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Enhancing University Students' Financial Satisfaction Through AI-Driven Financial Tools

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ABSTRACT

Financial satisfaction is a key component of overall well-being, yet many university students constantly face challenges in managing their personal finances effectively. Notably, this study investigates the relationships between personal attitude, financial behavioral intention, financial behavior, and financial satisfaction among public university students in the northern region of Malaysia. In particular, a quantitative survey was conducted with 413 respondents using a structured questionnaire with Likert-scale items. Stratified sampling ensured representation across diverse student backgrounds, and the data were analyzed using Statistical Package for Social Sciences (SPSS) software. The findings indicate that while most students report having a positive attitude toward money management, many still exhibit weak saving habits, poor budgeting discipline, and low financial satisfaction. Furthermore, a significant number of students save less than 25% of their income monthly, and a notable portion expresses dissatisfaction with their overall financial well-being. These results highlight a disconnect between students' financial intentions and their actual behavior. In response to these challenges, the study also explores the potential role of Artificial Intelligence (AI)-driven financial teaching and learning tools in enhancing students' financial satisfaction. Such tools, offering personalized guidance, real-time budgeting support, and automated financial planning, could help bridge the gap between knowledge and behavior. In addition, future research should explore the implementation of these tools in educational settings and assess their long-term impact on students' financial outcomes.

Keywords: financial satisfaction, financial behavior, university students, financial literacy, AI-driven financial tools

INTRODUCTION

Financial satisfaction plays a vital role in a person's overall well-being, especially in the field of financial therapy. It reflects a sense of happiness and security from managing finances effectively. When individuals feel financially secure, they tend to experience a better quality of life, free from constant worry about future financial challenges. Note that everyone has their own definition of financial satisfaction, shaped by their personal goals, needs, and priorities. For some, it indicates having sufficient savings for emergencies, while for others, it may be about affording a comfortable lifestyle. Ultimately, financial satisfaction is deeply connected to psychological well-being. It influences whether a person feels at ease or anxious about their financial situation (Normawati et al., 2021). When people have control over their finances, they are more likely to feel content and secure in their lives.

A survey by Ringgit Plus (2022) involving 3,144 Malaysians aged 18 and above revealed a concerning reality: most Malaysians do not have sufficient savings. The financial situation in 2022 was reportedly at its worst since 2015, particularly following the COVID-19 pandemic. This decline is mainly due to rising inflation and a drop in income levels, leaving many struggling with cash flow and savings. Interestingly, some respondents admitted that after nearly two years of pandemic restrictions, they are now prioritizing leisure and travel expenses despite financial instability. This trend is especially alarming for those approaching retirement, as many have insufficient savings to sustain them in the coming years. Referring to Figure 1, the findings revealed that around 70% of respondents could save less than RM500 per month or were unable to save at all. In an effort to ease their immediate financial burdens, 66% of respondents aged 21 and above expressed willingness to withdraw more funds from their Employees Provident Fund (EPF) accounts if permitted by the government. Additionally, 52% of respondents over 18 years old had yet to start investing, missing out on potential long-term financial growth. Comparing savings trends, the percentage of Malaysians able to save more than RM1,500 per month dropped from 20% in 2020 to just 5% in 2022. At the same time, financial resilience worsened, with 53% of Malaysians in 2022 reporting they could survive on their savings for only three months or less, compared to 52% in 2021. The financial strain extended to debt repayment as well. The number of individuals unable to meet their financial obligations due to unemployment increased from 44% in 2021 to 55% in 2022. Moreover, those who could fully pay off their credit card bills declined from 70% in 2020 to 55% in 2022. These statistics paint a grim picture. Malaysians faced their most challenging financial situation in 2022, highlighting the urgent need for better financial planning and resilience (Ringgit Plus, 2022).

