

# FINANCIAL SAVING PATTERNS IN MALAYSIAN ONLINE DISTANCE AND DIGITAL EDUCATION: LEARNERS DEMOGRAPHIC PERSPECTIVES

ALWI, N. H.<sup>1\*</sup> – OSMAN, Z.<sup>1</sup> – HUSSIN, S. A.<sup>1</sup> – RAZAK, N. S. A.<sup>2</sup>

<sup>1</sup> *Faculty Business and Management, Open University Malaysia, Selangor, Malaysia.*

<sup>2</sup> *School of Management and Marketing, Nilai University, Negeri Sembilan, Malaysia.*

*\*Corresponding author  
e-mail: noral[at]journ.edu.my*

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**Abstract.** This article explores the savings behaviour of Online Distance and Digital Education (ODDE) learners in Malaysia focusing on the role it can play in promoting financial independence and long-term financial resilience. Given the variety of incomes among students, it is necessary to ensure they can thrive in their future careers financially as well as academically. The majority of the ODDE students were financially illiterate, with erratic or uncertain earnings and no access to suitable saving products. The main purpose of this study is to investigate the saving habits of the ODDE students and the impact of demographic variables on the students' saving behaviour. A survey design with stratified random sampling was conducted to obtain the data of the study amongst ODDE students in Malaysia. Data was analysed with SPSS that allowed thorough examination of descriptive statistics for 377 participants. The finding indicated that short-term saving was the most favourable option among ODDE student representing the conventional and well-known method of saving. This analysis suggests that one size doesn't fit all. Instead, what is needed is financial behaviour models that are specific to various cultures and ages conducive to predicting education savings.

**Keywords:** *financial literacy, saving patterns, higher education, saving behavior, ODDE, online learning*

## Introduction

Open, Distance, and Digital Education (ODDE) students and their saving habits have received increased attention since they face unique financial challenges. Traditional support networks and income levels provide few examples, and many ODDE students struggle to develop the habit of saving. Savings are known to be important for their financial well-being and student success by them to handle unforeseen expenses, purchase of study equipment and prepare for their future jobs (Khalisharani et al., 2022). Furthermore, saving habits may contribute to greater independence and financial sustainability in the long-term (Fariana et al., 2021). Various factors influence the saving behavior of ODDE students. These factor into a lack of financial education, irregular incomes or uncertain income and limited access to savings products with a focus on needs fulfilment. Although many students seem to informal ways to save money many appear to have poor understanding of formal financial products like bank accounts and investments. This may lead to poor saving behaviour (Hartono and Isbanah, 2022). Trend information shows that the growth of students' access to digital wallets and their use of mobile banking is actively encouraged to save small amounts of money and to participate in the financial system (Helendriani and Hardaningrum, 2025). But the availability of digital tools is uneven, especially for students living in areas with poor internet or infrastructure (Makusara et al., 2025).

Research on the determinants of ODDE students' saving and non-saving decisions remains limited. It is important to comprehend the factors that motivate them as well as the significance of financial education in the development of their saving behaviour (Hartono and Isbanah, 2022; Gilenko and Chernova, 2021; Sangar and Burad, 2020). The majority of the studies are focused on the traditional learners; hence, little is known about the unique experiences and the needs of the ODDE learners. Addressing this gap can help to develop targeted support programmes. ODDE clients face obstacles to saving due to lack of financial literacy, lack of knowledge on the benefits of saving, and unpredictable income flows. In certain cases, socio-economic disparities and infrastructural shortcomings add to these challenges, away, and thus resulting in students not being able to save regularly (Sangar and Burad, 2020). This study has the following implications for policy-making, educational institutions and financial institutions. The findings can contribute to the design of financial literacy programs for ODDE students. Institutions have different needs in terms of getting the right financial aid and advise more effectively. Understanding savings behaviour among this group can improve their financial well-being, empowerment, and academic achievement, meaning that successful fiscal planning is important in digital and open education (Helendriani and Hardaningrum, 2025). Therefore, this study also tries to investigate the saving habits by the ODDE students from the demographic factors and the association of the demographic factors towards the saving choices among the students.

