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FSCA
Financial Sector Conduct Authority

DIGITAL FINANCIAL LITERACY AND EDUCATION FEASIBILITY STUDY

Research Report

20 February 2025

DIGITAL FINANCIAL LITERACY AND EDUCATION FEASIBILITY STUDY

Study commissioned by the

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Study conducted by the

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LIST OF ACRONYMS

AI	Artificial Intelligence
ASISA	Association for Saving and Investments South Africa
BASA	Banking Association South Africa
BANKSETA	Banking Sector Education and Training Authority
BMR	Bureau of Market Research (Pty) Ltd
CATI	Computer-Aided Telephone Interviews
CPA	Cost Per Acquisition
CTR	Click-Through Rates
FinTech	Financial Technology
FSB	Financial Services Board
FSCA	Financial Sector Conduct Authority
GDPR	General Data Protection Regulation
ICT	Information and Communication Technology
ILO	International Labour Organisation
INFE	International Network on Financial Education
KPI	Key Performance Indicators
LMS	Learning Management Systems
NCFEC	National Consumer Financial Education Committee
NCR	National Credit Regulator (NCR)
NDP	National Development Plan
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Cooperation and Development
POPIA	Protection of Personal Information Act (or the PoPI Act)
RERC	Research Ethics Review Committee
ROI	Return on Investment
SAIA	South Africa Insurance Association
SASAS	South Africa Social Attitude Survey
SAMRA	Southern African Market Research Association
SCORM	Sharable Content Object Reference Model
SMME	Small, Medium and Micro Enterprise
SPSS	Statistical Package for Social Sciences
UI	User Interface
UX	User Experience
UNISA	University of South Africa

EXECUTIVE SUMMARY

SYNOPSIS

In January 2024, the Financial Sector Conduct Authority (FSCA) commissioned the Bureau of Market Research (Pty) Ltd (BMR) to conduct a **Digital Financial Literacy and Education Feasibility Study** to evaluate the potential for digital platforms to enhance financial knowledge and inclusion among South African adults (18+ years). This study aimed to assess, design and test innovative digital financial literacy solutions—including an eLearning platform and a mobile application—aligned with national financial education and inclusion objectives.

The study followed a triangulated research approach, integrating secondary, primary and experimental research to evaluate the feasibility, scalability and sustainability of a Digital Financial Literacy eLearning Platform and Application. Central to this approach was a structured development roadmap, outlining key phases from initial concept to full-scale implementation and policymaker engagement. The roadmap was divided into two major phases:

- **Feasibility Study (Stages 1 - 4):** Focused on research, stakeholder engagement and technical and financial viability assessment.
- **Post-Implementation Strategy (Stages 5 - 8):** Addressed strategic partnerships, funding, policy advocacy, large-scale deployment, awareness campaigns and continuous monitoring to ensure long-term impact and sustainability.

While the feasibility study primarily assessed the viability of digital financial literacy solutions, it also led to the development of a strategic framework to guide the long-term sustainability of the initiative. By integrating these phases, the research ensured that the proposed Digital Financial Literacy eLearning Platform is evidence-based, scalable, impactful and aligned with national financial literacy and inclusion priorities.

This structured, research-driven approach positions the FSCA to advance a sustainable, technology-driven financial literacy agenda, reinforcing its role in promoting financial wellness and consumer protection across South Africa.

FEASIBILITY STUDY OUTCOMES

Review of Secondary Research Information

To gain insight into financial literacy and digital literacy, available online literature on these topics was explored. The main sources included articles from journals, credible reports and publications from organisations, as well as textbooks, Big Data and AI analytics. The insights from this research were important for guiding the design and development of the primary research model, which helped in creating and testing digital solutions.

A review of existing literature found that global efforts did not give rise to significant increases in financial literacy levels, even in developed economies. Financial literacy benefits individuals and enhances the economy by tackling socioeconomic inequalities, promoting financial inclusion and encouraging stability and growth[1]. In South Africa, financial literacy is shaped by its unique cultural, historical and institutional background. Surveys from 2012 to 2020 indicate that many South Africans struggle with basic financial skills such as budgeting, saving, borrowing and investing[2].

Since the COVID-19 pandemic, there has been a growing focus on digital financial literacy, which is essential in today's digital world[3]. Digital financial literacy helps people effectively use digital tools and understand the risks that come with digital innovations[4]. The literature identified various financial literacy initiatives in South Africa, created to improve financial

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1 Pratley, C. (2023). 7 Reasons Why Financial Literacy is Important for People in the GCC. https://nowmoney.me/blog/why-is-financial-literacy-important/#:~:text=individuals%20and%20governments.-,Why%20is%20financial%20literacy%20important%3F,promotes%20economic%20growth%20and%20development.

2 FSCA and HSRC (2022). Rands and Sense: Financial literacy in South Africa. [Online]. https://www.fscamymoney.co.za/Research Documents/01 FSCA Financial Literacy Overview (2022-05-31).pdf

3 Nawang, WRW & Shukor SA (2023). Digital Financial literacy among Young Adults in Malaysia. International Business Education Journal, 16(2), 115-126.

4 Koskelaine, T, Kalmi, P, Scornavacca, E & Vartiainen, T (2023). Financial literacy in the digital age – A research agenda. Journal of Consumer Affairs, 57(1), 507-528.

skills among the population with support from government and financial service providers. However, issues like technology access and low digital literacy levels hinder the effectiveness of online educational programs. With 72.3% of South Africans accessing the internet mainly via smartphones, it is essential to create appropriate eLearning materials[5]. Additionally, the diverse cultural and linguistic background of South Africans should guide the development of financial education programs to ensure accessibility and inclusion.

Several existing national and international financial literacy programmes were identified and perused during the review, which highlighted important efficacy considerations. The review emphasised the importance of creating interactive and engaging content, using multimedia elements like gamification to enhance learning enjoyment and effectiveness. It also suggested personalised learning pathways to cater to various financial needs and levels, along with real-life applications to improve applicability. Likewise, exploratory research conducted for the purpose of this project revealed that measurement and evaluation mechanisms are critical for understanding program effectiveness and fostering continuous improvement. In this regard, the Organisation for Economic Co-operation and Development (OECD) provides guidance on digital financial education, advocating for the adaptation of delivery methods to different groups, training trainers and using monitoring tools for quantitative evaluations[6].

Quantitative Research Findings

The primary quantitative research phase was designed to collect reliable information to guide the design, development and testing of the eLearning platform and mobile application, based on the secondary research outcomes. Four main areas were explored with relevant research questions, including access and usage of information and communication technology (ICT), digital literacy, digital financial literacy, mobile application and eLearning.

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[5] Digital 2023: South Africa. Simon Kemp. Accessed online at: https://datareportal.com/reports/digital-2023-south africa#:~:text=Internet%20use%20in%20South%20Africa,at%20the%20start%20of%202023.

[6] Evaluating Financial Education Programmes: OECD (2013). Accessed online at: https://web-archive.oecd.org/2013-09-09/247243-G20-Evaluating_Fin_Ed_Programmes_2013.pdf

A total of 1 144 adults, 18 years and older from all nine provinces of South Africa, covering various demographics, took part in the quantitative research phase. A hybrid research design was used for data collection, including computer-aided telephone interviews (CATIs) and self-administered web-based surveys.

Research Focus Area 1: Access and Usage of Information and Communication Technology (ICT)

Most respondents access the internet from home (73. 3%) using smartphones (79. 3%). Many (60% to 70%) use the internet for banking and educational activities. This finding supported the developing of digital financial literacy platforms. Existing limitations, such as data costs, poor connectivity and device capabilities, need to be considered when developing digital financial literacy platforms.

Research Focus Area 2: Digital Literacy

Digital literacy is a key factor in designing digital financial programs. From a self-assessment, most respondents claimed to be digitally literate and practice online safety measures, like using strong passwords (88. 3%) and avoiding suspicious links (55. 2%). Understanding digital literacy nuances is crucial for participating in online education.

Research Focus Area 3: Digital Financial Literacy

Approximately six in every ten respondents rated their financial knowledge and skills as 'excellent' or 'good', but only 20% felt 'completely' confident in managing their finances. This finding underscores the need for access to relevant digital financial literacy education platforms.

The research revealed that the Internet is preferred for financial management due to convenience and efficiency. Respondents frequently used digital services for money transfers and online payments, showing familiarity with mobile banking but less so with cryptocurrency and budget apps.

Preferred learning methods to improve knowledge of financial concepts included text-based articles, explainer videos and interactive exercises, with online courses and virtual classrooms being the most effective. Games and collaboration platforms (e.g. Google Workspace, Microsoft Office 365) were cited as the least effective digital learning platforms for enhancing learning and financial concepts. Approximately, half of the respondents (50%) were open to trying new digital financial tools if recommended, highlighting the need for accessible online financial information.

Research Focus Area 4: Mobile Applications and eLearning

The primary research phase found that almost fifty percent (48. 9%) of respondents have less than 20 mobile apps on their devices, with social media, banking and entertainment as the most popular. Key activities on these apps include social media, communication, banking and education. Daily usage of mobile applications is common and the main factors impacting on downloading include functionality, security and usability. Only 10% have used mobile financial literacy apps and only 15. 8% completed online financial literacy and education courses or programmes. The most helpful features identified for eLearning programmes included clear learning objectives and engaging content, while lower-ranked features included discussion forums and interactive elements.

Design and Development of a Prototype eLearning Platform and Mobile Application

Prototype eLearning Platform

According to the Terms of Reference received from the FSCA, two eLearning modules were to be designed and developed using the FSCA MyMoney series, OECD financial literacy frameworks and primary research results. After careful consideration, it was agreed, to develop four eLearning modules including:

- Module 1: Income and Expenditure.
- Module 2: Savings and Investments.
- Module 3: Credit and Debt.
- Module 4: Protection and resilience.

The eLearning modules forms the basis of an eLearning platform and mobile application which must be relevant to the South African population, using simple language and clear illustrations to help users improve their financial knowledge and make informed financial decisions.

As per the Terms of Reference, the eLearning platform had to contain detailed financial information and be accessible through various digital devices including desktops, laptops and tablets. The layout and design elements of the eLearning platform had to include audio, notifications, background music, AI voiceovers, animated videos with subtitles, graphics, whiteboard animations and mini quizzes for various devices. A prototype eLearning platform was developed using FIGMA, a collaborative web application for interface design.

Prototype Mobile Application

In addition to the eLearning platform, the FSCA requested the design, development and testing of a prototype mobile application to provide South Africans easy access to financial information. The application's content was adapted from the eLearning modules and were more basic for easy access. The prototype mobile app featured a reward system for achieving milestones and was designed to be mobile-friendly and scalable.

Developed using Flutter for cross-platform use and supported by Firebase, the prototype mobile app included user authentication, offline access, interactive learning and push notifications. It ensured security through data protection and compliance with POPIA and GDPR. Integration with Moodle also allowed for content synchronization and real-time updates.

Qualitative Research: Interactive User Testing

The qualitative research phase involved interactive user testing sessions following the approval of the prototype eLearning platform and mobile application by the FSCA project steering committee. Testing took place in a BMR research laboratory with 41 participants from various backgrounds in November 2024. Participants evaluated the user interface (UI)

and user experience (UX) of two selected eLearning modules (modules 1 and 4) using desktop computers. The prototype application was tested on mobile devices, with participants split into smaller groups to discuss their opinions and engage with the application.

Participants in the user testing sessions were highly satisfied with the prototype digital eLearning platform and mobile application for financial literacy. It was confirmed that individuals required relevant and applicable financial information from digital financial literacy platforms. It was agreed that the eLearning platform was better for desktop or laptop access and provides detailed financial information, while the mobile application offered easy and convenient access to basic information. Participants stressed the importance of balancing interactive features and content and considered cost-free access due to data expenses. Overall, both platforms received positive feedback on design and content, recommending full-scale development by the FSCA.

To add a gaming element and engage users in the eLearning platform, a character called the "Financial Genie" was introduced. This character was well received, but it was noted that learning should be the main focus and financial topics need to be taken seriously. Thus, the guiding character should match the content's sophistication. The Financial Genie suited module 1, which taught basic financial concepts, but a more serious character, like a financial advisor, was recommended for module 4 which deals with more complex concepts.

Considering the research findings, the FSCA can further develop digital financial literacy platforms for South Africans, emphasising effective promotion, especially on social media. Strategically, each of the four modules should be released individually, accompanied by a monitoring and assessment process.

POST-IMPLEMENTATION STRATEGY (STAGES 5 - 8)

Building on the research outcomes from stage 1, which provided strong evidence supporting the feasibility of digital financial literacy platforms, the extended research efforts revealed that the next stage should focus on the critical activities necessary for full-scale

implementation and long-term impact. Should the FSCA proceed with this initiative, Stages 5 to 8 below outline key strategic priorities for the FSCA that will be essential to ensuring sustainability, scalability and continued relevance.

Stage 5: **Establishing strategic partnerships and securing funding**. Sustainable funding and strong partnerships will be crucial for the long-term success of digital financial literacy platforms. Collaboration with financial institutions, technology providers and public-private sector stakeholders will enable resource mobilization and operational sustainability. A governance framework will be established to ensure financial transparency, risk mitigation and accountability in managing the initiative.

Stage 6: **Policy advocacy and regulatory alignment**. To integrate digital financial literacy into national financial inclusion strategies, proactive engagement with policymakers, regulators and industry leaders will be necessary. Ensuring alignment with existing financial education policies and securing institutional support will enhance credibility and facilitate long-term adoption. Policy recommendations will also focus on bridging the digital divide and expanding financial literacy access to underserved populations.

Stage 7: **Full-scale deployment and awareness strategy**. Successful implementation will require an effective national awareness campaign to drive adoption and maximize user engagement. Targeted outreach through digital channels, community programs and educational partnerships will promote platform accessibility. The technological infrastructure will be optimized to ensure seamless functionality, user-friendly design and continuous innovation to enhance learning experiences.

Stage 8: **Monitoring, evaluation and continuous improvement**. To maintain platform effectiveness, a robust monitoring and evaluation framework will be implemented to track engagement, knowledge retention and behavioral impact. Real-time data analytics, user feedback loops and periodic content updates will ensure that the platform evolves in response to emerging financial trends and learner needs. Adaptive strategies will be deployed to enhance user experience and improve financial literacy outcomes over time.

By implementing these four strategic stages, the FSCA will be well-positioned to transition from feasibility research to a fully operational, impactful and sustainable Digital Financial Literacy eLearning Platform and Mobile Application. These efforts will not only enhance financial literacy and inclusion across South Africa but also ensure that the platform remains adaptive, scalable and effective in addressing the country's evolving financial education needs.

RECOMMENDATIONS FOR A FULL-SCALE DIGITAL FINANCIAL LITERACY PLATFORM

To ensure the successful development and sustainability of a Digital Financial Literacy eLearning Platform and Application, the following key recommendations are proposed to the FSCA:

- **Develop a structured, evidence-based digital financial literacy framework aligned with South African financial regulations, consumer protection policies and national financial inclusion goals**. This framework should serve as a foundation for enhancing financial awareness, knowledge acquisition, behavioural change and long-term financial well-being among South African consumers. A well-structured framework must incorporate key dimensions that measure success, including reach (awareness and adoption), engagement (user interaction and experience), learning outcomes (knowledge and skills development), behavioural change (application and financial habits) and long-term impact (financial well-being and resilience). By integrating these dimensions, the framework will enable the FSCA to track platform effectiveness, ensure ongoing user engagement and assess improvements in financial decision-making and stability. Additionally, the FSCA should implement real-time data analytics, periodic impact assessments and user feedback mechanisms to facilitate continuous platform enhancements and targeted interventions. By developing a comprehensive, structured and measurable digital financial literacy framework, the FSCA can establish a sustainable and scalable platform that empowers consumers, promotes responsible financial behaviour and strengthens financial inclusion across South Africa.