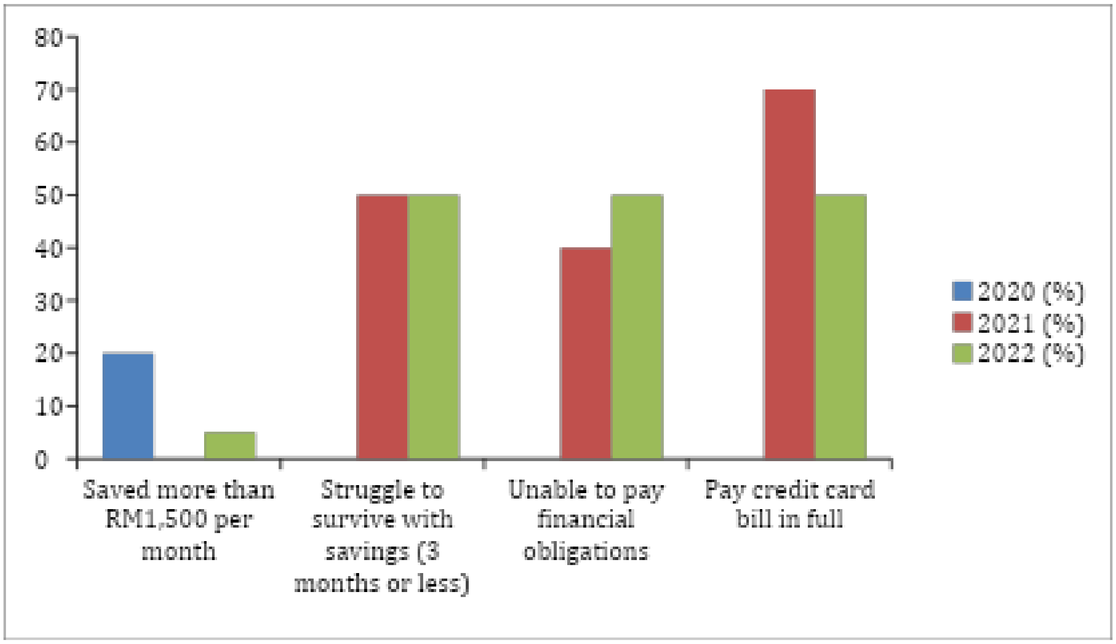

Figure 1. Financial Position among Malaysians (Source: Ringgit Plus, 2022)

Supporting these concerns, Bank Negara Malaysia's (BNM) triennial Financial Capability and Inclusion Demand Side (FCI) Survey introduced the Malaysia Financial Literacy and Capability (MYFLIC) Index, which rose from 57.1 in 2018 to 59.0 in 2021. This reflects a modest improvement in financial knowledge and attitudes (Bank Negara Malaysia, 2021). However, the same report highlighted that many Malaysians, particularly youth, continue to face significant financial vulnerability. This is in addition to a substantial portion unable to sustain living expenses beyond a month without income. Furthermore, the Money SENse Report by FINCO (2022), guided by BNM, noted that many Malaysian students lack sufficient financial knowledge and are ill-prepared for financial independence. Alarmingly, nearly 60% of Malaysians declared bankrupt between 2018 and 2022 were aged 25 to 44, reinforcing the pressing need for comprehensive financial education and stronger financial resilience among young adults.

Financial satisfaction among university students is significantly influenced by their ability to manage money effectively. According to Joo and Grable (2004) and Porter and Garman (1993), financial satisfaction is a subjective assessment of one's financial situation, incorporating perceptions of income adequacy, debt management, and future financial security. In particular, university students are often considered a high-risk group in terms of financial stability (Leach et al., 1999) as they transition from adolescence to emerging adulthood. For many, entering university marks their first experience managing finances independently, without parental supervision (Gutter & Copur, 2011), and they are suddenly responsible for making their own financial decisions (Low, 2020). A recent study by Russell et al. (2025) stressed that financial stress significantly affects students' academic performance, mental health, and overall well-being, emphasizing the need for stronger institutional and governmental support systems. While most students rely heavily on their parents for financial support, especially tuition fees and daily living expenses, not all parents can fully meet these needs (Moneva & Jumag, 2021). Consequently, many students depend on education loans or financial aid to cover various costs such as accommodation, food, transportation, study materials, and communication bills (Mohamad et al., 2020; Sani, 2019; Shim et al., 2009). Despite these responsibilities, some students exhibit poor financial discipline, spending on non-essential items like branded smartphones, luxury goods, and expensive food to maintain a certain social image (Sani, 2019). This behavior often leads to weak budgeting practices and financial mismanagement, ultimately resulting in financial difficulties that diminish their financial satisfaction, overall well-being, and life satisfaction.

Achieving financial satisfaction is not easy for university students. According to Joo (2008), financial satisfaction refers to being financially stable, happy, and free from financial worries. However, many students struggle with financial anxiety due to a lack of emergency savings and poor financial planning (Setiyani & Solichatun, 2019). In fact, most students are dissatisfied with their financial situation, especially those living off-campus, as their living expenses are significantly higher compared to students who stay in university dormitories (Fazli Sabri et al., 2012). On-campus students generally have fewer financial burdens since they do not have to worry about rent and utility bills. Additionally, students from urban areas tend to feel more financially secure than those from rural backgrounds, as they often come from wealthier families. These students typically receive financial support from their parents or family members, which reduces their financial stress. This support may include tuition payments, living expenses, or other financial assistance, allowing them to focus on their studies without worrying about money (Moneva, 2020).