### *Literature review*

#### *Saving patterns among students*

Financial knowledge, attitude, and motivation are among the connections discovered in studies analysing student saving and spending behaviour. Al Shuraiqi and Al Hasani (2021), for example, have investigated saving behavior among students in Oman and found that students who have low levels of financial literacy save less. Raina and Mathews (2021) found that students at an undergraduate college in Pune display irrational saving behaviour which is influenced by their levels of financial literacy and cultural orientation. Nazaripour (2021) notes that Islamic doctrine has an impact on the saving behaviour of college students, highlighting the importance of cultural and religious factors in shaping the formation of financial behaviour. Gilenko and Chernova (2021) considered Russian high schoolers and found that higher levels of financial literacy are linked to positive saving behavior, which suggests education is important. Khalisharani et al. (2022) found that financial literacy and attitudes are significant factors that influence the financial behavior of students across the globe, highlighting the universality of financial education. Csiszárík-Kocsir (2023) claims that motivations for saving vary among generations and are related to their financial literacy and culture background. Finally, Fariana et al. (2021) highlight that self-control and life-style choices shape students' consumption and savings, which reinforces the importance of attitudinal factors in financial well-being.

#### *Saving platform selection*

Choice of savings platforms among students are largely influenced by financial literacy, technological access, and lifestyle preferences. Fariana et al. (2021) explains that both financial literacy and self-regulation have strong influences on the saving behavior of students, which means that digital payment systems like mobile banking

might be more effective when the students are knowledgeable. Hartono and Isbanah (2022) empirically analyse motivational factors in saving platform choice, where accessibility, security, and convenience are important determinants. Students usually prefer payment solutions that offer quick services and convenience like mobile wallets or digital banking solutions. Evidence shows that digital wallets and mobile banking apps have become popular with young people because they are convenient. George (2024) and Wai (2024) indicated that students are attracted to mobile banking and digital wallets because of their ease of use and availability of cashless transaction. According to Sangar and Burad (2020), there is an impact of the knowledge of online banking on the preferred platform in students. The COVID-19 pandemic accelerated the use of digital financial tools, as illustrated by Makusara et al. (2025), investigated how mobile technology provides financial inclusion during emergency crisis scenario. Moreover, the research of Helendriani and Hardaningrum (2025) and Santoso et al. (2023) they indicate those students are driven by digital-consumption lifestyle and habits to embrace digital-wallet and e-wallet as their primary saving instruments and payment devices. Downes (2000) as well as Wilka and Fitzner (1998) posit that e-learning and distance environments encourage more use of digital financial services, due to openness and flexibility.

This work underscores that convenience, security, and digital literacy and lifestyle fit, drive students' choice of a saving platform, especially in terms of decisioning whether or not to adopt mobile banking and digital wallet. For many students, especially those with limited digital literacy or technical access, traditional saving behaviours still apply and are relevant. Traditional methods of banking, such as savings accounts, piggy banks, or safety deposit boxes, are considered to be more secure by some student populations. Research, including that of Birari and Patil (2014), shows that many young people prefer traditional savings as they are familiar with such a medium, which also provides a perception of being safe, especially in regions with low digital penetration. Additionally, some students find non-digital modes due to their distrust in internet driven applications or the fear of privacy and security threat associated with electronic transactions (Omar et al., 2018). Even with the spread of digital finance, traditional forms of financial services remain relevant, especially for students in rural or poor areas who have limited access to digital financial products and services. The integration of digital and traditional platforms for saving indicates the need to offer multiple approaches to reflect varying levels of technical access and familiarity.

### ***Saving options among ODDE students***

Research shows that students' choice of saving methods varies significantly according to short, medium and long-term financial goals. Fariana et al. (2021) state that students who have short-term saving goals in daily expenses or an emergency in nature typically prefer mobile banking and digital wallet services as these services are easy to use and enables faster transaction processes. George (2024) and Wai (2024) also note cashless transactions and simplicity whilst shovelling back into the pot are other reasons that students favour mobile wallets for short-term savings, it supports the frequent small payments they make to cover daily expenses. For intermediate-term goals like funding their education or purchasing big items, students commonly choose more organized instruments such as bank savings and digital savings accounts with better interest rates, including security features (Hartono and Isbanah, 2022; Omar et al., 2018). These are relatively safe and can be good for saving money over the course of a few years. Sangar

and Burad (2020) have found that improving knowledge and use of web banking enhances students' ability to save on a systematic basis for medium term goals. Future funds, such as those meant for retirement or investments, are rarely saved for, but are more acknowledged by the more financially aware, who understand the need of financial planning (Csiszárík-Kocsir, 2023; Khalisharani et al., 2022). They prefer financial products like fixed deposits or investment-linked savings plans that require discipline and give better returns over the long-term. Moreover, students select different savings instruments on the basis of their purpose, influenced by such factors as availability, safety, interest rate, and financial knowledge. Previously published should be referenced, and only relevant modifications should be mentioned.

