to re-examine their assumptions, increase self-awareness, and apply new knowledge meaningfully. According to Cranton (2006), transformative learning occurs when adult learners are given space to explore their values, identity, and beliefs in a supportive and open learning environment. In ODL, this can be implemented through reflective writing activities, learning journals, and critical discussions.

Previous studies on the implementation of Open Distance Learning (ODL) among adult learners have demonstrated that this approach provides substantial opportunities for individuals with career and family commitments to pursue further studies. However, various challenges are also faced, especially in terms of technology, emotional support, and pedagogical design that do not always align with adult learners' needs. In Malaysia, research by Mansoor et al. (2024) found that adult learners choose ODL because of time and place flexibility, as well as the ability to adapt learning to work and family schedules. However, constraints such as unstable internet access, low digital skills, and lack of technical support were identified as factors hindering ODL's effectiveness. Meanwhile, Halili and Razak (2023) reported that adult learners often feel isolated in digital learning environments, especially when online social interaction elements are not thoroughly planned. This results in declining motivation,

particularly over the long term. Research by Mohd Yusof and Ahmad (2023) likewise supports these findings, emphasizing the need for psychosocial support interventions such as academic mentoring sessions and online peer support groups. Internationally, Ally (2019) highlights that adult learners in ODL contexts require teaching approaches different from traditional students. They value practical learning closely related to work experience and applicable directly in daily life. Studies in Canada and Australia found that adult learners tend to succeed in ODL when learning activities are contextually designed, and when emotional support and collaborative interactions are integrated into the curriculum. According to OECD (2022), ODL has become an essential component in lifelong learning strategies, especially in the post-pandemic era. However, they stress that the success of ODL among adult learners depends on institutional readiness in terms of technology, lecturer pedagogical competence, and learners' digital literacy levels. Wang et al. (2024) further emphasize the need to provide learning environments that support emotional well-being and allow adult learners to adapt learning styles according to individual needs. This aligns with andragogy principles emphasizing autonomy, life experience, and intrinsic motivation as the cornerstones of adult learning success.

**Table 1: Past Related Studies**

No.	Title	Authors	Year	Subject	Level	Data Analysis	Country
1	Online and Distance Learning in Malaysian Higher Education: Adult Learners' Readiness and Challenges	Alias, N.A., Zainuddin, A.	2021	ODL	Adult / Higher Education	Quantitative (Survey)	Malaysia
2	Exploring Motivation and Persistence among Adult Learners in Open Distance Learning	Wong, S.L., Hamzah, M.I.	2021	Adult Education	Adult Learners	Mixed-Method	Malaysia
3	Technology Acceptance and Online Learning Readiness of Adult Students Post-Pandemic	Mohd Isa, N., Yusoff, M.	2022	ICT in Education	Adult / Higher Education	Quantitative (TAM Analysis)	Malaysia
4	The Impact of Open Distance Learning on	Norazah, M.,	2022	ODL	Adult / Working	Case Study	Malaysia

	Working Adults: A Case Study of Universiti Terbuka Malaysia	Hassan, H.			Professionals		
5	Challenges and Opportunities of Lifelong Learning through Distance Education	Peters, O.	2023	Lifelong Learning	Adult Learners	Literature Review	Germany
6	Digital Fatigue and Student Engagement in Distance Learning: Implications for Adult Learners	Johnson, T., Brown, A.	2023	ODL Psychology	Adult Learners	Quantitative (Survey)	UK
7	The Effectiveness of Andragogical Approaches in Open and Distance Learning	Lee, C.K., Abdullah, M.	2024	Andragogy	Adult Education	Mixed-Method	Malaysia
8	Access and Equity in Open and Distance Learning: Addressing the Needs of Adult Learners	Daniel, J.	2024	Education Policy	Adult Learners	Qualitative	Canada
9	Barriers to Adult Participation in Online Learning: A Systematic Review	Kahu, E., Picton, C.	2025	Online Learning	Adult Learners	Systematic Review	New Zealand



10	Psychological Wellbeing and Academic Achievement in Open Distance Learning	Ahmed, R., Kamarul zaman, W.	2025	ODL	Adult / Higher Education	Quantitative (Survey & Regression)	Malaysia
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Source: MyCite databases

## Methodology

This study employed a quantitative research approach using a survey design to examine the impact of Open and Distance Learning (ODL) on adult learners in Malaysian higher education institutions. The methodology encompasses research design, participant selection, data collection procedures, analysis techniques, and validity and reliability strategies. The aim was to obtain accurate, relevant, and generalisable data regarding adult learners' experiences, challenges, and perceptions of ODL, particularly in relation to technological, pedagogical, and psychological dimensions. The study was conducted over a three-month period, from March to May 2025. Data collection was administered online, allowing participation from adult learners across multiple public and private universities in Malaysia. The selected institutions included Universiti Kebangsaan Malaysia (UKM), Universiti Malaya (UM), Asia e University (AeU), City University Malaysia, and HELP University. These institutions were chosen based on their active implementation of ODL programmes and their high enrolment of adult learners. Participants in this study consisted of adult learners aged 25 years and above who were currently enrolled in fully online ODL programmes. In addition to age, inclusion criteria required that participants have either work commitments, family responsibilities, or other social obligations, to ensure alignment with the study's focus on adult learning. The purposive sampling technique was employed to select individuals who met these specific conditions. Participation was voluntary, and the study aimed to gather responses from 80 to 120 participants, which was considered sufficient for an exploratory study of this nature.