The discussion underlines a growing concern regarding financial satisfaction among Malaysians, particularly in light of post-pandemic economic struggles. A key issue is insufficient savings, increased financial stress, and poor money management practices, particularly among young adults and university students. The Ringgit Plus (2022) survey revealed that a majority of Malaysians, especially those aged 18 and above, have poor saving habits, limited investment knowledge, and difficulty meeting financial obligations. Among university students, financial dissatisfaction is strongly linked to their transition into adulthood, where they begin managing finances independently. Many students rely on parental support or educational loans. However, they often lack financial planning skills, leading to poor budgeting and impulsive spending. Furthermore, students living off-campus or from lower-income/rural backgrounds report higher financial stress than those receiving steady family support. Collectively, these findings emphasize the critical need for financial education and tools that can enhance financial literacy and planning, particularly for young adults and students.

Therefore, this study aims to explore the key factors influencing students' financial satisfaction by focusing on three core elements: personal attitude, financial behavioral intention, and financial behavior. Note that understanding these components is critical, as positive personal attitudes and strong intentions are often linked to better financial habits, contributing to greater satisfaction with one's financial situation. Specifically, this study seeks to examine how students' personal attitudes toward money, their intentions to manage it wisely, and their actual financial behaviors, such as saving, budgeting, and spending, impact their overall financial satisfaction. In addition, this research seeks to identify the potential of Artificial Intelligence (AI)-driven financial teaching and learning tools in enhancing students' financial satisfaction. With the growing adoption of AI in education, such tools could offer personalized learning experiences, real-time budgeting support, and tailored financial advice. This, ultimately, helps students develop sound financial habits and achieve greater financial well-being.

LITERATURE REVIEW

Satisfaction describes how individuals can have a good life that brings happiness, life satisfaction, and evaluations in their employment, health, and relationships. The concept refers to one's feelings when facing any financial situation that helps them become happy after achieving their needs and goals (Normawati et al., 2021). Meanwhile, Arifin (2018) defined satisfaction as a type of happiness that can be achieved by one's efforts, with happiness in life being known as the best type of personal accomplishment. Almost everyone in the world wishes to be happy and achieve their life goals of satisfaction. Brdar et al. (2009) argued that one's quality of life can affect their life satisfaction. For this reason, a person's ability to achieve their expectations and goals in life indicates their satisfaction with the accomplishment (Rad & Yarmohammadian, 2006). This is attributed to the fact that most people will be happy to enjoy every moment in life after making many efforts and finally succeeding in achieving the target.

Furthermore, satisfaction can be regarded as a process or result that depends on every person defining their own satisfaction (Hom, 2002). It may be challenging to define satisfaction in general as it depends on one's different goals in life. Additionally, Aigbavboa and Thwala (2013) added that different life goals can affect an individual's perception of how satisfaction can be achieved when having experiences that help to evaluate the requirement needed. This suggests that when life experiences gained through employment, health, or finances can serve as a valuable lesson for someone to not go through the same experiences again, helping them to set their own goals to achieve life satisfaction. Therefore, satisfaction can be defined through various contexts across different individuals since every person has their own needs, wants, and levels to be achieved.

Researchers believe that financial satisfaction is part of the satisfaction domains that affect one's life satisfaction in addition to health and employment (Arifin, 2018; Praag et al., 2003). Hansen (2009) defined financial satisfaction as one of the crucial fields connecting life satisfaction and general well-being involving experience in health, life, or happiness. Accordingly, financial satisfaction describes one's feeling of happiness in any aspect of their financial condition. It is known as part of the financial well-being that relates to psychological well-being (Normawati et al., 2021). Meanwhile, Rohani and Yazdanian (2021) revealed that financial satisfaction is part of the feelings and mentality of a person toward their financial performance, which indicates their level of satisfaction over income and sources. Moreover, Joo (2008) agreed that financial satisfaction describes someone happy and satisfied with their current financial condition based on their perception of satisfaction. This is supported by Arsadena (2020) and Joo and Grable (2004), who posited that the level of financial satisfaction is determined by one's measurement of financial situation level to achieve financial well-being. In essence, only the respective person knows their level of income and sources that help to determine their level of satisfaction in finance.