- **Ensure user-centric design**. Create an intuitive, mobile-friendly and multilingual platform to maximize accessibility and user engagement.
- **Implement interactive and engaging learning methods**. Use gamification, real-life simulations, AI-driven adaptive learning and expert-led content to enhance financial education.
- **Strengthen strategic partnerships**. Collaborate with financial institutions, government bodies and NGOs (Non-Governmental Organisations) to secure funding and expand platform reach.
- **Drive policy advocacy**. Align digital financial literacy initiatives with national financial inclusion strategies and FSCA's consumer protection policies.
- **Deploy scalable awareness campaigns**. Leverage digital marketing, community partnerships and influencer engagement to drive platform adoption.
- **Establish robust monitoring and evaluation**. Implement key performance indicators (KPIs), A/B testing and user feedback mechanisms to ensure continuous platform optimization.
- **Expand outreach via alternative digital channels**. Utilize USSD, WhatsApp, SMS-based education and AI chatbots to increase accessibility, particularly in underserved communities.

By integrating these recommendations, the FSCA can establish a scalable, impactful and sustainable digital financial literacy platform, enhancing financial inclusion and consumer empowerment across South Africa.

CONCLUSION

The findings of the FSCA Digital Financial Literacy Feasibility Study indicate strong potential for the full-scale implementation of a digital financial literacy eLearning platform and mobile application. The research highlights a significant need for accessible, engaging and impactful financial education tools to enhance financial literacy, bridge the digital divide and promote financial inclusion across South Africa.

However, the study also emphasises that the long-term sustainability and effectiveness of the platform are contingent upon several critical preconditions. These include:

- **Strategic partnerships** with public and private sector stakeholders to ensure financial and operational support.
- **Ongoing content updates** to maintain relevance, engagement and accuracy in an evolving financial landscape.
- **User-centric design** that prioritizes accessibility, usability and diverse learning preferences to maximize reach and impact.
- **Robust engagement strategies** to drive awareness, adoption and sustained user participation.
- **Continuous monitoring and evaluation** to measure effectiveness, track behavioural change and refine strategies based on data-driven insights.

By addressing these key considerations, the FSCA can successfully implement a full-scale digital financial literacy platform that is not only impactful but also sustainable in the long run. The study reaffirms that with the right framework, resources and strategic commitment, the initiative has the potential to transform digital financial education in South Africa and contribute meaningfully to financial wellness and inclusion for all citizens.

SECTION A: BACKGROUND, AIM AND METHODOLOGY

1.1 INTRODUCTION

The Financial Sector Conduct Authority (FSCA) was established by the Financial Sector Regulation Act 9 of 2017 (the FSR Act) to become a dedicated conduct authority replacing the Financial Services Board (FSB), in 2018[7]. The FSCA is tasked with protecting consumers by ensuring that financial institutions treat them fairly and offering financial education programs to current and prospective customers that will improve the financial literacy of all persons living in South Africa. The FSCA has made the transition of financial education activities to digital financial literacy a top priority in support of the financial education efforts. The goal of this transition is to provide financial customers with the understanding of and access to, increasingly sophisticated financial technology (fintech) products and services.

Globally, there has been a transition from traditional to more digitalised learning methods in the delivery of financial education. Within South Africa, digital technologies have the potential to greatly enhance financial education by fostering greater financial inclusion and bridging the gap between urban and rural communities. They have the potential to enhance financial awareness and expand access to financial services, particularly for vulnerable populations like women and young people. In addition, digital financial education may boost economic empowerment and Small, Medium and Micro Enterprise (SMME) development. Digital technology can also help achieve the objectives of the National Development Plan (NDP), improve access to education and lessen poverty and inequality. Additionally, by utilising mobile penetration, financial education can be made simpler and more accessible, which will support the nation's economic development and growth.

[7] National Government of South Africa. Financial Sector Conduct Authority (FSCA). https://nationalgovernment.co.za/units/view/98/financial-sector-conduct-authority-fsca

Therefore, it is pertinent that the government should focus on a digital financial inclusion strategy based on digital skills and financial literacy, as having the knowledge and understanding of online financial services and products can increase access and usage of these services and products and overall promote financial growth.

In view of this background information, the Bureau of Market Research (Pty) Ltd was commissioned by the FSCA in January 2024, to carry out a **Digital Financial Literacy and Education Feasibility Study** among current and potential financial customers who are 18 years and older. The primary purpose of this study was to examine the feasibility and efficacy of using a targeted digital platform as a successful learning, dissemination and distribution tool for financial education to South African financial customers and potential financial customers and make recommendations regarding the preferred platform. The project used a triangulated research approach, which included secondary and primary research methods. In addition, the study also included the practical application of the research information through the development and testing of an eLearning platform and mobile application intended for the South African society.

To ensure a comprehensive and forward-looking approach, the BMR broadened the scope of the feasibility study beyond the immediate requirements of developing a prototype digital financial literacy eLearning platform and application. This expansion was guided by a structured roadmap for introducing an innovative Digital Financial Literacy eLearning solution. The roadmap encompasses multiple strategic phases, ranging from conceptualization to securing policymaker support for financial inclusion in South Africa. While the first four stages (Stages 1 to 4) focus on conducting the feasibility study, the subsequent phases address critical implementation and sustainability factors necessary for the platform's long-term success. By incorporating all roadmap stages, this feasibility study ensures that the recommended Digital Financial Literacy eLearning Platform and Application remains sustainable, scalable and impactful in promoting financial awareness, knowledge and inclusion for all South Africans. Additionally, this structured approach aligns with the broader research

objectives posed by the FSCA, which extend beyond the immediate feasibility study deliverables to support long-term financial wellness and empowerment.

1.2 OBJECTIVE

The **primary goal** of the research was to conduct a **feasibility study** for a digital financial literacy eLearning platform and mobile application. Consequently, the study explored the use of a targeted digital financial literacy platform (eLearning platform and mobile application) designed based on evidence-based research specifically for South Africa. It was envisioned at the inception phase of the study that the digital financial literacy platform will serve as a tool for learning and sharing information about financial education with current and potential financial customers. To achieve the objective, the following key areas were explored during the feasibility study:

- The South African ICT environment, including (i) availability and access to relevant infrastructure, financial literacy levels, access and inclusion, (ii) digital literacy levels, access and inclusion and the extent of the "digital divide", (iii) suitability of digital delivery channels to different financial products and services available to the target market, as well as relevant content (e.g. as developed for the FSCA MyMoney learning series) and (iv) the relative costs, value and impact.
- Financial customer preferences when engaging with educational content on a digital platform, across demographic indicators.
- Customer learning preferences as well as the behavioural drivers of these preferences. The study aimed to understand these preferences, particularly as technology is changing the way customers interact with financial products and services as well as financial literacy.
- The most suitable format "suggested" for digital platform/s and how these channels could be used for disseminating the information in consideration of platform, channel, content, population, budget, infrastructure challenges and literacy challenges.

- Indicators for monitoring and evaluation (tracking) of the success of digital platforms for financial education.

In addition to assessing the feasibility of a full-scale Digital Financial Literacy Platform, the study aimed to develop a structured framework to ensure its long-term sustainability and scalability. This supplementary research objective expanded the study's scope to explore critical implementation and sustainability factors necessary for the platform's enduring success. A key focus was to frame a **post-implementation strategy**, leveraging insights from the feasibility study to outline essential considerations for the deployment, maintenance and continuous enhancement of the platform. By integrating these strategic elements, the research aimed to provide the FSCA with a comprehensive roadmap that supports the viability, adoption and long-term impact of digital financial literacy initiatives in South Africa.

1.3 STRATEGIC VALUE

Improving digital financial literacy and education among all South Africans using appropriate digital financial literacy platforms such as an eLearning platform and mobile application can have significant strategic value which include the following strategic advancements:

- **Inclusive economic growth**: By empowering individuals with the knowledge and skills to effectively use digital financial platforms, it can promote inclusive economic growth, reduce poverty and increase employment opportunities.
- **Increased financial inclusion**: Digital financial literacy can help increase access to financial services, especially for marginalised groups, such as the unbanked and underbanked, thereby reducing financial exclusion.
- **Better financial decision-making**: Educating individuals on how to navigate the digital financial landscape can lead to better financial decision-making, reduced debt and improved financial well-being**.**

- **Enhanced digital skills**: As South Africa continues to digitise, improving digital financial literacy can also enhance overall digital skills, making individuals more competitive in the job market.
- **Socio-economic development**: By promoting digital financial education, it can contribute to socio-economic development, improve living standards and enhance the overall quality of life for South Africans.
- **Reduced vulnerability to fraud**: Educating individuals on how to identify and avoid online scams, phishing and other forms of financial fraud can reduce their vulnerability to these types of crimes.
- **Increased adoption of digital payments**: By promoting digital financial literacy, you can increase the adoption of digital payments, reducing the reliance on cash and promoting a more efficient, secure and convenient payment system.
- **Support for entrepreneurs and SMMEs**: Digital financial education can also support SMMEs by providing them with the skills and knowledge to effectively manage their finances, access credit and grow their businesses.

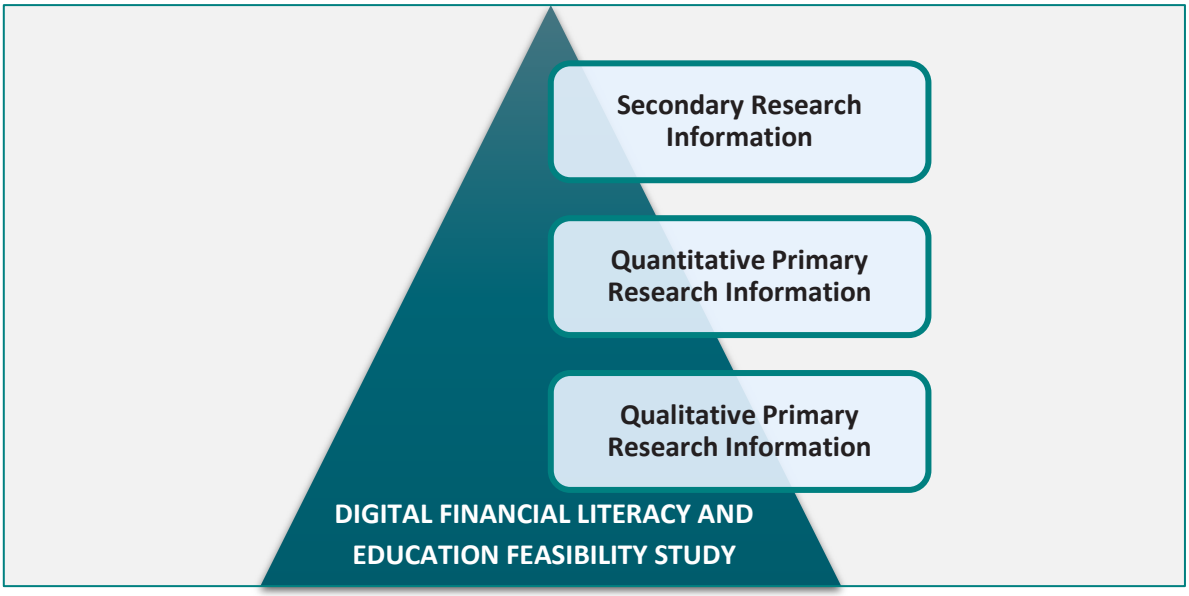
The supplementary research conducted as part of the digital financial literacy feasibility study provides a strategic blueprint to ensure the long-term viability, scalability and impact of full-scale digital financial literacy platforms in South Africa. While the feasibility study validated the technical and financial viability of such platforms, the extended research offers critical insights into the post-implementation strategy, enabling the FSCA to maximise its investment and ensure sustained engagement, adoption and behavioural change among target audiences.

By proactively addressing deployment, stakeholder engagement, funding models, continuous content evolution and long-term monitoring and evaluation, this research equips the FSCA with a structured roadmap to enhance financial literacy in a measurable, impactful and future-proof manner. This evidence-based approach aligns with South African financial inclusion goals and empowers the FSCA to position itself as a leader in digital financial education, driving socioeconomic benefits through improved financial decision-making and long-term consumer financial well-being.

1.4 RESEARCH APPROACH AND METHODOLOGY

The Digital Financial Literacy and Education **Feasibility Study** applied a **triangulated research approach**, that combines multiple research methods including secondary and primary data collection methods, to conduct the research for the purposes of this study. In addition to gathering research data, the study included a significant practical component related to the design, development and testing of financial literacy eLearning platforms. Therefore, by combining different research methods, it contributed to a more detailed and nuanced understanding of the phenomenon being investigated and increase the validity and reliability of the research findings. The triangulated research approach used is illustrated in figure 1.1.

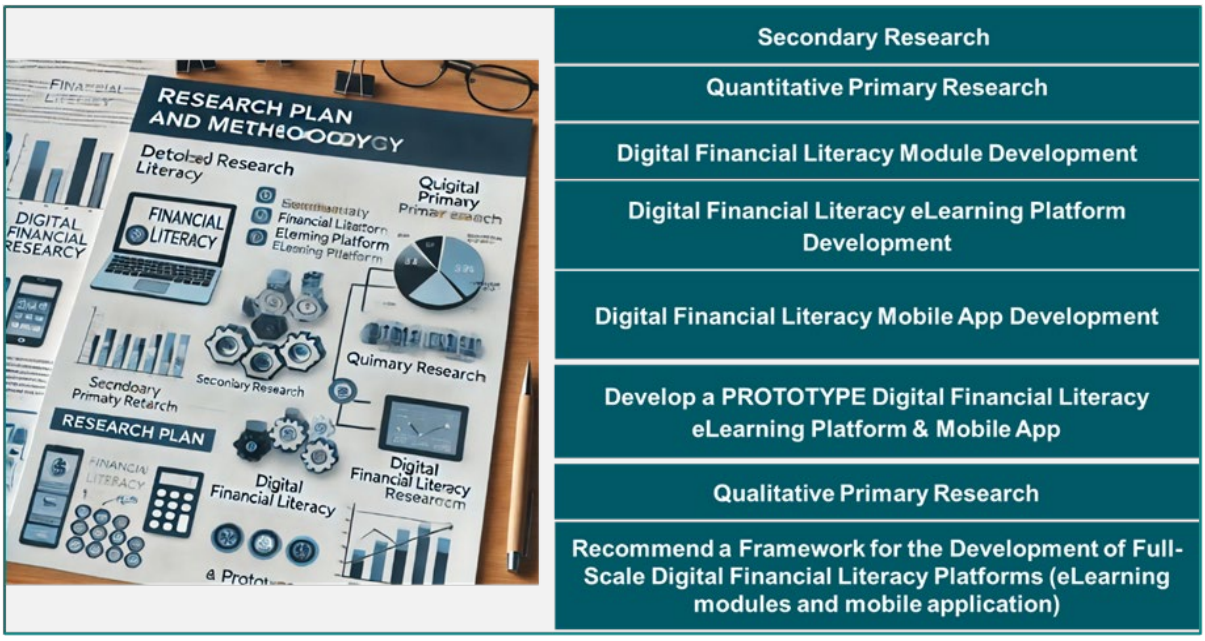
Figure 1.1: Triangulated research approach



As illustrated in figure 1.2, the feasibility study commenced with secondary research information, which was important to conceptualize and contextualize the nature and goals of the feasibility study. In addition, the secondary research information provided key insights into the effective design of the research instrument used in the primary quantitative research phase. To guide the development of the eLearning modules and digital financial literacy platforms, including a prototype eLearning platform and

mobile application, primary data was collected after the secondary research phase. An interactive prototype of the digital literacy eLearning platform and mobile application was developed following the design and development phase. During the qualitative research phase these prototypes were tested and evaluated. A suggested framework for the development of comprehensive digital financial literacy platforms was constructed based on the findings of each study phase. The research methodology and approach will be discussed in the subsequent sections of the report.