## Materials and Methods

This study concentrates on online distance learning students in Malaysia, with a specific focus on Open, Distance, and Digital Education students within the Klang Valley region, which serves as the targeted population. A survey research design was employed, adopting a quantitative approach to systematically gather data. A total of 376 participants were selected as the sample size, providing adequate representation for analysis. The survey instrument consisted of 14 items that examined various saving options across short-term, medium-term, and long-term financial platforms, in addition to capturing socio-demographic characteristics of the respondents. To obtain comprehensive insights and encourage active participation, the study utilized a closed-ended questionnaire format. This method was chosen due to its simplicity, structured nature, and ability to yield clear, quantifiable data. The straightforward design of the questionnaire likely enhanced the efficiency of responses, motivating participants to complete all questions promptly and without confusion. The collected data, particularly the demographic profiles of respondents, were analyzed using SPSS version 24.0, ensuring accurate statistical treatment and enabling meaningful interpretation of the findings.

## Results and Discussion

*Table 1* shows the ranking of saving options among ODDE students in Malaysia, which represent a clear preference towards traditional (and familiar) means of saving. The top choice of bank savings accounts indicates that students are looking for safety and liquidity when it comes to economic savings. This preference shows that, among learners taking courses through ODDE institutions, there is a heavy bias towards traditional financial service providers for safe and liquid savings options. ASB and Tabung Haji testify the cultural and religious influence on financial decision, given the popular belief that these plans represent the trustworthy investment that is consistent with Islamic teaching. Gold savings, rank at fourth placed, is a clear indication that gold is still seen as a solid long-term store of value, especially in times of economic turmoil. It says students believe in gold as a reliable store of wealth. The declining interest in holding cash at home could be due to increasing awareness of risks to financial security, or establish the benefits of non-cash forms. Investment led savings and e-wallets rank lower hints the lack of financial knowledge about various investment products or an aversion to risk possibly. The preference for traditional, low-risk saving options reflects sound financial behaviours with a need for familiarity among the students.

**Table 1.** Saving options among ODDE students.

Saving decision	Rank
Bank savings account	1
Amanah Saham Bumiputera (ASB)	2
Tabung Haji	3
Gold savings (e.g., Maybank GIA, Public Gold)	4
Cash savings at home	5
Investment-based savings (e.g., unit trust, Wahed invest)	6
E-wallet savings (e.g., Touch & Go, Boost)	7

The *Table 2* displays the standard deviations of savings behaviours among different demographic groups, illustrating the variety in each group's saving patterns across short-term, medium-term, and long-term periods. In terms of gender, both female and males look quite similar in the level of variability they experience (*Figure 1*), with the standard deviations between 0.35 and 0.37 for all saving categories. These suggest that saving behaviours, within each gender, is rather homogeneous, implying that no big differences in saving consistency exist, either by gender. According to *Figure 2*, the variability around ethnicity is substantial. The Chinese students have a high standard deviation of 0.43 in long term saves which is indicative of large variation in the behaviours of these group, which may reflect varying future financial needs or income stability. Meanwhile, they have a low standard deviation, 0.11 in medium-term save, which means that most of Chinese students would behave similarly with respect to medium-term saving. Compared to Indian students, their standard deviations in saving amounts are lower and fall in a narrow range from 0.08 to 0.22, reflecting stronger homogeneity in terms of their saving patterns, to the disadvantage of mean values though. Malays and other ethnic groups exhibit greater variation in some categories, such as short-term saving (0.34) and long-term saving (0.43), showing that various techniques or contexts influence these ethnic groups' saving habits. Younger students aged 20-30 exhibit higher standard deviations in both short-term and medium-term saves (about 0.36), signifying greater variability in saving patterns within this demographic (*Figure 3*). As individuals age, variability typically diminishes or stabilizes; however, older cohorts, particularly those over 50, exhibit the highest standard deviation in long-term savings (0.46), indicating a wide range of financial strategies, some may prioritize early retirement, while others may possess limited or alternative long-term objectives. The standard deviations within this cohort indicate that long-term savings behaviours among older adults are significantly heterogeneous, likely affected by variables such as income, health status, or retirement strategies.