Furthermore, financial satisfaction indicates individuals' satisfaction with income in managing financial emergencies, debts, savings, and money set aside for future needs (Hira & Mugenda, 1998). Several people think the capability to pay, manage, and allocate money for savings, debts, and financial emergencies often indicates good financial satisfaction. Falahati et al. (2012) stated that financial satisfaction is the ability to be satisfied with the finances after managing all incomes and sources for needs, even if the person succeeded in managing the money despite being in the worst financial condition. It indicates that people can oversee their finances wisely regardless of the current situation. Similarly, a number of researchers also view financial satisfaction from the demographic aspect. Many studies stated that demographic factors such as age, income, gender, and marital status are significant to financial satisfaction. For instance, Woodyard and Robb (2016) reported that higher financial conditions resulted in higher financial satisfaction. Conversely, Kirbiš et al. (2017) and Hansen et al. (2008) revealed that income impacts the financial satisfaction of households and older people. However, it depends on the situation the respective individuals face and their own perception of satisfaction. For instance, older people tend to achieve higher satisfaction even at lower incomes due to their life cycle related to wealth, health, and household size.

On the other hand, young people still have a long journey to achieve many financial goals after earning their income (Hansen et al., 2008). Kirbiš et al. (2017) suggested that individuals wishing to increase their financial satisfaction should begin saving and investing early. In fact, those involved in investment should have a greater understanding of risk and return that can gain more profits when having the basics for decision-making in investment, thus resulting in greater financial satisfaction (Rohani & Yazdanian, 2021). Meanwhile, Arifin (2018) claimed that financial satisfaction is one of the satisfaction domains. The author further stated that individuals who manage their finances well are more likely to achieve financial satisfaction since they are often free from debts, pay bills on time, and have emergency funds, investments, and life protection.

Notably, understanding the factors that shape financial satisfaction is essential, particularly for university students who often face financial instability due to limited income, insufficient savings, and rising living costs. The Theory of Planned Behavior (TPB) offers a valuable framework to explore these influences. According to TPB, behavior is guided by intention, which is shaped by three components: attitude toward the behavior, subjective norms (social influence), and perceived behavioral control (one's confidence in performing the behavior). Applied to personal finance, this theory suggests that students are more likely to adopt sound financial behaviors when they possess a positive financial attitude, are supported by social norms, and feel capable of managing their money. However, this study focuses on personal attitude, financial behavioral intention, financial behavior, and financial satisfaction, as these constructs are more directly observable and measurable within the context of students' daily financial decision-making.

While subjective norms and perceived behavioral control are crucial components of TPB, they are not explicitly examined in this study due to two main reasons. First, measuring social influence and internal control perceptions often requires more in-depth qualitative or longitudinal methods, which fall outside the scope of this study's quantitative survey approach. Second, the study prioritizes more actionable constructs for financial education and intervention, such as improving knowledge, shaping attitudes, and reinforcing positive behaviors that can directly enhance financial satisfaction. Therefore, although the TPB framework informs the theoretical foundation of this research, the study narrows its scope to focus on the more immediate and practical predictors of financial satisfaction among students. This includes personal attitude, financial behavioral intention, and behavior.

Furthermore, this study is also motivated by the growing concern that many students struggle to support themselves during and after university life due to unstable income, low savings, and rising living costs. Thus, to address these challenges, the study also explores the potential of integrating AI-driven tools to enhance financial behavior and satisfaction. Accordingly, AI-powered financial applications, such as budgeting tools, virtual advisors, and automated savings platforms, can help students make informed and timely financial decisions. Moreover, by leveraging real-time data, predictive analytics, and personalized recommendations, these tools support better money management, goal setting, and spending control. Importantly, AI tools can also provide customized financial education content based on individual behaviors and needs, helping students learn more effectively. This aligns with TPB. As such, AI tools could play a pivotal role in fostering stronger financial behavioral intentions and behaviors, ultimately leading to greater financial satisfaction. Considering the increasing digitalization of personal finance and the economic pressures faced by today's students, this study contributes to the growing literature by examining how traditional behavioral theories can be enhanced with modern technological interventions to improve student financial well-being.

METHODOLOGY

This study adopts a quantitative descriptive research design to explore university students' financial satisfaction. A structured survey was used as the primary data collection instrument, consisting mainly of categorical response options, including Yes/No questions and closed-ended items. Rather than employing continuous scales like Likert scale items, this study focuses on descriptive analysis of categorical data, where findings are reported in terms of frequencies and percentages. For instance, as summarized in Table 4, 217 respondents reported saving less than 25% of their monthly income, 114 saved between 25% and 50%, 19 between 50% and 75%, one saved more than 75%, and 62 respondents did not save at all. These results provide a snapshot of students' financial behaviors, emphasizing the prevalence and distribution of specific practices rather than their intensity.

The data were collected through a self-administered questionnaire distributed to 413 students from public universities in the northern region of Malaysia. A stratified sampling technique was employed to ensure representation across different demographic groups and academic programs. Subsequently, data were analyzed using SPSS software, focusing on descriptive statistics (frequencies, percentages, and cross-tabulations) to summarize the patterns observed among respondents. Considering the study aims to provide a broad understanding of financial satisfaction, a cross-sectional design was chosen, with data collected at a single point in time during 2021. This approach allows for a timely assessment of student financial conditions in the context of a post-pandemic economic environment.