Figure 1.2: Research Plan and Methodology for Feasibility Study



As mentioned, some auxiliary deductive and secondary research was done to further complement the outcome of the feasibility study. For this purpose, the overall research design was guided by a structured roadmap for introducing an innovative Digital Financial Literacy eLearning solution. The roadmap encompassed multiple strategic phases, commencing with the feasibility study, which was followed by subsequent phases to address critical implementation and sustainability factors necessary for the platform's long-term success.

1.5 FRAMEWORK TO DEVELOP DIGITAL FINANCIAL LITERACY PLATFORMS

Based on the objective of the study, a detailed framework outlining the approach to the development of digital financial literacy platforms is being presented in figure 1.3. The framework served as a roadmap, guiding the data collection and development process and ensuring that the final outcomes meet the objective of the study and needs of the FSCA.

Figure 1.3: Framework to Develop Digital Financial Literacy Platforms

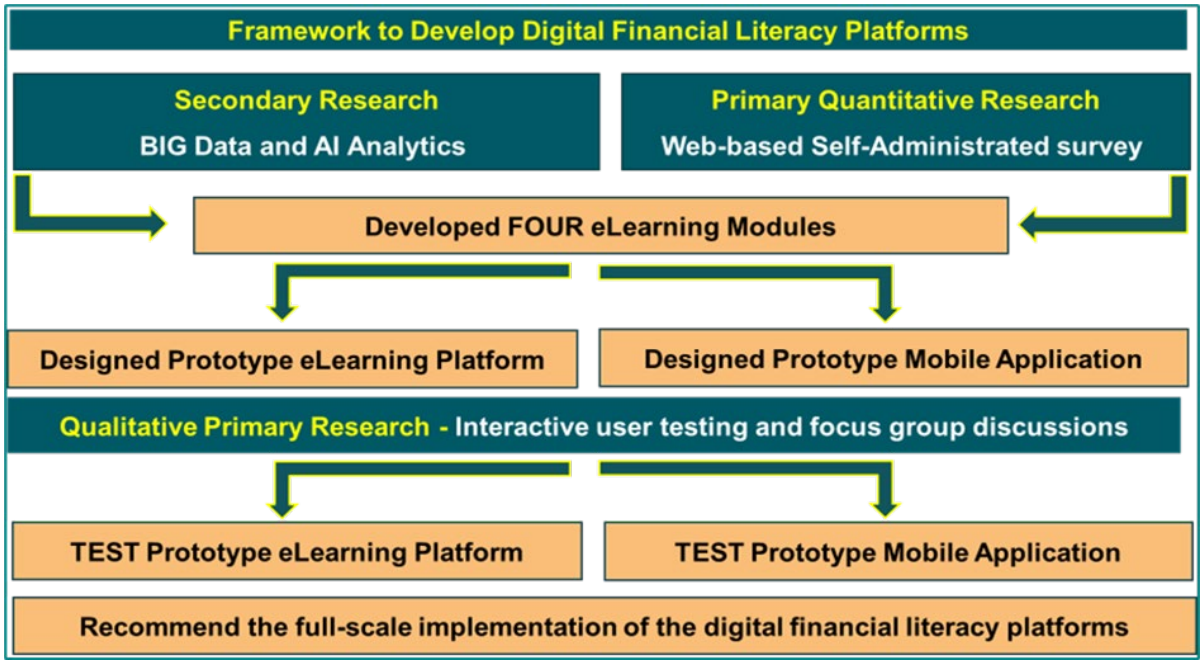
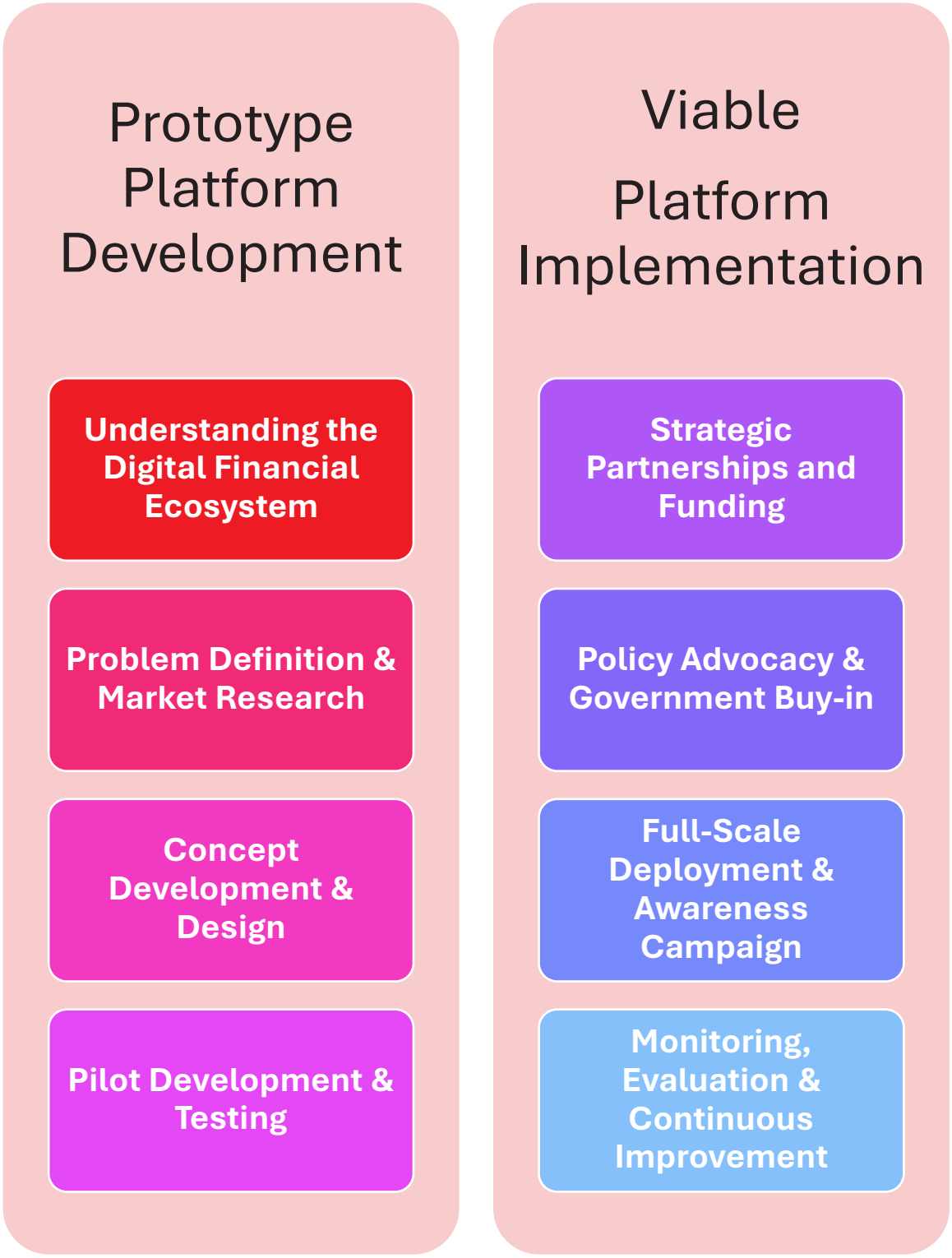


Figure 1.3 displays the framework for developing digital financial platforms. Guided by the structured roadmap for introducing an innovative and viable Digital Financial Literacy eLearning solution, figure 1.4 also scopes the post-implementation stages of the platforms. Adding this dimension presents a more balanced framework to ensure that the recommended Digital Financial Literacy eLearning Platform and Application remains sustainable, scalable and impactful in promoting financial awareness, knowledge and inclusion for all South Africans.

Figure 1.4: Framework for the development and implementation of a Digital Financial Literacy eLearning solution



1.6 ETHICAL CONSIDERATIONS

The study was ethically approved by the Research Ethics Review Committee (RERC) of the Bureau of Market Research (Pty) Ltd (BMR) at Unisa. The BMR closely adheres to all relevant national legislation including the Protection of Personal Information Act (POPIA or the PoPI Act), which governs the law of data protection and privacy in South Africa. Likewise, the BMR is a corporate member of the Southern African Market Research Association (SAMRA) and concurrently are guided by SAMRA standards of ethical and professional research conduct and guidelines for research involving adults and children.

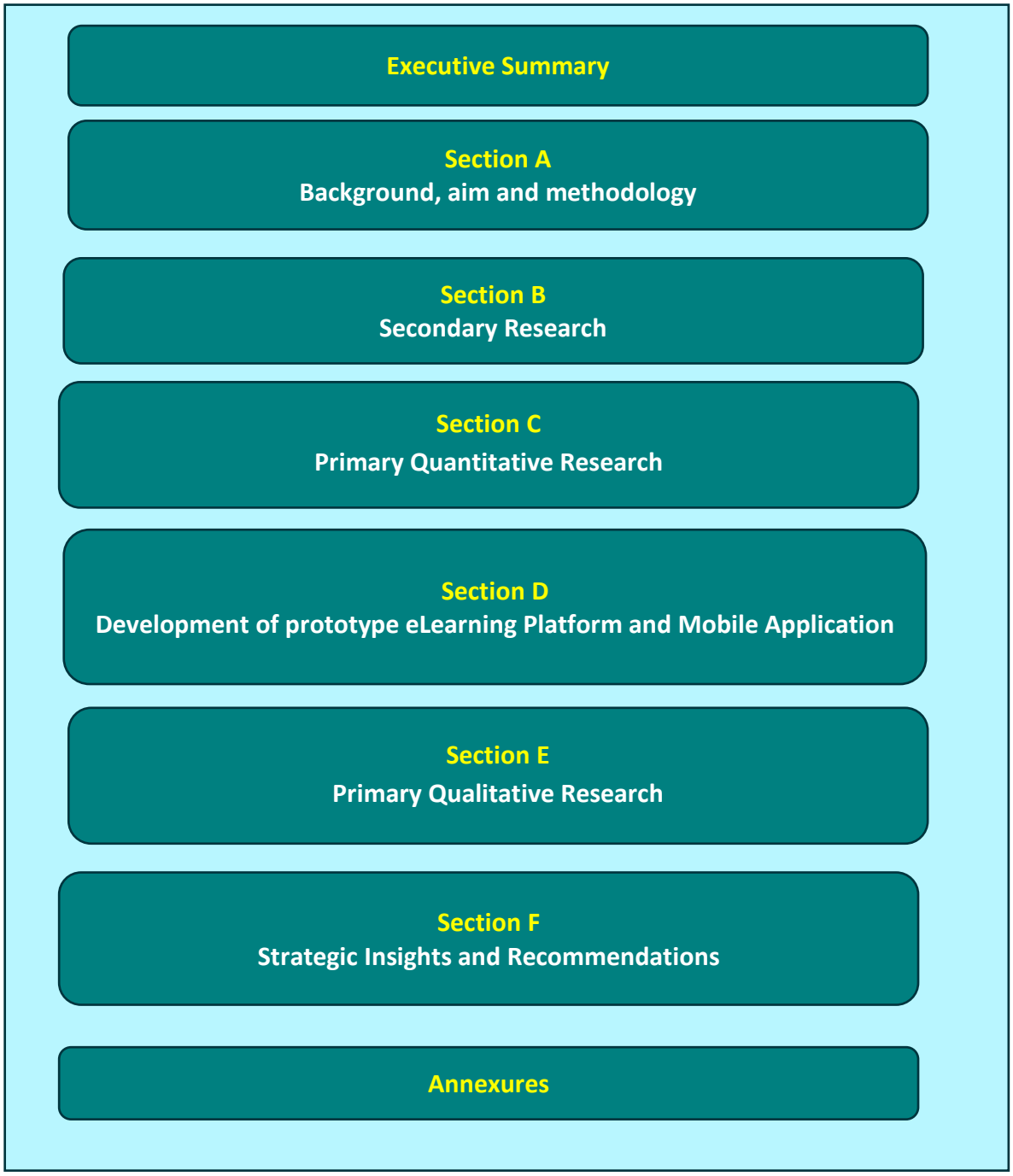
All potential participants (data subjects) selected for the feasibility study were presented with a letter of introduction, signed by the project overseer from the FSCA and the CEO of the BMR, including the contact details of the project leaders. This letter introduced the potential participant to the research study, highlighting the main aim of the study and the anticipated outcome. Furthermore, potential participants were advised that their participation was voluntary, confidential and anonymous. The letter of introduction is shown in Annexure A.

Before participating in the study, all participants were required to provide consent, which is a fundamental ethical prerequisite.

1.7 STRUCTURE OF THE REPORT

This report includes the eight parts as displayed in figure 1.5.

Figure 1.5: Report structure



SECTION B: SECONDARY RESEARCH

2.1 INTRODUCTION

The secondary research review aimed to gain insights into the current financial literacy and digital financial landscapes by focusing on government and non-governmental initiatives and the role that financial institutions and FinTech companies play in promoting digital financial literacy. Furthermore, an online literature review of existing information related to financial literacy, digital financial literacy, financial education and financial technology will be discussed in this section. The scope of the secondary research also features an investigation of the financial and digital financial literacy landscapes and Big Data analytics related to the study topic.

Collectively, the insights gained through the secondary research were crucial to providing conceptual and contextual knowledge and identifying gaps in existing information that can be used to guide the design and development of the primary research model, which further guides the design, development and testing of elective digital solutions.

When considering the national imperative of financial inclusion and empirical research evidence showing low financial literacy levels in South Africa, the educational content areas covered in the digital financial literacy e-learning module had to be kept simple but smart (concise, innovative and rewarding), with the main aim of advancing basic digital financial literacy knowledge, skills and behaviours.

Big Data Analyses as well as frameworks are also included to guide the design, development and testing of effective and impactful digital solutions which will confidently guide the future implementation, funding, marketing, monitoring and evaluation strategies of the FSCA to maintain and sustain lucrative digital content and eLearning/application platforms beneficial to the national cause of long-term digital financial literacy advancement, sustainable financial well-being and life-long learning.

To contextualize the nature and intent of the FSCA study, it was imperative form the onset of the study to understand the role of the FSCA within the context of digital financial literacy and its statutory mandate. In this regard, the FSCA was established by the Financial Sector Regulation Act 9 of 2017 (the FSR Act) to become a dedicated market conduct authority replacing the Financial Services Board (FSB), in 2018. The FSCA is mandated to:

- Enhance and support the efficiency and integrity of financial markets.
- Protect financial customers by:
    a. promoting fair treatment of financial customers by financial institutions; and
    b. providing financial customers and potential financial customers with financial education programs and otherwise promoting financial literacy and the ability of financial customers and potential financial customers to make sound financial decisions.
- Assist in maintaining financial stability[8].