**Table 2.** Saving options, by demographic factors.

Category	Short term	Medium term	Long term
Gender			
Female	0.35	0.35	0.35
Male	0.37	0.37	0.37
Ethnic			
Chinese	0.43	0.11	0.27
Indian	0.34	0.08	0.16
Malay	0.34	0.45	0.27
Others	0.24	0.34	0.43
Age			

20-30	0.36	0.36	0.23
31-40	0.32	0.41	0.32
41-50	0.22	0.38	0.38
Above 50	0.25	0.34	0.46

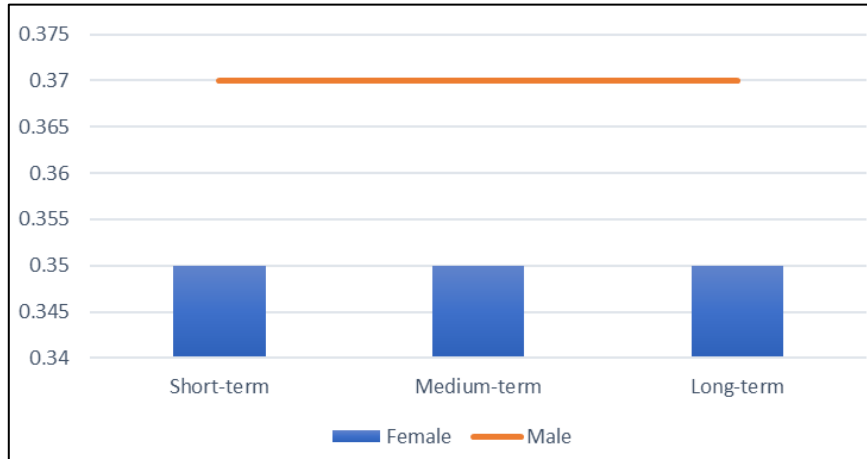


Figure 1. Saving patterns, by gender.

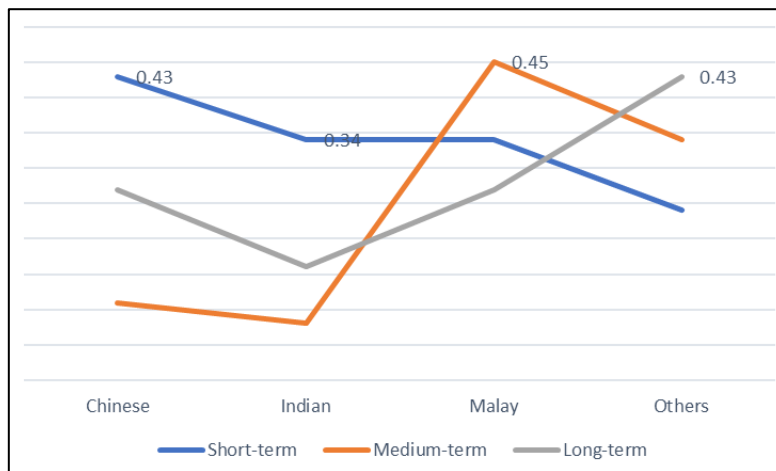


Figure 2. Saving patterns, by ethnic.