In addition, the target population of this study comprises students enrolled in public universities in the northern region of Malaysia. This region was selected due to its comparatively higher student enrollment in public universities relative to other regions, such as the southern, eastern, and western parts of the country (Statistics of Higher Education, 2021). In addition, the lack of empirical studies focusing on this specific student population is also considered. While existing literature has examined various aspects of student behavior and attitudes in other regions, there remains a noticeable gap in research involving students from the northern region, particularly in the context of financial satisfaction. Therefore, addressing this gap allows for a more balanced national understanding and contributes valuable insights from an underrepresented demographic. As of December 2021, a total of 127,011 students were enrolled in public universities in the northern region (Statistics of Higher Education, 2021), highlighting the relevance and significance of focusing on this population.

To ensure representativeness, this study employs a stratified sampling technique, which is particularly suitable considering the heterogeneous nature of the target population. Stratified sampling ensures that all subgroups within the population are proportionally represented, thereby enhancing the reliability and generalizability of the findings. Table 1 presents the total number of students in Malaysian public universities, which stands at 127,011, forming the study's population. The Krejcie and Morgan (1970) table suggests a minimum sample size of 384 is required for a population of this magnitude. Additionally, the G*Power model recommends a minimum sample size of 146. These methods serve as the basis for determining the appropriate sample size, ensuring statistical adequacy in representing the research population.

Table 1. Total Number of Students Enrolling in Public University (Northern)
(Source: Statistics of Higher Education, 2021)

University	Frequency
UiTM Kedah	7,404
UiTM Perlis	7,481
UiTM Pulau Pinang	6,281
UiTM Perak	12,761
UPSI	30,036
UUM	33,816
USM	18,570
UNIMAP	10,662
TOTAL	127,011

However, data collection will not be confined to the initial minimum of 384 completed responses. Instead, this study employs proportionate stratified sampling to ensure adequate representation of students from public universities in the northern region of Malaysia (Refer to Table 2). Based on Krejcie and Morgan's (1970) sample size determination table, a total sample size of 384 is deemed sufficient for a population exceeding 100,000. To account for potential non-response, incomplete surveys, and bias, the study adopts a 65% expected response rate, as recommended by Falahati et al. (2012). Hence, to achieve 384 usable responses, the number of questionnaires to be distributed increased to 591.

The distribution of questionnaires across universities is determined proportionately based on each institution's student population relative to the total population of 127,011. For example, UiTM Kedah, which accounts for approximately 6% of the total population (7,404 ÷ 127,011 ≈ 0.0583), is assigned 6% of the 591 questionnaires. This results in a minimum distribution of approximately 34 questionnaires (0.0583 × 591 ≈ 34). This proportional allocation approach is applied across all universities listed to ensure equitable and representative sampling.

Table 2. Determining Proportionate Stratified Sampling

University	Population (Frequency)	Population (%)	Minimum Completed & Usable Questionnaires (Frequency)	Minimum Distribution of Questionnaires (Frequency)
UiTM Kedah	7404	6%	22	34
UiTM Perlis	7481	6%	23	35
UiTM Pulau Pinang	6281	5%	19	29
UiTM Perak	12761	10%	39	59
UPSI	30036	24%	91	140
UUM	33816	27%	102	157
USM	18570	15%	56	86
UNIMAP	10662	8%	32	50
TOTAL	127011	100%	384	591

This study measured key variables, namely personal attitudes, financial behavioral intention, financial behavior, and financial satisfaction, using validated instruments adapted from past research. All items were rated on categorical scales. The number of items and sources for each construct were as follows: financial management (31 items; Cronbach's alpha = 0.75) from Jorgensen (2007). A pilot study was conducted to assess the internal consistency of each scale, and all Cronbach's alpha values exceeded the recommended threshold of 0.70, indicating acceptable to excellent reliability (George & Mallery, 2020; Hair et al., 2020). At the same time, descriptive and inferential analyses were conducted using IBM SPSS Statistics version 28. Furthermore, descriptive statistics, including frequency distributions and measures of central tendency, were used to summarize the respondents' demographic profiles, such as university, age, gender, ethnicity, mode and level of study, faculty, residence status, and source of education fee payment. Prior to conducting these analyses, data were screened and cleaned to ensure quality, and assumptions of normality were tested using skewness and kurtosis. Notably, the values obtained fell within acceptable ranges (skewness: -0.003 to -1.572; kurtosis: -0.315 to 2.122), supporting the use of parametric statistical methods (Tabachnick & Fidell, 2019). The data's construct validity was confirmed through expert review and exploratory factor analysis during the pilot phase, where items with low factor loadings were examined and refined. Overall, the validity, reliability, and normality assessments ensured that the dataset met the assumptions for robust statistical analysis and that the instruments used were psychometrically sound.