Considering the mandate of the FSCA and recent global and local developments, including the COVID-19 pandemic, it has now, more than ever, become essential to strengthen financial literacy within the South African context. Efforts to promote financial literacy have been undertaken by various stakeholders including the government, financial institutions, non-governmental organisations and educational institutions. Available information confirms that financial education initiatives in South Africa cover a wide range of topics including budgeting, saving, investing, debt management, insurance, retirement planning and consumer rights.

[8] Financial Sector Regulation Act 9 of 2017. Accessed online at: https://www.gov.za/sites/default/files/gcis_document/201708/4106022-8act9of2017finansectorregulationa.pdf

Also, the growing digital landscape in the world and within South Africa, as well as the increased use of digital technologies, have resulted in the digitalisation of financial products, services and providers, which further advances the need for digital financial literacy and education. Financial technology (FinTech) innovations have the potential to increase financial inclusion by reaching underserved populations who may have limited access to traditional banking services, reduce costs, improve efficiency and foster innovation and competition in the financial industry. Therefore, digital financial literacy is essential in the current digital age, which also underscores the importance and relevance of the digital financial literacy feasibility study.

2.2 RESEARCH METHODOLOGY

The secondary research phase commenced in February 2024 and included the identification and sourcing of relevant data and information obtained from varied online sources. The main sources of information/data included scientific journal articles, credible research reports, commercial and organisational reports, publications from national and international organisations as well as textbooks, Big Data and AI analytics.

The online literature search was guided by the key research objective, which aim to develop and test digital financial literacy platforms which, if successful, are anticipated to improve digital financial literacy and education among existing and potential financial customers in South Africa. Key search terms included, amongst others, 'financial literacy', 'digital financial literacy', 'financial education', 'digital financial services', 'digital financial products'', 'FinTech' and 'financial wellness'.

2.3 KEY DEFINITIONS

When considering the information presented in the report, it is important to take note of the following key definitions which are presented in exhibit 2.1.

Exhibit 2.1: Key definitions relevant to the study

Financial Literacy	✓ The OECD defines **financial literacy** as a combination of '*financial awareness, knowledge, skills, attitudes, and behaviours necessary to make sound financial decisions and ultimately achieve financial wellbeing*.'[9]
Digital Financial Literacy	✓ According to the OECD, **digital financial literacy** can be defined as *a combination of knowledge, skills, attitudes and behaviours necessary for individuals to be aware of and safely use digital financial services and digital technologies with a view to contributing to their financial well-being*.[10]
Financial Education	✓ The OECD defines **financial education** as '*the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being*'.
FinTech	✓ Technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services.[11]

In summary, financial literacy is the foundation for making sound financial decisions, while digital financial literacy focuses on leveraging digital tools and technologies to manage finances effectively in the digital age. FinTech plays a critical role in driving innovation and expanding access to financial services, thereby enhancing financial literacy and empowering individuals to achieve their financial goals. Within the context of the primary aim of the study, ***the development of the elected digital financial***

9 OECD/INFE (2023). International Survey of Adult Financial Literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

10 OECD (Website). Accessed online at: https://www.oecd.org/about/#:~:text=The%20Organisation%20for%20Economic%20Co,and%20well%2Dbeing%20for%20all.

11 Salzus & Bick (2022). Factors that Influence Fin Tech Adoption in South Africa: A Study of Consumer Behaviour towards Branchless Mobile Banking. Athens Journal of Business & Economics – Volume 8, Issue 1, January 2022 – Pages 43-64.

literacy eLearning platform and the FinTech (financial technology) application will require combining elements of finance, technology and education to create user-friendly digital platforms to assist consumers to improve their financial knowledge and skills and concurrently enhance their consumer 'financial' experience across digital touchpoints.

2.4 UNCOVERING FINANCIAL LITERACY, DIGITAL FINANCIAL LITERACY AND FINANCIAL TECHNOLOGY

The meaning of the terms 'financial literacy', 'digital financial literacy' and 'financial technology' are explored in this section. The section commences with an overview of the components of financial literacy and then proceeds to unravel financial literacy theoretical frameworks. This discussion precedes an exposition of the benefits of financial literacy, followed by an exploration of the meaning of digital financial literacy. A multidimensional framework to organise financial literacy, digital literacy and digital financial literacy is further presented to reflect on the linkages between and across the different types of literacy.

2.4.1 Defining and conceptualising financial literacy

Financial literacy is recognised at a global level as a core life skill in the 21st century[12]. Considering the recent global developments, financial literacy has now, more than ever, become essential to support the financial well-being of individuals and households. These global developments include the COVID-19 pandemic, Russia's invasion of Ukraine and the Israel and Palestine conflict which all had far-reaching economic impacts[13]. Besides the adverse impact on the economy, the COVID-19 pandemic accelerated the uptake of technology and the spread of digital financial services, which further underscores the need for individuals to have adequate financial

[12] OECD/INFE (2023) International Survey of Adult Financial Literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

[13] OECD/INFE (2023) International survey of adult financial literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

knowledge and skills to safely make use of digital financial products and services[14]. Apart from the advent of globalisation and technological advancement, factors such as economic uncertainty, increasing life expectancy and retirement planning, the complexity of financial products, personal debt levels, personal empowerment (achieving financial dependence) and digital transformation by businesses (aimed to leverage digital channels and technologies to deliver personalised, seamless and convenient interactions with customers), have collectively resulted in a renewed focus and increased demand for financial knowledge and skills. According to Lusardi (2019), on average, only about one-third of the global population is familiar with the basic concepts that underlie everyday financial decisions[15]. This shows low levels of financial literacy even in advanced economies with well-developed financial markets.

A methodological review by Lyons and Kass-Hanna (2021) [16] confirms that there is no standard definition for the term 'financial literacy' or standard measurement to determine levels of financial literacy among individuals. However, in most instances, reference is made to the definition provided by the Organisation for Economic Cooperation and Development (OECD). The OECD defines **financial literacy** as a combination of *"financial awareness, knowledge, skills, attitudes and behaviours necessary to make sound financial decisions and ultimately achieve financial wellbeing"*[17]. The three key components that constitute the OECD's definition of financial literacy are as follows:[18]:

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14 OECD/INFE (2023) International Survey of Adult Financial Literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

15 Lusardi (2019). Financial literacy and the need for financial education: evidence and implications. Swiss Journal of Economics and Statistics 155:1

16 Lyons AC and Kass-Hanna, J (2021) A methodological overview to defining and measuring "digital" financial literacy Financial Planning Review. 2021;4:e1113.

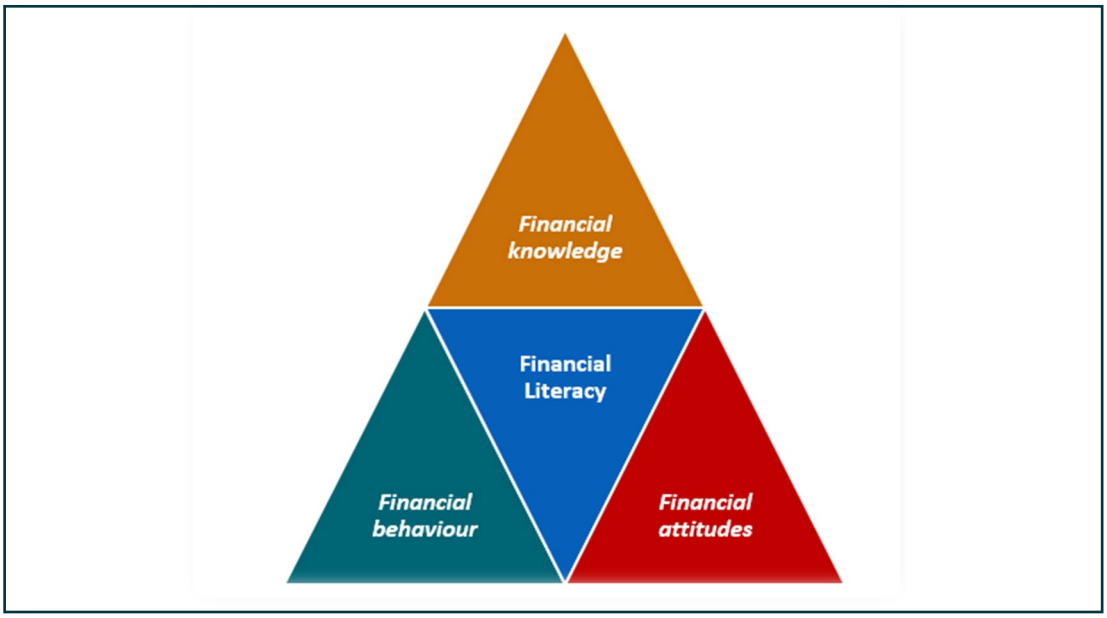
17 OECD/INFE (2023) International Survey of Adult Financial Literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

18 OECD/INFE (2023) International Survey of Adult Financial Literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

- *Financial knowledge*: Having a basic knowledge of financial concepts and the ability to apply numeracy skills in financial contexts.
- *Financial behaviour*: The behaviours and actions of individuals which affect their financial situation and well-being in both the short- and long-term.
- *Financial attitudes*: Even if an individual has the knowledge and ability to act in a particular way, their attitudes towards money also influence their decisions and behaviours.

The configuration of the three components defining financial literacy is being presented in figure 2.1.

Figure 2.1: Components defining financial literacy



It is imperative to also consider the theoretical frameworks underpinning the concept 'financial literacy', as these theoretical frameworks serve as a guide to interpret and further develop an understanding of the concept. According to Nanziri and Leibbrandt

(2018), the theoretical frameworks underpinning financial literacy are diverse and integrated[19], as depicted in figure 2.2.

Figure 2.2: Financial Literacy Theoretical Frameworks



- **Development psychology theories** suggest that financial literacy is not taught, but is shaped by an individual's upbringing, emotions and interactions in life.
- **Exchange theory** suggests that the level of financial literacy will depend on the level of knowledge exchange and interactions.
- **Learning theory**, financial literacy is linked to habit formation, whereby reinforcement or punishment determines the continuity of action. An individual can therefore learn and master financial skills if he/she is positively rewarded.
- **Capability theory** summarises these arguments by showing that an individual's capability is a combination of personal capabilities (e.g. cognitive ability and personality traits) and external factors. The absence of external support can inhibit the financial performance of individuals, even when they possess the relevant skills[20].

[19] Nanziri, E.L. & Leibbrandt, M. (2018) Measuring and profiling financial literacy in South Africa. South African Journal of Economic and Management Sciences 21(1), a1645. https://doi.org/ 10.4102/sajems.v21i1.1645

[20] Nanziri, E.L. & Leibbrandt, M. (2018) Measuring and profiling financial literacy in South Africa. South African Journal of Economic and Management Sciences 21(1), a1645. https://doi.org/ 10.4102/sajems.v21i1.1645

- **Social learning theory** furthermore assists in framing research in the field of financial literacy, particularly the assessment thereof[21]. Considering this fact, educational assessments measuring financial literacy abilities are often set within relevant social settings with real-world considerations to advance the financial literacy of the users of the developed program.

Based on the review, financial literacy involves financial knowledge, self-efficacy (confidence in one's capacity to manage your finances), financial attitudes and motivation required to promote sound financial behaviour in pursuit of sustainable financial well-being[22,23]. Simply stated, financial literacy empowers people to craft their finances to manage their expenses and ultimately prepare for their post-retirement years[24]. Financial literacy is the understanding and application of a wide range of financial skills[25] that help people with personal money management, including everyday financial behaviours, including spending and budgeting as well as long-term financial decisions, such as saving, investing and borrowing[26].

Benefits of Financial Literacy

Besides the benefits for an individual to be financially literate, which includes taking charge of their finances, building wealth, becoming financially independent and better risk management, financial literacy is also beneficial for an economy as it:[27]

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21 Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, *45*(1), 80– 105. https://doi.org/10.1111/ijcs.12605.

22 McCoy, M. A., White, K. J., & Love, K. (2019). Investigating the financial overconfidence of student-athletes. Sport, Business and Management, 9(4), 381– 398. https://doi.org/10.1108/SBM-10-2018-0091

23 Warmath, D., & Zimmerman, D. (2019). Financial literacy as more than knowledge: The development of a formative scale through the lens of bloom's domains of knowledge. Journal of Consumer Affairs, 53(4), 1602–1629. https://doi.org/10.1111/joca.12286

24 Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. International Journal of Consumer Studies, 45(1), 80– 105. https://doi.org/10.1111/ijcs.12605.

25 Nawang, W. R. W., & Shukor, S. A. (2023). Digital Financial Literacy Among Young Adults in Malaysia. International Business Education Journal, 16(2), 115-126.

26 Koskelainen, T., Kalmi, P., Scornavacca, E., & Vartiainen, T. (2023). Financial literacy in the digital age—A research agenda. Journal of Consumer Affairs, 57(1), 507-528.

27 Pratley, C. (2023). 7 Reasons Why Financial Literacy is Important for People in the GCC. https://nowmoney.me/blog/why-is-financial-literacy-important/#:~:text=individuals%20and%20governments.-,Why%20is%20financial%20literacy%20important%3F,promotes%20economic%20growth%20and%20development.

- **Aids financial inclusion:** Financial education aids in facilitating access and encourages the use of financial products and services. By promoting financial inclusion and equity, financial literacy contributes to a more just and equitable society where everyone can thrive.

- **Promotes economic growth and stability**: Financial literacy is not only beneficial for individuals but also essential for promoting economic growth and stability at the societal level. A financially literate population is better equipped to participate in the economy, contribute to productivity and drive innovation and entrepreneurship. Moreover, financial literacy reduces reliance on social safety nets and public assistance programs by empowering individuals to build assets, generate income and plan for retirement, thereby easing the burden on government resources.

- **Addresses socio-economic inequality**: Financial literacy plays a crucial role in addressing socio-economic inequality by providing individuals with the tools and knowledge they need to overcome financial barriers and achieve upward mobility. Access to financial education and resources can level the playing field and empower marginalised communities to build wealth and economic resilience.

Given its benefits, the importance of financial education and financial literacy at all levels of the socio-economic strata of South Africa cannot be overemphasised[28].

[28] Mbukanma I, Rena R & Prinsloo JJ (2019). The National Strategy on Financial Literacy: A Conceptual Review of South African Perspectives. Journal of Reviews on Global Economics, 2019, *8,* 1121-1134

2.4.2 Defining and conceptualising digital financial literacy

Digital financial literacy is a specific area of overall financial literacy, that has received increasing attention, especially after the COVID-19 pandemic. The increased use of digital technology resulted in the digitalisation of financial products, services and providers, which further advances the need for digital financial literacy and education[29]. The internet provides individuals with easy access to vast amounts of information on financial topics, while digital platforms allow individuals to learn about finances at their own pace. The digital space also offers a wide range of resources (i.e. interactive tools, calculators, podcasts and social media groups) for financial education which are cost-effective (low-cost or free). Furthermore, advancements in Financial Technology (FinTech) have made it easier for individuals to access and manage their finances. Advancements in financial technology revolutionized the way financial services are delivered, accessed and managed. Some of the notable advancements in FinTech include mobile payments, digital wallets, blockchain technology and cryptocurrencies.

The OECD defines **digital financial literacy** as *a combination of knowledge, skills, attitudes and behaviours necessary for individuals to be aware of and safely use digital financial services and digital technologies to contribute to their financial well-being*[30]. Digital financial literacy is essential in the current digital age. Individuals must develop the necessary skills and knowledge to navigate the digital financial landscape effectively. Financial literacy is needed for individuals to be able to not only leverage the benefits of digital financial literacy but also to recognise the potential risks associated with the diffusion of such innovations[31]. It is on these premises that any efforts to improve an individual's financial competency need to encourage and

[29] Nawang, WRW & Shukor SA (2023). Digital Financial literacy among Young Adults in Malaysia. International Business Education Journal, 16(2), 115-126.