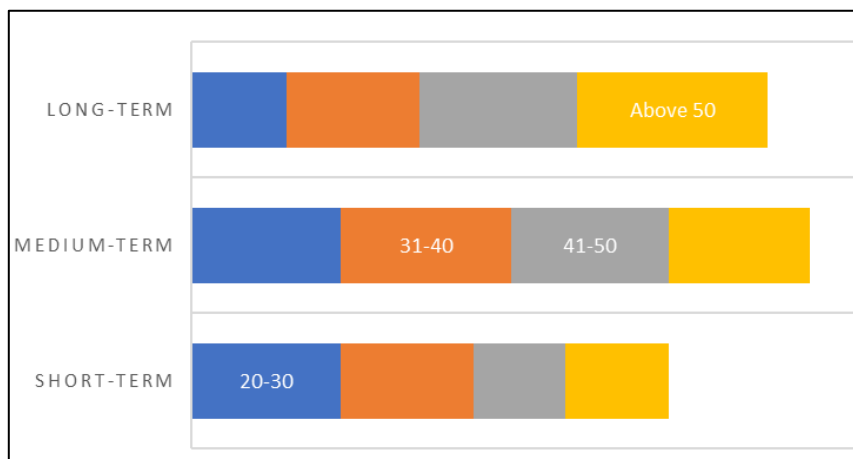


Figure 3. Saving patterns, by age.

## Conclusion

Analysis of saving behaviours of students in Open, Distance, and Digital Education (ODDE) can be useful to formulate focused financial intervention strategies for different demographic profile. The study results indicate that gender, age and ethnicity have a significant influence on the saving behaviour of students, and therefore higher education institutions should consider these when developing financial literacy programmes and support mechanisms. The standard deviations data suggest that some groups such as female and male have relatively uniform saving patterns, whilst others, in particular the ethnic and age categories, have a wide variation in saving patterns. These on average differing observations indicate the importance of considering both average activities and the presence of heterogeneity between groups in the provision of targeted financial literacy or savings interventions. Tailoring programs for group specific behaviours may increase the efficacy of programs for encouraging sustainable saving patterns in different demographic segments. Studies have shown that gender is an important factor in savings attitudes; males usually have higher diversity in savings behavior and more savings from different time periods (George, 2024; Wai, 2024). This means financial literacy programmes need to be sensitised to gender, increasing the awareness of the importance of saving amongst women, while providing targeted content to address the specific barriers faced. Highlighting the low risk saving options may therefore encourage saving behaviour in female students or target workshops that focus on low risk saving options to make female students feel more comfortable to save (Helendriani and Hardaningrum, 2025).

Age has a major impact on saving behaviour; younger students (20-30 years) concentrate on short and medium-term goals whereas, older students prioritise long-term savings including retirement (as in *Table 3*). Recent research suggests that colleges and universities should offer age-specific financial advice which includes short-term saving advice for early-stage learners and long-term financial planning for mature students (Sangar and Burad, 2020; Downes, 2000). Face Real Money Perils Age-appropriate saving options designed for the digital era, such as mobile savings accounts and investment tools, can help to improve financial habits among the young and old (Makusara et al., 2025). Culture plays a role in the saving practices of students; one example is that Chinese students have more regular saving behaviour for Indian students, who may have lower saving in general, either because of cultural differences or levels of financial literacy (Nazaripour, 2021). Acknowledgement of this variation allows institutions to develop community-unique financial literacy programmes to meet the specific circumstances and preferences of communities in relation to savings (Al Shuraiqi and Al Hasani, 2021). Delivering financial literacy content ranging multilingual resources and culturally relevant saving products such as Islamic saving schemes can serve to improve inclusion of various student populations (Khalisharani et al., 2022). This study contributes to the literature on financial behaviour by integrating cultural and socio-demographic factors in the savings decision models, in line with Al Shuraiqi and Al Hasani (2021) which emphasize that culture context affects the financial behaviour. The evidence questions standard life cycle theories that usually assume homogeneous saving behaviour and shows a great dispersion among different population groups. This result conforms to the normative social-psychological theory as suggested by Sangar and Burad (2020) that social forces and awareness also play important roles in financial behaviour. Age differences are an important input for lifecycle theory saves reasons and behaviour change during an individual's life,

corresponding with the work of George (2024) and Wai (2024), who studied savings behaviours across different age groups. The discovery of ethnicity-specific saving preferences is based on the cultural theories of financial socialization (Khalisharani et al., 2022), and underscores the need to consider ethnicity and cultural context in the current decision-making models. The deeper analysis of demographic factors in this research reveals that one-size-fits-all approaches are inappropriate and that culture-sensitive and age-specific models of household financial behaviour capable of better predicting saving attitudes in education are urgently required. These findings contribute to the further development of theories pertaining to financial decision-making and savings behaviour among different populations, particularly within the context of digital and open education (Downes, 2000).

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### **Conflict of interest**

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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