RESULTS AND DISCUSSION

Demographic Profile of Respondents

This study achieved a response rate of 76.99%, which aligns with previous research reporting rates between 60% and 70% (Falahati et al., 2012; Hansen et al., 2008). The demographic profile of the respondents is presented below. Out of 413 students, the majority (92.3%) belonged to the age group of 18 to 25 years old. Meanwhile, a smaller percentage (5.8%) fell within the 26 to 35 years old category, followed by 1.7% in the 36 to 45 years old range. Only one respondent (0.2%) was above 50 years old. In terms of gender distribution, 113 respondents (27.4%) were male, while the remaining 300 (72.6%) were female. Regarding marital status, most respondents (95.4%) were single, whereas 4.6% were married.

The ethnic composition of the respondents suggested that 87.2% were Malay, 8.0% were Chinese, 1.5% were Indian, and 3.4% belonged to other ethnic groups, including Iban, Dusun, Kadazan Dusun, Bidayuh, Siamese, and Bugis. Regarding student status, the vast majority (95.6%) were full-time students, while only 4.4% were part-time students. As for their level of study, most respondents (72.4%) were pursuing a bachelor's degree, followed by diploma holders (20.8%), master's degree students (3.9%), Ph.D. students (1.7%), and foundation students (1.2%).

The respondents were enrolled in various universities. The highest number of students (24.2%) were from Universiti Utara Malaysia (UUM), followed by Universiti Pendidikan Sultan Idris (UPSI) with 19.6%, Universiti Sains Malaysia (USM) with 13.8%, and UiTM Perak with 11.1%. Additionally, UiTM Kedah and UiTM Perlis had 9.7% and 9.4% of the respondents, respectively. Smaller proportions of students were from Universiti Perlis Malaysia (UNIMAP) (7.7%) and UiTM Pulau Pinang (4.4%).

In terms of living arrangements, the majority of respondents (286 students) lived in university hostels or colleges. Meanwhile, 33 students lived with their parents, 89 rented accommodation, and five owned their own homes. Regarding the payment of education fees, 51.6% of the respondents relied on education loans. A significant portion (32.9%) had their fees covered by their parents, while 8.7% received scholarships. Additionally, 6.1% paid for their own fees, and 0.7% used other funding sources. The respondents' demographic characteristics are summarized in Table 3.

Table 3. Demographic of Respondents

Category	Sub-category	Frequency (n)	Percentage (%)
Age Group	18–25 years	381	92.3
	26–35 years	24	5.8
	36–45 years	7	1.7
	Above 50	1	0.2
Gender	Male	113	27.4
	Female	300	72.6
Marital Status	Single	394	95.4
	Married	19	4.6
Ethnicity	Malay	360	87.2
	Chinese	33	8.0
	Indian	6	1.5
	Others (Iban, Dusun, etc.)	14	3.4
Student Status	Full-time	395	95.6
	Part-time	18	4.4
Level of Study	Bachelor's Degree	299	72.4
	Diploma	86	20.8
	Master's Degree	16	3.9
	Ph.D.	7	1.7
	Foundation	5	1.2
University	UUM	100	24.2
	UPSI	81	19.6
	USM	57	13.8
	UiTM Perak	46	11.1
	UiTM Kedah	40	9.7
	UiTM Perlis	39	9.4
	UNIMAP	32	7.7
	UiTM Pulau Pinang	18	4.4
Living Arrangement	University Hostel/College	286	286.0
	With Parents	33	33.0
	Rented Accommodation	89	89.0
	Own Home	5	5.0
Payment of Education Fees	Education Loan	213	51.6
	Parents	136	32.9
	Scholarship	36	8.7
	Self-funded	25	6.1
	Others	3	0.7

Descriptive Analysis

Personal Attitude

Referring to Table 4, 217 respondents saved less than 25% every month, 114 saved between 25% to 50%, 19 saved between 50% to 75%, one saved more than 75%, and 62 respondents did not have any savings. Consequently, there were 128 responders who set aside money for spending less than 25% every month, followed by 148 who set aside their money between 25% and 50%, 82 who set aside their money between 50% and 75%, and 13 responders who set aside their money more than 75% every month. Only 42 respondents did not set aside any money for spending. Furthermore, 172 responders marked most of the respondents who saved their money for future financial goals. There were 123 respondents who saved money for future goals between 25% and 50%, 46 who saved between 50% and 75%, eight who saved more than 75% for future financial goals, and 64 of the respondents who did not save anything.