[30] OECD/INFE (2023) International Survey of Adult Financial Literacy. Accessed online at: https://www.oecd-ilibrary.org/docserver/56003a32-en.pdf?expires=1707288990&id=id&accname=guest&checksum=8F1F59685C98ED2E3D0469AB64ACE069

[31] Koskelaine, T, Kalmi, P, Scornavacca, E & Vartiainen, T (2023). Financial literacy in the digital age – A research agenda. Journal of Consumer Affairs, 57(1), 507-528.

facilitate the advancement of financial literacy skills, which should encompass digital financial education and practices[32]. Expanding financial literacy education and practices to include skills necessary to use technology are as crucial as reading, writing and numeric competence in today's digital economy[33]. Koskelainen et al (2023)[34] affirm that individuals should have an adequate combination of both digital and financial literacy to be able to update their skill set as needed.

A multidimensional framework depicting financial literacy, digital literacy and digital financial literacy along with five core dimensions is provided by Lyons and Kass-Hanna (2021)[35] (see table 2.1. These authors also attempted to expand these dimensions. Moreover, table 2.2 shows how each area of digital financial literacy can be defined individually within a multidimensional framework, while also showing the linkages between and across the different types of digital financial literacy.

[32] Golden, W & Cordie, L (2022). Digital Financial Literacy. Adult Literacy Education, 4(3), 20-26.
[33] Golden, W & Cordie, L (2022). Digital Financial Literacy. Adult Literacy Education, 4(3), 20-26
[34] Koskelaine, T, Kalmi, P, Scornavacca, E & Vartiainen, T (2023). Financial literacy in the digital age – A research agenda. Journal of Consumer Affairs, 57(1), 507-528.
[35] Lyons, AC & Kass-Hanna, J (2021). A multidimensional approach to defining and measuring financial literacy in the digital age. In The Routledge handbook of financial literacy (pp.61-76). Routledge.

Table 2.1: Analogy and Linkages across Multidimensional Frameworks for Financial Literacy, Digital Literacy and Digital Financial Literacy Analysis

Dimensions	Financial literacy (FL)	Digital literacy (DL)	Digital financial literacy (DFL)
Basic knowledge and skills	Basic financial concepts *(numeracy, compound interest, inflation, risk diversification).*	Basic digital skills *(knowledge of digital devices – computer, tablet, mobile phone and internet).*	**Basic financial and digital knowledge.**
Awareness (the knowing about)	Awareness of available financial products and services *(payments, deposits and savings, credit, risk management and insurance, investments)* and awareness of positive financial attitudes and behaviours *(budgeting, saving, responsible borrowing, preparing for emergencies and retirement).*	Awareness of available digital solutions and applications *(online research and communication tools, online entertainment, e-shopping, virtual education, telework, telemedicine).*	Awareness of available DFS *(digital payment tools such as mobile money and digital wallets, online banking, peer-to-peer lending and remittance services)* and **awareness of positive financial attitudes and behaviours.**
Practical know-how (the knowing how)	Ability to use financial services *(know how to make payments, how to open a bank account, etc.).*	Ability to use digital applications, platforms and software *(know how to search for information online, use email, social media and networking, download music, videos and games, learn, shop online, etc.).*	Ability to make digital financial transactions *(know how to use mobile money applications – navigate menus, make and cancel transactions, correct transaction errors, access peer-to-peer lending, use online banking, etc.).*
Decision-making (attitudes and behaviours)	Ability to make appropriate financial decisions, reflective of attitudes and behaviours *(decide to put money aside and choose reliable deposit and saving services, borrow responsibly and select appropriate lenders, etc.).*	Ability to make appropriate digital decisions, reflective of attitudes and behaviours *(decide to use digital tools to improve knowledge, skills and communication, take advantage of new opportunities, etc.).*	Ability to make appropriate financial decisions, reflective of attitudes and behaviours, using DFS *(decide to put money aside and choose reliable DFS, use DFS to send remittances safely, rely on peer-to-peer lending, etc.).*
Self-protection	Ability to avoid misleading financial information and advice, abusive practices and frauds.	Ability to protect devices, personal data and privacy *(avoiding identity and data theft, hacking attacks, etc.).*	Ability to detect and avoid online scams and frauds associated with DFS.

Table 2.2: Digital Financial Literacy Multidimensional Framework – Dimensions, Subdimensions and Indicators

Dimensions	Subdimensions	Indicators
Basic knowledge and skills	**Basic financial knowledge**	• Numeracy. • Compound interest (2 items). • Inflation. • Risk diversification.
	Basic digital knowledge	• Basic knowledge of hardware (mobile phone, computer, tablet): - turning on/off and charging devices. - locking devices. • Basic knowledge of software: - creating user account, managing password and logging in. - using privacy settings.
Awareness **(the knowing about)**	**Awareness of available DFS**	• Knowing about existing providers of DFS. • Knowing about the specific purpose and usage of available DFS (digital payment, saving, lending and remittance).
	Awareness of positive financial attitudes and behaviours	• Knowing about the biases (present bias and other cognitive biases, etc.) that affect decision-making and the benefits of long-term planning. • Knowing about the risks of borrowing (over indebtedness, abusive and predatory lending practices). • Knowing where to seek financial information and advice • Knowing about positive financial behaviours (budgeting, saving, preparing for emergencies and retirement, responsible borrowing).

Table 2.2 (continued): Digital Financial Literacy Multidimensional Framework – Dimensions, Subdimensions and Indicators

Dimensions	Subdimensions	Indicators
Practical know-how (the knowing how)	**Practical know-how of operating DFS applications.**	• Knowing how to open an account on DFS applications or platforms. • Knowing how to navigate DFS menu. • Knowing how to initiate and complete a transaction. • Knowing how to correct errors and cancel a transaction.
Decision-making (attitudes and behaviours)	**Positive financial attitudes.**	• Managing day-to-day finances while setting future goals. • Preparing for emergencies and retirement. • Deciding to put money aside and save. • Making prudent and responsible borrowing decisions. • Sending remittances through reliable channels.
	Positive financial behaviours through DFS.	• Ability to select appropriate DFS for specific purposes (savings, remittances, borrowing). • Ability to select reliable DFS providers.
Self-protection	**Self-protection from online scams and frauds.**	• Ability to understand the terms and conditions related to DFS and avoid deceptive practices (e.g., unclear or unfair disclosure of fees, overcharging, subscription traps). • Ability to detect scams and frauds associated with DFS (e.g., identity and credential theft, malware, phishing attacks) and avoid their trap to protect data and financial resources.

Digital financial services offer various benefits such as offering convenient, faster, more secure and timely transactions, the opportunity to achieve broader financial inclusion by increasing the banked portion of society, broadening the range of financial service providers and the ability to use Big Data on consumer spending to advance financial literacy education[36]. However, financial literacy is needed for individuals to be able to recognise the potential risks associated with the diffusion of such innovations[37]. The risks include new types of fraud, a lack of security, privacy and confidentiality of data, rapid access to high-cost short-term credit and digital profiling to identify potential customers taking advantage of uncertain consumers in a digital environment[38].

2.4.3 **Defining and conceptualising financial technology (FinTech)**

FinTech refers to financial technology, which is the fusion of finance and technology. It is about the introduction of new technologies into the financial sector and it is transforming the financial industry globally [39]. According to Slazus and Bick (2022), FinTech can be broadly defined as *"technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services"[40].* The scope of activity in FinTech started with mobile payments, money transfers, peer-to-peer loans and crowdfunding, spreading to the newer world of blockchain, cryptocurrencies and robo-investing[41]. Despite the proliferation of complicated financial products and services, many of them have proven difficult to comprehend for financial customers, which emphasises the importance of effective digital financial education[42]. Therefore, effective financial education is crucial because

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36 OECD (2018). G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy. Access online at: https://web-archive.oecd.org/2021-04-21/585814-g20-oecd-infe-policy-guidcance-digitalisation-finaical-literacy-2018.htm

37 Koskelaine, T, Kalmi, P, Scornavacca, E & Vartiainen, T (2023). Financial literacy in the digital age – A research agenda. Journal of Consumer Affairs, 57(1), 507-528.

38 OECD (2018). G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy. Access online at: https://web-archive.oecd.org/2021-04-21/585814-g20-oecd-infe-policy-guidcance-digitalisation-finaical-literacy-2018.htm

39 Goldstein (2019). To FinTech and Beyond. The Review of Financial Studies. V 32 n 5.

40 Slazus & Bick (2022). Factors that Influence Fin Tech Adoption in South Africa: A Study of Consumer Behaviour towards Branchless Mobile Banking. Athens Journal of Business & Economics – Volume 8, Issue 1, January 2022 –Pages 43-64

41 Goldstein (2019). To FinTech and Beyond. The Review of Financial Studies. V 32 n 5.

42 Lusardi A & Mitchell, OS (2014). The economic importance of financial literacy: Theory and evidence. Journal of Economy Literature, 52 (1), 5-44. https://doi.org/10.1257/jel.52.1.5.

consumers are surrounded by an ecosystem of digital financial services, which includes digital money as well as online and mobile financial services[43]. Considering the proliferation of FinTech products and services it is anticipated that there is also a growing number of FinTech users entering the market[44]. Nonetheless, FinTech adoption, by digitally active consumers, tends to be higher in developing markets. Slazus and Bick (2022) argue that the reason for this high adoption rate in developing markets is twofold. Firstly, FinTech firms are successfully targeting tech-literate consumers, thereby minimising budgetary and resource wastage and trying to convert non-responsive audiences. Secondly, FinTech firms are offering products to the financially underserved population of which there are proportionally higher ratios in emerging countries[45]. Notably, FinTech also poses challenges that need to be addressed to ensure consumer protection and stability of the financial system[46]. Panos and Wilson (2020) provided evidence that mobile users are more likely to engage in impulsive purchasing behaviour and consequently often tend to choose undesirable financial situations as a result. It was shown that mobile loan products are often too accessible and allow fleeting preferences to be acted upon immediately, usually resulting in poor choices[47].

The opportunities for fraud and cybercrime are increasing as digital channels and products expand and the rapid adoption of new technology by financial services providers can introduce systemic risk when the technology fails[48]. Consumers will need to have increasing financial sophistication knowledge to make effective use of FinTech products and avoid fraud and costly mistakes[49]. Some examples of FinTech financial

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43 Koskelaine, T, Kalmi, P, Scornavacca, E & Vartiainen, T (2023). Financial literacy in the digital age – A research agenda. Journal of Consumer Affairs, 57(1), 507-528.

44 Slazus & Bick (2022). Factors that Influence Fin Tech Adoption in South Africa: A Study of Consumer Behaviour towards Branchless Mobile Banking. Athens Journal of Business & Economics – Volume 8, Issue 1, January 2022 –Pages 43-64

45 Slazus & Bick (2022). Factors that Influence Fin Tech Adoption in South Africa: A Study of Consumer Behaviour towards Branchless Mobile Banking. Athens Journal of Business & Economics – Volume 8, Issue 1, January 2022 –Pages 43-64

46 Genesis Analytics (“Genesis’’). Fintech Scoping in South Africa. October 2019.

47 Panos GA & Wilson JOS. (2020). Financial literacy and responsible finance in the FinTech era: capabilities and challenges. March 2020. European Journal of Finance 26(4-5):297-301

48 Genesis Analytics (“Genesis’’). Fintech Scoping in South Africa. October 2019.

49 Morgan, Huang, and Trinh, (2019). The Need to Promote Digital Financial Literacy for the Digital Age. Accessed online at: https://t20japan.org/policy-brief-need-promote-digital-financial-literacy/

education applications available in South Africa offering various features to help users manage their finances, make informed decisions and build better financial habits are summarised in exhibit 2.3. Some FinTech applications cater to a broader audience, however, there are specific platforms and initiatives tailored to the needs of low-income individuals in South Africa. The examples of the FinTech financial education applications listed as numbers 11-14 in exhibit 2.3, are those available to low-income groups in the country.

Exhibit 2.3: Exemplars of FinTech financial education applications in South Africa

No	FinTech Applications	Description
1	22seven	22seven is a popular budgeting and investment app that helps users track their spending, set budgets and save money. It offers personalized insights and recommendations to help users make informed financial decisions.[50]
2	EasyEquities	EasyEquities is an investment platform that allows users to invest in shares, exchange-traded funds (ETFs) and other investment products. It offers educational resources and tools to help users learn about investing and growing their wealth.[51]
3	SatrixNOW	SatrixNOW is an online investment platform that offers a range of low-cost investment products, including index-tracking ETFs and unit trusts. It provides educational content and resources to help users understand investing and make informed investment decisions.[52]
4	Nomanini	Nomanini is a FinTech platform that offers financial services, including mobile banking, digital payments and microloans, to underserved communities in South Africa. It aims to improve financial inclusion and literacy among low-income individuals and small businesses.[53]
5	Livestock Wealth	Livestock Wealth is an agricultural investment platform that allows users to invest in livestock, such as cattle and sheep. It offers educational content and resources to help users understand agricultural investments and earn returns from livestock farming.[54]
6	Shyft	Shyft is a foreign exchange app that allows users to buy, store and send foreign currency. It offers educational content and tools to help users understand foreign exchange markets and manage their currency transactions effectively.[55]
7	Outvest	Initiated by Outsurance, Outvest offers goal-based advice and passive investment options through its website and app. There's a do-it-yourself digital front end, low fees and goal-based calculators, which help you work out how much to save to achieve your goals.[56]
8	Frank	This app was built to make investing simple and affordable with access to money market funds and the stock exchange.[57][58]

[50] https://www.22seven.com/
[51] https://www.easyequities.co.za/easyapps
[52] https://satrix.co.za/platform
[53] https://nomanini.com/
[54] https://livestockwealth.com/farmers-app/
[55] https://www.shyft.co.za/
[56] https://www.outvest.co.za/
[57] https://www.franc.app/
[58] https://www.franc.app/academy

Exhibit 2.3 (continued): Exemplars of FinTech financial education applications in South Africa

No	FinTech Applications	Description
9	InvestRight	This tool from Old Mutual is free and easy to use and can help you to determine how much you need to save and invest for specific financial goals such as retirement or tertiary education.[59]
10	Yoco	Yoco is a South African FinTech company that offers point-of-sale (POS) solutions and financial services to small businesses, including informal traders and micro-entrepreneurs in low-income communities. Yoco's platform provides tools for accepting card payments, managing inventory and accessing business insights to help entrepreneurs grow their businesses and improve their financial literacy.[60]
11	Nomanini	Nomanini is a FinTech platform that partners with informal retailers, such as spaza shops and street vendors, to provide financial services to underserved communities in South Africa. Nomanini's platform offers mobile banking, digital payments and microloan solutions, empowering entrepreneurs to access financial services and build their financial capabilities.[61]
12	MobiLife	MobiLife is a mobile insurance platform that offers affordable insurance products, such as funeral cover and life insurance, to low-income individuals in South Africa. MobiLife leverages mobile technology to make insurance accessible and affordable for underserved communities, while also providing financial education and literacy resources to help users understand the importance of insurance and financial planning.[62]
13	OZOW (formerly i-Pay):	OZOW is a payment platform that enables secure and convenient digital payments for online and offline transactions. OZOW's platform caters to individuals and businesses of all income levels, providing an alternative to traditional banking service and promoting financial inclusion through accessible payment solutions.[63]
14	JUMO	JUMO is a FinTech platform that partners with financial institutions and mobile network operators to offer digital financial services, including savings, credit and insurance, to underserved communities in Africa. JUMO's platform uses data analytics and machine learning to provide personalized financial products and educational content to help users make informed financial decisions.[64]

2.5 FINANCIAL LITERACY IN SOUTH AFRICA

This section presents a synopsis of the financial literacy levels in South Africa, which serves as a key indicator for the desire to develop and test an effective digital financial literacy eLearning module and digital financial literacy application. A baseline assessment according to financial literacy and behaviour domains compares the levels of financial knowledge for major developed and emerging economies in the world. Big Data analytics is also applied to reveal changing data patterns between 2019 and 2024

[59] https://www.oldmutualinvest.com/individual/our-solutions/making-informed-decisions/
[60] https://www.yoco.com/za/
[61] https://nomanini.com/
[62] https://landing.mobi.co.za/
[63] https://ozow.com/
[64] https://jumo.world/

regarding the interest in financial literacy among South Africans. To allow for a better exposition regarding the financial literacy landscape of South Africa this section also cites examples of various financial literacy initiatives, regulations, policies and strategies in South Africa which have emerged in the government and financial service sector in response to the need for improving financial knowledge and skills and to empower individuals to make informed financial decisions.