Data were collected using a structured questionnaire adapted from previously validated instruments, particularly those developed by Wang et al. (2021) and Ally (2019), which examine technological, pedagogical, and psychological aspects of online learning. The questionnaire was divided into three main sections: demographic information, technological experiences with ODL, and pedagogical and psychological perceptions. The demographic section captured variables such as age, gender, employment status, institution, and prior experience with ODL. The second section focused on digital literacy, accessibility of devices and internet connectivity, and familiarity with learning management systems such as Moodle and Google Classroom. The third section addressed learner motivation, stress levels, time management skills, and perceptions of teaching effectiveness in ODL settings. A five-point Likert scale was used in the latter two sections to measure respondents' levels of agreement, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire underwent face and content validity evaluation by two academic experts from UKM who specialised in instructional technology and educational measurement. A pilot study involving 30 adult learners was conducted to test the clarity and structure of the instrument. The results of the pilot test informed the refinement of several questionnaire items to enhance clarity and

relevance. The internal consistency of the instrument was assessed using Cronbach's Alpha, yielding a coefficient above 0.80, which indicates high reliability (Taber, 2018).

Data analysis was carried out using IBM SPSS Statistics version 27. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarise the demographic profile of respondents and to provide an overview of their experiences and perceptions related to ODL. Inferential statistics were then employed to examine the relationships and differences between groups. An independent samples t-test was used to compare means between two groups, such as full-time and part-time learners. In addition, one-way analysis of variance (ANOVA) was conducted to detect differences in perceptions based on multiple categories, such as level of digital literacy or type of institution. Where significant differences were found, post hoc tests using Tukey's Honest Significant Difference (HSD) were conducted to identify specific group differences. All statistical tests were conducted at a 95% confidence level ( $p < 0.05$ ). To ensure the quality of the research instrument, both validity and reliability were thoroughly addressed. The initial version of the questionnaire was reviewed by experts for face and content validity, ensuring that the items aligned with the study's conceptual framework and research objectives. The pilot test provided empirical evidence of the instrument's clarity and appropriateness for adult learners in ODL contexts. Reliability analysis confirmed that all sections of the questionnaire had high internal consistency, with Cronbach's Alpha values exceeding the generally accepted threshold of 0.70, and in most cases, surpassing 0.80. The process of the research followed a systematic sequence beginning with the selection of research design and development of the instrument. This was followed by expert validation, a pilot study, distribution of the questionnaire, data collection, data cleaning, and final analysis using statistical techniques. The following summarises the flow of the study: Research Design → Instrument Development → Validity Assessment → Pilot Study → Data Collection → Data Cleaning → Data Analysis (SPSS) → Interpretation of Findings.

## Conclusion

This study set out to explore the impact of Open and Distance Learning (ODL) on adult learners in Malaysia, with specific attention to technological, pedagogical, and psychological aspects. The objectives of the study were successfully achieved, as the findings provided empirical evidence on how adult learners navigate the ODL environment, including their use of technology, engagement with pedagogical approaches, and the psychological demands of balancing education with work and family responsibilities. The results show that adult learners generally exhibit high levels of digital literacy and positive attitudes toward self-directed learning facilitated by ODL. Flexibility in time management and control over learning pace were significant factors contributing to learner motivation and autonomy. These findings support the applicability of andragogy theory and the Technological Pedagogical Content Knowledge (TPACK) framework, reinforcing the importance of designing adult learning environments that balance technological tools, appropriate pedagogy, and relevant content.

At the same time, the study uncovered notable challenges, particularly in the psychological domain. Emotional stress, mental fatigue, and difficulties in juggling multiple life roles were more prominent among older learners, women, and those residing in rural areas. Limited digital infrastructure and low social support in these groups intensify feelings of isolation. These observations align with social constructivism and transformative learning theories, highlighting the need for socially interactive learning environments and psychosocial support to enhance learner well-being.



Studying contributes both theoretically and practically. Theoretically, it enriches existing frameworks by contextualizing them within the Malaysian adult learning environment in the digital age. Practically, it offers evidence-based insights into educators and policymakers on how to design more inclusive and supportive ODL programs. It advocates for the development of learner-centered policies that address not only access to technology but also mental health, motivation, and socio-emotional engagement. Despite its contributions, the study encountered several challenges, including limited sample size and reliance on self-reported data, which may introduce bias. Another limitation was the inability to fully explore longitudinal impacts of ODL on adult learners. For future research, longitudinal and mixed-method studies are recommended to gain deeper insights into how adult learners' experiences evolve over time, especially concerning their psychological resilience and long-term engagement with digital learning.

Moving forward, the study proposes several areas for improvement. ODL systems must integrate not only robust digital infrastructure and adaptive pedagogy but also dedicated mental health support and community-based learning strategies. Future research can also explore intervention-based models or experimental designs to evaluate the effectiveness of specific support mechanisms for adult learners. In conclusion, the success of ODL as an effective adult education platform in Malaysia depends on more than technological advancement—it requires a holistic, responsive, and human-centered approach. Educational transformation must be grounded in empathy, inclusive, and sustained support, ensuring that adult learners are empowered not only to participate but to thrive in the dynamic and demanding landscape of digital learning.

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