Table 4. Personal Attitude of Respondents

Section B: Personal Attitude	n	%	Response Category
How much do you save every month?	217	52.5	<25%
	114	27.6	25–50%
	19	4.6	50–75%
	1	0.2	>75%
	62	15	Do not save anything
	413	100	Total
How much do you set aside money for spending?	128	31	<25%
	148	35.8	25–50%
	82	19.9	50–75%
	13	3.1	>75%
	42	10.2	Do not set anything
	413	100	Total
How much do you save your money for future financial goals?	172	41.6	<25%
	123	29.8	25–50%
	46	11.1	50–75%
	8	1.9	>75%
	64	15.5	Do not save anything
	413	100	Total

In addition to Table 5, 402 respondents wanted to learn how to have proper savings, while 11 responders did not. In terms of investment, 397 responders wanted to invest money properly, and the remaining 16 responders were uninterested in investment. In addition, most of the respondents want to control their spending on food (194), followed by entertainment (117), personal care (78), electronic devices (15), and others (9).

Table 5. Financial Behavioral Intention of Respondents

Section B: Financial Behavioral Intention		n	%
I want to learn how to have proper saving	Yes	402	97.3
	No	11	2.7
	Total	413	100
I want to learn how to invest my money properly	Yes	397	96.1
	No	16	3.9
	Total	413	100
I want to control my spending on the following:	Foods	194	47
	Entertainments	117	28.3
	Electronic Devices	15	3.6
	Personal Care	78	18.9
	Others	9	2.2
	Total	413	100

In Table 6, 392 of the respondents had kept their savings, and the remaining 21 respondents did not have savings yet. Meanwhile, 74.8% of the respondents tracked their spending, and 356 of the respondents kept their savings for emergency purposes.

Table 6. Financial Behavior of Respondents

Section B: Financial Behavior	Yes/No	n	%
I have kept saving some money	Yes	392	94.9
	No	21	5.1
	Total	413	100
I have tracked my spending	Yes	309	74.8
	No	104	25.2
	Total	413	100
I have kept savings for emergency purposes	Yes	356	86.2
	No	57	13.8
	Total	413	100

In Table 7, in terms of satisfaction toward finances, the majority of the respondents were not very satisfied with their current savings (123), followed by somewhat satisfied (123), not satisfied at all (85), and very satisfied with their current savings (20). Next, 88 responders were not satisfied with their current spending habits, 170 were not too satisfied, 132 were somewhat satisfied, and 23 were very satisfied with their spending habits. Lastly, 63 of the respondents were not satisfied with their emergency savings, followed by 194 responders who wished to know more about how to save money for emergency purposes, 128 were somewhat satisfied with their emergency savings, and 28 were very satisfied with what they have.

Table 7. Financial Satisfaction of Respondents

Section B: Financial Satisfaction	Sub-Category	n	%
How satisfied are you with your current savings?	Not satisfied at all - I hope I know a lot more about how to save my money	85	20.6
	Not too satisfied – I wish I knew more how to save my money	185	44.8
	Somewhat satisfied – I understand most of what I'll need to know	123	29.8
	Very satisfied – I understand how to save my money very well	20	4.8
	Total	413	100
How satisfied are you with your current spending habits?	Not satisfied at all - I hope I know a lot more about how to control my spending habits	88	21.3
	Not too satisfied – I wish I knew more about how to control my spending habits	170	41.2
	Somewhat satisfied – I understand most of what I'll need to know	132	32.0
	Very satisfied – I understand how to control my spending habits very well	23	5.6
	Total	413	100
How satisfied are you with your emergency savings?	Not satisfied at all - I hope I know a lot more about how to save money for emergency purposes	63	15.3
	Not too satisfied – I wish I knew more about how to save money for emergency purpose	194	47.0
	Somewhat satisfied – I understand most of what I'll need to know	128	31.0
	Very satisfied – I understand how to save money for emergency purposes	28	6.8
	TOTAL	413	100

The findings indicate that while a significant number of students (77.7%) claim to know how to manage their money, a substantial portion (22.3%) still struggle with financial management. Additionally, most students save less than 25% of their monthly income, with 15% not saving at all. Despite 94.9% of students keeping some form of savings and 86.2% setting aside funds for emergencies, financial satisfaction remains low. Moreover, a majority of respondents expressed dissatisfaction with their savings, spending habits, and emergency funds, highlighting a gap between financial behavior and perceived financial well-being. While many students practice basic financial behaviors such as tracking expenses and maintaining savings, financial dissatisfaction persists. This suggests that while students may engage in positive financial habits, they may lack confidence in their financial decisions or fail to optimize their financial strategies effectively. In line with this, the discrepancy between behavior and satisfaction could be attributed to inadequate financial literacy, impulsive spending habits, or insufficient income to meet their financial goals.