2.5.1 Financial literacy levels in South Africa

Financial literacy remains a significant challenge in South Africa, particularly among certain demographic groups. Economic inequality exacerbates financial literacy disparities, with marginalised communities often facing greater challenges in accessing and understanding financial information and services. The Global Findex 2021 database [65] indicates that 85% of adults in South Africa have an account with a financial institution or through a mobile money provider. It furthermore indicates that 60% of adults have borrowed money in the past year and only 18% of adults will find it easy to access emergency funds if needed. Furthermore, 68% of adults also indicated that they are worried about not having sufficient funds for old age[66].

The need for the necessary financial skills and knowledge among the South African adult population is driven by the four current trends that make financial literacy more important than it's ever been namely:

- Consumers are making more financial decisions.
- Consumers faced with myriad complex options.
- Consumers living longer.
- The world is changing.

[65] Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank.

[66] https://www.fanews.co.za/article/education-training-learnerships/42/general/1196/financial-literacy-the-gift-that-keeps-on-giving/27662

Most South Africans appear to lack basic financial knowledge and skills, including understanding concepts like budgeting, saving, borrowing and investing. This is showcased from survey data commissioned by the FSCA and fielded using the Human Sciences Research Council's South African Social Attitudes Survey (SASAS) research infrastructure in 2012, 2013, 2015, 2017 and 2020. The surveys consist of nationally representative samples, which means that the results reflect the views of South Africans aged 16 years and older [67]. The financial literacy metrics obtained from these surveys are based on a conceptual framework created by the OECD International Network on Financial Education (OECD/INFE). This framework groups financial literacy and behaviour into four domains, namely, financial control, financial planning, appropriate financial product choice and financial knowledge.

The average South African scored 52 on the overall Financial Literacy Index during the latest survey in 2020, with scores ranging from 0 to 100. This indicates a moderate level of knowledge and skills across the various financial domains. The domains of financial planning and financial product choices recorded the lowest scores and therefore should be regarded as the key areas where interventions could assist in increasing the average scores. Consumers are therefore susceptible to financial fraud, predatory lending and purchasing unsuitable financial goods and services as a result. Thus, a sizable portion of the adult population in the nation is still ill-equipped to make wise and appropriate financial decisions.

The results from the 2020 baseline survey[68] also indicated that financial literacy levels vary across different demographic groups, including age, gender, education level, income level and geographic location. Younger individuals, women, those with lower levels of education and residents of rural areas often exhibit lower levels of financial

[67] FSCA and HSRC (2022). Rands and Sense: Financial literacy in South Africa. [Online]. https://www.fscamymoney.co.za/Research Documents/01 FSCA Financial Literacy Overview (2022-05-31).pdf

[68] Roberts, B., Struwig, J., Gordon, S. & Radebe, T. (2021) Financial literacy in South Africa: results from the 2020 baseline survey. [Online]. https://www.fscamymoney.co.za/Research Documents/Financial Literacy in South Africa Results from the 2020 Baseline Survey.pdf

literacy. It was also shown that the average South African struggles the most with understanding financial concepts such as inflation and interest, lacks emergency funds and does not research appropriate financial products.

A recent comprehensive study conducted by Momentum/Unisa (2023) revealed that, in general, South African households overestimate their knowledge of personal financial matters. The study further showed that, when determining the self-assessment of financial literacy against the actual measurement of financial literacy, 45.7% of the 19.2 million households considered themselves to be financially literate, whereas only 15% were found to be financially literate[69]. The outcome of this study supports the baseline assessment findings and highlights the urgency of the need for financial literacy education.

With the aid of the 2022 OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion, approximately 39 economies and nations - including 20 OECD Member countries and 8 G20 countries - participated in a third round of the OECD/INFE international survey of adult financial literacy levels. The average financial literacy score across all participating countries and economies was 60 out of 100 points[70]. Financial knowledge differs vastly between the major developed and emerging economies in the world (see figure 2.3). Financial knowledge was measured using similar questions to those used in the baseline study for South Africa, where South Africa recorded an average of 51 out of 100 points[71]. The average financial knowledge score across all participating countries and economies in the OECD/INFE survey was 63 out of 100 points, with the highest levels recorded among adults in Hong Kong, China (91 points), Germany (85 points) and Estonia (78 points)[4].

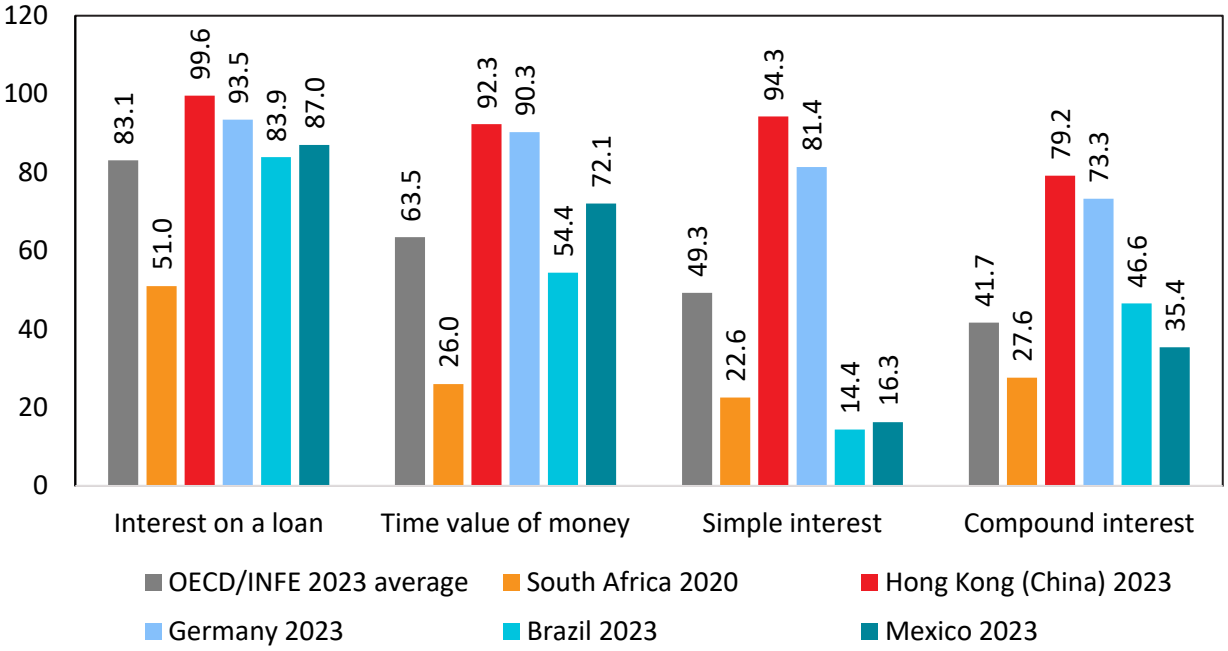
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69 Momentum, and Unisa, 2023, Household Financial Wellness Index towards the Science of Financial Success Household Finance Insights Report. Pretoria. Accessed online at: https://www.momentum.co.za/momentum/about-us/unisa-science-of-success-research/household-financial-wellness-index

70 OECD (2023). OECD/INFE 2023 international survey of adult financial literacy

71 Roberts, B., Struwig, J., Gordon, S. & Radebe, T. (2021) Financial literacy in South Africa: results from the 2020 baseline survey. [Online]. https://www.fscamymoney.co.za/Research Documents/Financial Literacy in South Africa Results from the 2020 Baseline Survey.pdf

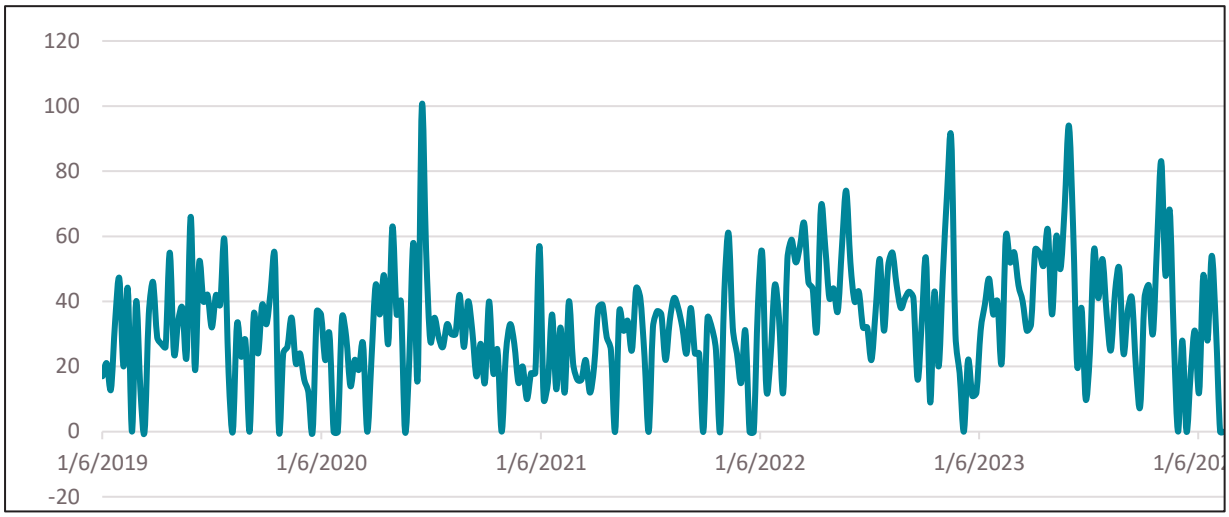
Figure 2.3: Financial Knowledge Questions Comparison



2.5.2 Interest in financial literacy

Findings from Google Trends covering the period 2019 to 2024 reveal that there is no clear growth pattern in the interest of South Africans in financial literacy but that such interest shows a fluctuating pattern (see figure 2.4 below).

Figure 2.4: Interest in Financial Literacy, 2019 – 2024



2.6 RECOGNISING AND RESPONDING TO THE IMPORTANCE OF FINANCIAL LITERACY

Various financial literacy initiatives in South Africa have emerged as a response to the need for improving financial knowledge and skills among the population. The initiatives have been spurred by government institutions and departments, supported through regulations, policies and strategies, as well as financial service providers, associations and organisations aiming to empower individuals with the necessary knowledge and tools to make informed financial decisions.

2.6.1 Financial education regulations, policies and strategies

In a policy document titled "***A Safer Financial Sector to Serve South Africa Better***," the National Treasury delineated the country's intended regulatory reform for the financial sector in February 2011. This reform's policy objectives included fighting financial crime, preserving financial stability, improving consumer protection and making sure financial services are appropriate, accessible and affordable[72].

The ***National Consumer Financial Education Strategy***[73] sets out four objectives to support the vision of increasing the financial capability and financial well-being of all South Africans. These four objectives focus on **financial control** (managing current expenditure), **financial planning** (managing future income and expenditure), **product choice** (choosing the right financial product) and **financial knowledge**. The strategy also emphasises that multiple stakeholders have the shared responsibility for providing and promoting consumer financial education.

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[72] FSCA (2023). About Money Smart Week. https://www.mswsa.co.za/SitePages/About.aspx

[73] National Treasury (2013). National Consumer Financial Education Strategy. Accessed online at: https://www.fscamymoney.co.za/Legislation%20Strategy%20and%20Policy/National%20consumer%20financial%20education%20strategy%20(23%20Aug%2020.pdf

The ***Financial Sector Code*** was gazetted in November 2012 under the Broad-Based Black Economic Empowerment Act of 2003[74]. The Code originated from the Financial Sector Charter, a voluntary reform charter executed by the Financial Sector Charter Council that came into effect in January 2004 following the NEDLAC Financial Sector Summit in August 2002. The Code has since been revised and the Amended Financial Sector Code was gazetted in December 2017[75]. The Financial Sector Code mandates that financial institutions (mainly banks and insurance firms) allocate 0.4% of their net profit after tax, to consumer financial education projects/initiatives directed to primarily black groups, communities and individuals. The Code stipulates that the full value of consumer education may only be claimed if at least 75% of the value directly benefits black people[76]. The largest number of financial programs and interventions has originated from the financial service providers of South Africa, following their agreement to the Financial Sector Charter to transform the financial services industry[77].

2.6.2 Financial education statutory bodies and associations

In South Africa, the most prominent statutory bodies and associations involved in financial education are:

- National Consumer Financial Education Committee (NCFEC) [78].
- National Credit Regulator (NCR) [79].

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74 National Treasury (2013) National Consumer Financial Education Strategy. https://www.fscamymoney.co.za/Legislation%20Strategy%20and%20Policy/National%20consumer%20financial%20education%20strategy%20(23%20Aug%2020.pdf

75 Department of Trade and Industry (2017) Amended Financial Sector Code. https://www.thedtic.gov.za/wp-content/uploads/Amended_Financial_Sector_Code.pdf

76 Department of Trade and Industry (2017) Amended Financial Sector Code. https://www.thedtic.gov.za/wp-content/uploads/Amended_Financial_Sector_Code.pdf

77 Wentzel, A. (2016). Financial Literacy in South Africa. In: Aprea, C., et al. International Handbook of Financial Literacy. Springer, Singapore. https://doi.org/10.1007/978-981-10-0360-8_22

78 Sibanda S. & Sibanda T. (2016) Financial Education in South Africa. Overview of key initiatives and actors. International Labour Office, Social Finance Program. Geneva: ILO https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_545803.pdf

79 Sibanda S. & Sibanda T. (2016) Financial Education in South Africa. Overview of key initiatives and actors. International Labour Office, Social Finance Program. Geneva: ILO https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_545803.pdf

- Financial Sector Conduct Authority (FSCA) [80]
- Banking Sector Education and Training Authority (BANKSETA) [81]
- The Banking Association South Africa (BASA) [82]
- South Africa Insurance Association (SAIA) [83]
- Association for Saving and Investments South Africa (ASISA) [84]

2.6.3 **Examples of financial education initiatives**

The International Labour Organisation (ILO) commissioned an analysis of role players and financial education initiatives in South Africa in 2016. Exhibit 2.4 provides a summary of this report on the most prominent financial education initiatives at that time.