Based on these findings, this study recommends adopting AI-driven financial tools as a practical solution. These tools can bridge the existing gap by offering personalized guidance and insights tailored to individual needs. Thus, by leveraging AI, students can enhance their financial literacy, build disciplined financial habits, and make more informed financial decisions in several key ways:

1. Personalized Financial Coaching – AI-powered financial management apps can analyze students' spending and saving patterns to provide tailored recommendations. These tools can offer customized budgeting plans, real-time spending alerts, and automated savings strategies to help students optimize their finances.

2. Predictive Analytics for Smart Budgeting – AI can predict future expenses based on spending history, allowing students to plan their budgets more effectively. By forecasting potential financial shortfalls, students can proactively adjust their spending and saving strategies.

3. Gamification and Interactive Learning – AI-driven gamified financial education platforms can enhance students' engagement with financial learning. Interactive simulations and real-life financial scenarios can help students practice financial decision-making in a risk-free environment, boosting their confidence and competence.

4. Automated Savings and Investment Recommendations – AI can assist students in setting up automated savings plans based on their financial goals. Additionally, AI-driven robo-advisors can suggest low-risk investment options to help students grow their wealth over time, thus improving their financial security and satisfaction.

5. Fraud Prevention and Financial Security – AI-driven financial monitoring tools can help students detect fraudulent activities, ensuring the security of their financial transactions. Enhanced financial security contributes to overall financial confidence and satisfaction.

While AI learning tools can significantly improve financial literacy and satisfaction, universities and financial institutions must also play an active role in supporting students. Notably, integrating AI-driven financial literacy modules into university programs allows students to receive structured financial education alongside their academic curriculum. Additionally, universities can collaborate with fintech companies to provide students with access to AI-powered financial planning tools at little to no cost. Moreover, mentorship programs that combine AI analytics with human financial advisors can further enhance financial learning by offering personalized coaching based on AI-generated insights. In other words, this hybrid approach ensures that students receive automated financial guidance and gain practical financial knowledge from industry experts.

CONCLUSION

This study examined students' financial satisfaction. The findings revealed that a significant portion struggles with saving, budgeting, and controlling their spending. In particular, the majority of students save less than 25% of their monthly income, and financial dissatisfaction remains prevalent, particularly in terms of savings and emergency funds. This suggests that financial literacy alone is insufficient to ensure financial well-being, and additional support is needed to bridge the gap between financial knowledge and practical financial habits. Furthermore, the study highlights the significance of financial behavior in influencing financial satisfaction. While many students practice basic financial habits such as tracking expenses and keeping emergency savings, a large number still feel dissatisfied with their financial situation. This indicates that financial education should go beyond theoretical knowledge and incorporate practical applications that encourage better financial decision-making.

The potential of AI-driven financial learning tools was also explored as a means to enhance students' financial satisfaction. AI technology offers personalized financial guidance, predictive budgeting, automated savings recommendations, and fraud prevention measures. Thus, by integrating AI tools into financial education, students can receive real-time, customized support in managing their finances, ultimately leading to improved financial well-being. In essence, leveraging AI-based solutions can play a crucial role in helping students make informed financial decisions, thereby increasing their financial confidence and overall satisfaction.

Nevertheless, future research should consider longitudinal studies to assess the long-term impact of financial education and AI-driven financial tools on students' financial behavior and satisfaction. Additionally, comparative studies across different institutions, income levels, or cultural backgrounds could offer deeper insights into how demographic and socio-economic factors influence financial attitudes and outcomes. Moreover, further investigation into students' psychological traits, such as self-control, risk tolerance, and financial anxiety, may also help explain the gap between knowledge and behavior. Lastly, experimental designs that implement and assess specific AI-based financial interventions (such as budgeting apps or chatbots) in educational settings can provide empirical evidence of their effectiveness in promoting sustainable financial habits among students.

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Conflict of Interest

The authors have no conflicts of interest to declare.

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Authors' Contributions

The authors confirm contribution to the paper as follows: study conception and design: Zuraidah Mohamed Isa, Norhidayah Ali; data collection: Nur Ain Hasna Ghazali; analysis and interpretation of results: Zuraidah Mohamed Isa, Nur Ain Hasna Ghazali; manuscript preparation: Norhidayah Ali. All authors reviewed the results and approved the final version of the manuscript.