[80] FSCA (2024). About Us. https://www.fsca.co.za/Pages/Vision-and-Mission.aspx

[81] Sibanda S. & Sibanda T. (2016) Financial Education in South Africa. Overview of key initiatives and actors. International Labour Office, Social Finance Program. Geneva: ILO https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_545803.pdf

[82] Sibanda S. & Sibanda T. (2016) Financial Education in South Africa. Overview of key initiatives and actors. International Labour Office, Social Finance Program. Geneva: ILO https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_545803.pdf

[83] SAIA (2024). Improving and deepening financial literacy through the use of local languages (Mother tongue). https://www.saia.co.za/index.php?id=2052

[84] ASISA (2020). ASISA Foundation Programs. https://www.asisa.org.za/foundation/programs/

Exhibit 2.4: Examples of Key Financial Education Initiatives in South Africa[85, 86]

Institution	Initiative
Financial Services Board (now Financial Sector Conduct Authority)	✓ FSCA Financial Literacy Speech Competition. ✓ Youth Finance, Entrepreneurship and Job Opportunity Campaign. ✓ Financial Rural Outreach Program. ✓ Taking the FSCA to the people. ✓ Expanded Public Works Program (EPWP) Train-the-Trainer Project. ✓ FSCA Mymoney Learning Series. ✓ FSCA's Accredited Financial Literacy Facilitator Course.
National Credit Regulator	✓ Credit consumer protection awareness campaigns, training workshops, TV and radio interviews.
KZN Financial Literacy Association	✓ High school annual competition. ✓ Research and presentation by students. ✓ Training workshops.
BANKSETA	✓ Consumer education focused on credit (offered mainly to institutions). ✓ Consumer education material
BASA	✓ StarSaver - In school teach children to save initiative. ✓ FinLit Spelling Bee.
South Africa Insurance Association (SAIA)	✓ Teacher development through improving mathematical literacy (Managing your Money), promotion of savings culture.
Old Mutual	✓ Fin 360 and On the Money programs.
STANLIB	✓ Smartbucks - Movie on Financial Education.
ABSA	✓ Bubomi (it is life) initiative.
Standard Bank	✓ Workshops for low-income consumers. Classroom training and radio programs for awareness raising.
FNB	✓ Money smart concept packaged in 10-unit courses.
Nedbank	✓ My financial life and my money Map.
FinMark Trust	✓ Institutional and organisational development. ✓ Research training workshops and online training. ✓ Financial education tool kit.
Sanlam	✓ Money fo Sho.
Hollard	✓ Training workshops.

[85] Sibanda S. & Sibanda T. (2016) Financial Education in South Africa. Overview of key initiatives and actors. International Labour Office, Social Finance Program. Geneva: ILO https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_545803.pdf

[86] FSCA (2024). FSCA CED Projects. https://www.fscamymoney.co.za/Pages/Projects.aspx

2.6.4 Challenges faced with financial literacy programs

Some of the perspectives on financial literacy programs in South Africa are provided by Mbukama, Rena and Prinsloo (2019)[87]. The authors identified challenges of existing financial literacy programs in South Africa that hinder the smooth campaign of financial literacy programs in South Africa. The practical intervention factors, which are important to consider for the development and implementation of future financial literacy and education initiatives within the South African context are recommended as follows:

- Stakeholders involved in financial literacy in South Africa, should identify a unified financial literacy program that ensures quality financial literacy delivery.
- Research and innovation are critical to ascertain needed areas for development and improvement.
- The objectives and focus of the stakeholders involved in financial literacy education should represent the national interest.
- Financial literacy should be encouraged more in the working environment and in schools to equip people with the right financial knowledge for them to make informed financial decisions.
- Specific legislation is needed to be adhered to, to ensure quality delivery of financial literacy education in South Africa.

2.7 DIGITAL FINANCIAL LITERACY IN SOUTH AFRICA

This section focuses on exploring the meaning of digital financial literacy and the digital technological landscape of South Africa. Access and the usage patterns of the technology are regarded as equally important business intelligence to design, develop and test the intended digital financial literacy eLearning module and application.

[87] Mbukanma I, Rena R & Prinsloo JJ (2019). The National Strategy on Financial Literacy: A Conceptual Review of South African Perspectives. Journal of Reviews on Global Economics, 2019, *8,* 1121-1134

Besides exploring the digital technological landscape of South Africa, the benefits/advantages of digital financial literacy and the patterns in the interest of South Africans in digital financial literacy between 2019 and 2024 are explored in this section. This further includes individual (self-learning) strategies to enhance digital financial literacy and explores the role of the industry in digital financial literacy by revealing examples of some of the existing projects and programs in South Africa, addressing digital financial literacy and its perceived impact.

2.8 THE DIGITAL TECHNOLOGICAL LANDSCAPE

The digital technological landscape has developed rapidly in South Africa consistently with the global trends. In 2023, South Africa's internet penetration rate stood at 72.3% of the total population. This implies that approximately 27.7% of the population did not use the internet at the start of 2023. Further analysis shows that internet users in South Africa increased by almost 1% (0.8%) between 2022 and 2023[88]. A recent national study investigating online access and digital literacy among children and adults (parents/caregivers) in South Africa, confirmed the existing generational gap between children and adults accessing the internet. The study found a substantial proportion of parents/caregivers (20%) ''hardly ever'' or ''never'' using the internet whilst only 1% of internet-using children reported that they ''hardly ever'' used the internet[89]. Mobile internet usage is widespread in South Africa, with a growing number of people accessing the internet through smartphones, despite fewer individuals have access to computers and tablets[90]. Based on the 2022 Census, published by Statistics South Africa (Stats SA), the overwhelming majority (92.1%) of households in the country owned a cell phone that is in working order. The ownership

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88 Digital 2023: South Africa. Simon Kemp. Accessed online at: https://datareportal.com/reports/digital-2023-south africa#:~:text=Internet%20use%20in%20South%20Africa,at%20the%20start%20of%202023.

89 ECPAT, INTERPOL, and UNICEF. (2022). Disrupting Harm in South Africa: Evidence on Online Child Sexual Exploitation and Abuse. Global Partnership to End Violence against Children.

90 ECPAT, INTERPOL, and UNICEF. (2022). Disrupting Harm in South Africa: Evidence on Online Child Sexual Exploitation and Abuse. Global Partnership to End Violence against Children

of cell phones was universal in most provinces, except for the Eastern Cape (87.9%) and Northern Cape (85.4%)[91].

Also, social media continues to dominate the digital landscape. The five most popular social media networks in South Africa are WhatsApp, YouTube, Facebook, Facebook Messenger and Instagram[92]. Facebook has become a powerful information and learning tool for people accessing social media networks. As of May 2023, there were 30.7 million Facebook users in South Africa, accounting for over half of the population. Overall, 29% of users were aged 25 to 34 years, making this age group the largest audience base. Just 3.7% of users were aged between 55 and 64 years[93].

Internet access in South Africa is likely to continue rising over the next few years, pointing towards a bright future for digital transformation in South Africa and an ideal time to invest in digital financial literacy and education strategies tailored specifically for the South African market[94]. Besides, there are still challenges in terms of accessibility and affordability within the South African context which negatively impact on the inclusion of lower-income individuals and communities. The main barriers to internet access and connectivity are expensive data, poor network connections and limited access to electricity which were due to national blackouts[95].

It was further shown that digital literacy levels differ among groups and impact on online behaviour and use of available applications. In this regard, older South African adults (particularly those aged 51 and above) are less likely to report a high level of

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91 Statistics South Africa (2023). Census 2022. Department of Statistics. Republic of South Africa. Accessed online at: https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf

92 Distribution of Facebook users in South Africa as of March 2023, by age group. Accessed online at: https://www.statista.com/statistics/1028389/facebook-user-share-in-south-africa-by-age/

93 Distribution of Facebook users in South Africa as of March 2023, by age group. Accessed online at: https://www.statista.com/statistics/1028389/facebook-user-share-in-south-africa-by-age/

94 Digital Statistics and Usage South Africa 2023. Accessed online at: https://helloyes.co.za/digital-statistics-and-usage-south-africa-2023/

95 ECPAT, INTERPOL, and UNICEF. (2022). Disrupting Harm in South Africa: Evidence on Online Child Sexual Exploitation and Abuse. Global Partnership to End Violence against Children

digital skills as compared to adults aged 30 or younger[96]. According to Panos and Wilson (2020) adults do not have the digital or financial literacy skills to use financial applications effectively and benefit from financial information and resources. Thus, financial literacy can be enhanced through improved digital skills[97].

2.9 BENEFITS/ADVANTAGES OF DIGITAL FINANCIAL LITERACY

Digital financial education has several benefits for both individuals and government agencies including[98]:

- Improved access to financial information, guidance and training for individuals and trainers who may be unable to access high-quality learning opportunities due to location, schedule and learning pace constraints.
- Information can be readily conveyed in a flexible, interactive and graphic manner by using a variety of languages and providing features for people with hearing or vision impairments.
- Digital technology can support better money management and financial control by offering tools like spending/budgeting calculators and financial goal trackers, enhancing core competencies.
- People can be provided with feedback mechanisms, reminders and personal goal setting, thereby encouraging wise financial decision-making.
- Policy makers can reach target populations that, due to their geography or personal schedules, cannot be reached through standard delivery methods.
- Increase the scope of currently implemented, tried-and-true interventions and make them more accessible to more people.
- Reduce costs associated with conventional delivery by utilising the economies of scale enabled by digital technologies.

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96 ECPAT, INTERPOL, and UNICEF. (2022). Disrupting Harm in South Africa: Evidence on Online Child Sexual Exploitation and Abuse. Global Partnership to End Violence against Children.

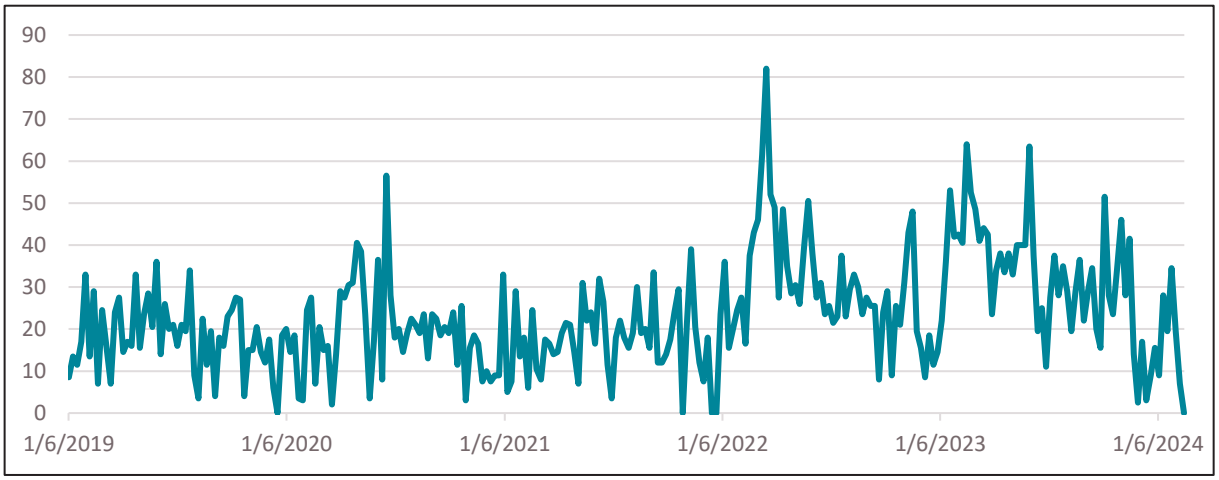
97 Panos GA & Wilson JOS. (2020). Financial literacy and responsible finance in the FinTech era: capabilities and challenges. March 2020. European Journal of Finance 26(4-5):297-301

98 OECD (2018), G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy

- Using integrated data collecting tools, monitor how a target audience uses financial education resources in real time.
- Examine the content of financial education initiatives with greater ease, based on monitoring of the intervention and on developments taking place in retail financial markets.
- Policy makers and program designers can monitor the use of an educational tool by individuals over time and tie it to their financial decisions, all while adhering to existing data protection laws. This can facilitate the monitoring and evaluation of digital initiatives.

Findings from Google Trends covering the period 2019 to 2024 reveal that there was a slightly upward growth pattern in the interest of South Africans in digital financial literacy during 2022 and 2023, but that such interest shows a fluctuating pattern in general as shown in figure 2.5.

Figure 2.5: Interest in Digital Financial Literacy, 2019 - 2024



2.10 INDIVIDUAL STRATEGIES TO ENHANCE DIGITAL FINANCIAL LITERACY

The literature review identified several sources of self-learning strategies that can be used by individuals to enhance their levels of digital financial literacy. The following individual self-learning strategies have been identified [99]:

- **Using educational resources -** Individuals can explore financial magazines, books and pamphlets to learn about digital banking, online security best practices and other relevant topics[100].
- **Self-education through online information -** Individuals can explore reputable websites, blogs, articles and online courses that cover topics such as online banking, digital payments, cybersecurity, budgeting apps, investment platforms and cryptocurrency. Podcasts are a great way to listen to financial news[101].
- **Attending workshops and webinars -** People in a group setting tend to learn more and get opportunities to ask questions or have discussions with others on different finance topics[102].
- **Participating in online forums and communities -** Participating in discussions, asking questions and sharing experiences with others can provide valuable insights, tips and advice on navigating digital financial services and platforms[103].
- **Learning by doing -** Experimenting with different features and functionalities can result in gaining confidence and proficiency in using financial tools effectively[104].

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99 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

100 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

101 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

102 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

103 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

104 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

- **Seeking professional advice -** A qualified professional can provide personalised guidance, respond to questions and help to develop a tailored financial plan that aligns with an individual's personal goals and circumstances[105].
- **Staying informed and up-to-date -** traditional forms of media such as television and radio programs, related to finance management, can provide valuable information on finance topics[106].

2.11 THE ROLE OF THE INDUSTRY IN DIGITAL FINANCIAL LITERACY

Most adult South African residents, including the millennials, are well placed to participate in the digital economy, having access to mobile devices and internet service. Also, consistent with global trends, the advent of Covid-19 contributed to an increase in the use of digital channels by many South Africans[107]. Notably, most digital innovations are typically adopted by the higher-income, tech-savvy market segments that may render the exclusion of the poor in South Africa[108]. Amidst 47.8 million mobile internet users[109], connectivity challenges are shown by only 8.3% of South African households that have access to fixed internet in their homes[110]. Some of the developments in digital financial literacy initiatives are documented in reports, government announcements and updates from relevant organisations working in the field of financial education in South Africa.

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105 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

106 Top 10 ways to improve your financial literacy right now. Accessed online at: https://www.experlu.co.uk/blog/top-10-ways-to-improve-your-financial-literacy/

107 FSCA (2022) Digital Financial Inclusion Trends Study. Accessed online at: https://www.fsca.co.za/Regulatory%20Frameworks/FinTechDocuments/Digital%20Financial%20Inclusion%20Final%20Version%20December%202022.pdf (accessed 14/02/2024)

108 FSCA (2022) Digital Financial Inclusion Trends Study. Accessed online at: https://www.fsca.co.za/Regulatory%20Frameworks/FinTechDocuments/Digital%20Financial%20Inclusion%20Final%20Version%20December%202022.pdf (accessed 14/02/2024)

109 South African Business, (6 July 2023). Alternative technologies fostering financial inclusion in Africa. By fostering digital proficiency, the country can empower its young population to bridge the unemployment gap. So, what is restricting financial inclusion in the country? Accessed online at: https://www.southafricanbusiness.co.za/07/2023/south-africa/alternative-technologies-fostering-financial-inclusion-in-africa/

110 South African Business, (6 July 2023). Alternative technologies fostering financial inclusion in Africa. By fostering digital proficiency, the country can empower its young population to bridge the unemployment gap. So, what is restricting financial inclusion in the country? Accessed online at: https://www.southafricanbusiness.co.za/07/2023/south-africa/alternative-technologies-fostering-financial-inclusion-in-africa/

Exhibit 2.5 displays examples of some of the existing projects and programs in South Africa addressing digital financial literacy and its perceived impact.

Exhibit 2.5: Examples of Key Digital Financial Education Initiatives in South Africa

Name of program	Description
Innovator Trust's FIN1k Financial Literacy program[111]	✓ WhatsApp, Zoom and Instagram Live digital platforms are used daily to engage with youth (18-35 years). ✓ Free data to facilitate attendance. ✓ The training encompasses a wide range of crucial topics such as entrepreneurship, personal finance, online business procedures, cyber protection, financial rights and responsibilities, business planning and protection, credit management and savings.
FinEasy collaboration with Momentum[112]	✓ An AI-powered chatbot empowering excellent, informed financial decisions. Using machine learning to give each user a unique learning experience. ✓ Future Finance Friends: financial literacy for teens (grade 8 to 12). ✓ Momentum Money Shift: financial literacy for graduates and individuals who recently entered the job market.
Capitec's Live Better Academy[113]	✓ Free data to facilitate attendance. ✓ Provides basic financial knowledge with practical tips and strategies to assist on a financial journey. ✓ Gamified online platform with points, badges and leaderboards. ✓ Each course is broken down into smaller modules, which should take around 5-10 minutes to complete.
Capitec's MoneyUp Chat[114]	✓ WhatsApp chatbot, Moola, provides money tips. ✓ Short, interactive courses in the form of a WhatsApp chat. ✓ Complete mini-challenges with money puzzles. ✓ Covers topics such as budgeting, compound interest, inflation, retirement and savings as a series of chapters that the user can conveniently work through in their own time and at their own pace.

111 https://www.innovatortrust.co.za/media/blog/harnessing-technology-to-boost-financial-literacy-among-south-africas-youth-nws269
112 https://www.momentum.co.za/momentum/about-us/csi
113 https://www.capitecbank.co.za/live-better/money-up/learning/live-better-academy/
114 https://www.capitecbank.co.za/live-better/money-up/moneyup-chat-by-capitec/

Name of program	Description
Mukuru Money Matters[115]	✓ Online learning platform, currently via WhatsApp and a website. ✓ Offers interactive modules on various financial topics, gamified elements to enhance engagement and downloadable resources. ✓ Four main themes of information include basic money and wealth principles, the necessity of saving, budgeting as a skill and how to properly use credit and debt.
Old Mutual Moneyversity[116]	✓ Online financial educational tools using videos, calculators, infographics and articles to assist users in understanding and managing their personal finances. ✓ Free access to users.
Standard Bank WalletWise[117]	✓ Financial education initiative aimed at teaching money management, while making informed financial decisions. ✓ Using TV, radio, print, social media and face-to-face activities.
Hollard's StreetWise Finance Online[118]	✓ Data-free and mobile-friendly digital learning platform. ✓ Financial literacy awareness initiative aimed at achieving financial inclusion and consumer protection. ✓ Covers four modules (needs vs wants and budgeting, saving and lending, insurance and retirement).
MayaOnMoney[119]	✓ Website hosting a collection of articles, videos and podcasts. ✓ Written by finance journalist Maya Fisher-French and other contributors. ✓ Covers areas needed for effective money management such as budgeting, saving, investing, banking and insurance.
FPIMyMoney123[120]	✓ Online initiative which focuses on delivering content and information to South Africans to assist with informing them and delivering content that will assist and improve their financial wellbeing. ✓ Content is in the form of articles, focussing on various financial topics.

115 https://iafrica.com/mukuru-partners-with-training-platform-digemy-to-launch-free-financial-literacy-tool-for-customers/
116 https://www.moneyversity.co.za/
117 https://www.standardbank.co.za/southafrica/personal/about-us/financial-education
118 https://www.streetwisefinance.co.za/online
119 https://mayaonmoney.co.za/
120 https://fpimymoney123.co.za/category/equip-yourself/#

2.12 GOVERNMENT INTERVENTIONS IN DIGITAL FINANCIAL LITERACY

Government intervention initiatives are a requisite to encourage digital financial literacy which may entail financial education for digital financial services in the context of national strategies[121]. A broader digital financial literacy scale can only be possible with government support entailing substantial investment in broadband infrastructure and internet connectivity[122]. Most governments have invested in the technologies as part of their national infrastructural plans including South Africa's National Broadband Policy of 2013[123].

For example, Wizzit is a global innovative payment solution provider which started in South Africa and assists financial institutions and service providers in realising low-cost merchant and consumer-centric payment solutions[124]. An identified example of a government intervention is the National Treasury Financial Literacy Game. The necessity for the development of a financial literacy game by the National Treasury of South Africa aligns with the findings from the study by Setiawan, Effendi, Santoso, Dewi and Sapulette (2020)[125]

2.13 EXAMPLES OF INTERNATIONAL DIGITAL FINANCIAL LITERACY PROGRAMS

Further analysis of international examples (17 countries in total) of digital financial literacy programs identified that digital financial literacy programs have gained increasing attention over the years, resulting in various programs aimed at empowering individuals with knowledge and skills (see exhibit 2.6).

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121 South African Institute of International Affairs (SAIIA), 2019. Digitising Financial Services: A Tool for Financial Inclusion in South Africa? Occasional Paper, African perspectives Global insights. Accessed online at: https://saiia.org.za/research/digitising-financial-services-a-tool-for-financial-inclusion-in-south-africa/ (accessed on 14/02/2024)

122 Olaniyi,E. 2022. Social and institutional determinants of digital financial inclusion in Africa: A system GMM Approach, Pan-Atlantic University. Online, available at: https://mpra.ub.uni-muenchen.de/117006/1/MPRA_paper_117006.pdf

123 Department of Communications & Digital Technologies. 2020. National Digital and Future Skills Strategy: Originality, agility, critical thinking and problem-solving for digital inclusion. Report No. 43730. Online, available at: https://www.gov.za/sites/default/files/gcis_document/202009/43730gen513.pdf

124 Discover the Journey. Learn more about Wizzit. Accessed online at: www.https://wizzit.com/about

125 Setiawan, M, Effendi, N, Santosa,T, Dewi, VI and Sapulette, MS. (2020) Digital financial literacy, current behavior of saving and spending and its future foresight. Accessed online.com/doi/abs/10.1080/10438599.2020.1799142

Exhibit 2.6: Identified International Digital Financial Literacy Programs and Initiatives

Country	Digital Financial Literacy Programs	Description
Australia	✓ ASIC (Australian Securities and Investments Commission) Money Smart[126]	✓ The MoneySmart website was created by ASIC to help you take steps to improve your personal finances.
	✓ Financial Literacy Foundation (FLF) programs[127]	✓ The Australian Government established the Financial Literacy Foundation (FLF) to give all Australians the opportunity to better manage their money: to raise awareness of financial literacy and its benefits; and to create opportunities for Australians of all ages to learn more about money
Brazil	✓ Minha Vida Financeira (My Financial Life)[128]	✓ My Financial Life
Canada	✓ CPA Canada Financial Literacy Program[129]	✓ Providing financial literacy resources.
	✓ Money Mentors[130]	✓ Promote financial education and invest in the youth.
	✓ Enriched Academy[131]	✓ Empowering individuals and organisations across Canada to improve financial wellness with innovative online portals, tools and applications.
	✓ NEFE (National Endowment for Financial Education)	✓ The National Endowment for Financial Education (NEFE) champions effective financial education.
China	✓ Alipay Ant Forest[132]	✓ Ant Forest, a feature within the Alipay app encourages users to adopt eco-friendly habits such as walking, using public transport and paying bills online.
	✓ Ping An's ''Know more, Gain More''	✓ Ping An, one of China's largest financial conglomerates, has launched various financial education initiatives under its ''Know more, Gain More'' campaign
France	✓ Mes questions d'argent [133]	✓ Financial Education Week.
	✓ Mes Questions d'Entrepreneur [134]	✓ Entrepreneurship information.
Germany	✓ MoneyFit bye Deutsche Bank	✓ Provides educational content and tools to help people manage their finances effectively.
	✓ FinanzBildung by Commerzbank	✓ Offers online courses, workshops and seminars to enhance financial literacy among consumers.
	✓ Finanzheldinnen	✓ Focuses on promoting financial literacy among women.

126 https://moneysmart.gov.au/
127 https://ministers.treasury.gov.au/ministers/mal-brough-2004/media-releases/understanding-money-financial-literacy-foundation-launched
128 https://www.bcb.gov.br/acessoinformacao/minhavidafinanceira
129 https://www.cpacanada.ca/public-interest/financial-literacy
130 https://moneymentors.ca/
131 https://www.enrichedacademy.com/
132 https://www.antgroup.com/en
133 https://www.mesquestionsdargent.fr/
134 https://www.mesquestionsdentrepreneur.fr/

Country	Digital Financial Literacy Programs	Description
India	✓ Pradhan Mantri Jan Dhan Yojana (PMJDY)[135]	✓ PMJDY promotes financial inclusion to ensure access to financial services, namely, Banking/Savings and Deposit Accounts, Remittance, Credit, Insurance and Pension in an affordable manner.
	✓ Reserve Bank of India (RBI) Financial Education[136]	✓ To create awareness about financial products and services, good financial practices, going digital and consumer protection. Financial Literacy Week is an initiative by RBI to promote awareness of key topics every year through a focused campaign.
Italy	✓ Bank of Italy[137]	✓ The Bank of Italy has been conducting a triennial survey on financial literacy in Italy (IACOFI) since 2017.
Japan	✓ Financial Services Agency (FSA) – Investor Education[138]	✓ Financial Services Agency, or FSA, is a Japanese government entity responsible for overseeing banking, insurance and securities and exchange.
	✓ Japan Securities Dealers Association (JSDA)[139]	✓ The Japan Securities Dealers Association (JSDA) is an association functioning as a self-regulatory organisation (SRO) and as an interlocutor for the securities industry.
	✓ Japanese Bankers Association (JBA)[140]	✓ Japanese Bankers Association provides useful tools and customer services to support you with your banking experience here in Japan.
Kenya	✓ Safaricom's Financial Literacy[141]	✓ Provide financial literacy.
	✓ PesaBazaar Financial Literacy Program	✓ Provides educational content and resources online to help Kenyans improve their financial literacy.
	✓ Faulu Digital Financial Literacy Program[142]	✓ Offers digital financial literacy training to its customers through online resources.
	✓ Centonomy by Centonomy Limited[143]	✓ Offers financial literacy courses, including digital financial skills training.
Namibia	✓ Namibia Financial Institutions Supervisory Authority[144]	✓ An independent institution established by virtue of Act No. 3 of 2001 to regulate and supervise financial institutions in the financial services industry in the public interest and fully funded by levies imposed on this industry.
Turkey	✓ Central Bank of the Republic of Turkey[145]	✓ The CBRT aims to reach out to different audiences with the financial literacy and economics education programs that are called Economics for All.

135 https://www.pmjdy.gov.in/flc-skilling-material.aspx
136 https://www.rbi.org.in/financialeducation/
137 https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/alfabetizzazione/index.html?com.dotmarketing.htmlpage.language=1&dotcache=refresh
138 https://www.investopedia.com/terms/f/financial-services-agency-fsa.asp
139 https://www.jsda.or.jp/en/about/
140 https://www.zenginkyo.or.jp/en/
141 https://newsroom.safaricom.co.ke/lifestyle/financial-literacy/
142 https://www.faulukenya.com/business-banking/faulu-digital-account/
143 https://centonomy.com/
144 https://www.namfisa.com.na/
145 ttps://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/About+the+Bank/Education+Academic/Financial+Literacy+and+Economics+Education/

Country	Digital Financial Literacy Programs	Description
United Kingdom	✓ Money Advice Service[146]	✓ The Money Advice Service (MAS) is a publicly funded body, which provides the backbone for the Financial Capability Strategy for the UK.
	✓ MoneyHelper[147]	✓ A consumer-facing service to offer free and impartial money and pension guidance.
	✓ The Open University's Managing My Money course.[148]	✓ Gain the skills to manage your personal finances: managing budgets, debts, investments, property purchases, pensions and insurance.
	✓ NatWest MoneySense[149]	✓ MoneySense – a free financial education program for 5-18s. With fun activities, games and resources that help teach children about money at home, as well as in schools.
	✓ Barclays Lifeskills[150]	✓ Gain the skills to manage personal finances: managing budgets, debts, investments, property purchases, pensions and insurance.
United States	✓ MyMoney.gov[151]	✓ The Financial Literacy and Education Commission's vision is of sustained financial well-being for all individuals and families in the U.S.
	✓ Consumer Financial Protection Bureau (CFPB) – Your Money, Your Goals[152]	✓ Your Money, Your Goals is a set of financial empowerment materials for organisations that help people meet their financial goals by increasing their knowledge, skills and resources.
	✓ Smart About Money[153]	✓ Effective tax planning saves SMEs time and money. Run your business tax efficiently with a good system that ensures records are kept and tax breaks maximized.
	✓ Bank of America – Better Money Habits[154]	✓ Learn about personal finance education through Better Money Habits. Start managing your personal finances and making smart financial decisions today.
Nigeria	✓ Central Bank of Nigeria (CBN) – Financial literacy programs[155]	✓ Financial Literacy Day.
	✓ Money Matters with Nimi[156]	✓ Financial literacy television program hosted by Nimi Akinkugbe.
	✓ Junior Achievement Nigeria - financial literacy programs in schools[157]	✓ Equip young people with entrepreneurial skills, financial management knowledge and career readiness.
	✓ Stanbic IBTC Financial literacy program	✓ Focuses on providing financial education to individuals and business
	✓ Nigerian Stock exchange (NSE)	✓ Offers courses and workshops on financial literacy, capital markets and investment opportunities to promote understanding and participation in the stock market

146 https://www.fincap.org.uk/en/articles/role-money-advice-service#:~:text=Money%20Advice%20Service%20and%20The%20Financial%20Capability%20Strategy&text=The%20Money%20Advice%20

147 https://maps.org.uk/en/about-us/moneyhelper#

148 https://www.open.edu/openlearn/money-business/managing-my-money/content-section-overview?active-tab=description-tab

149 https://natwest.mymoneysense.com/home/

150 https://barclayslifeskills.com/

151 https://www.mymoney.gov/

152 https://www.consumerfinance.gov/consumer-tools/educator-tools/your-money-your-goals/

153 https://smartaboutmoney.co.za/

154 https://bettermoneyhabits.bankofamerica.com/en

155 https://www.cbn.gov.ng/Devfin/finliteracy.asp

156 https://www.moneymatterswithnimi.com/

157 https://ja-nigeria.org/ja-programs/

Country	Digital Financial Literacy Programs	Description
Tanzania	✓ Tanzania Institute of Bankers (TIOB)[158]	✓ TIOB offers financial literacy training programs targeting various groups including youth, women, entrepreneurs and rural communities.
	✓ Financial Sector Deepening trust (FSDT)	✓ FSDT collaborates with financial institutions, government agencies and NGO's to implement financial education programs focus on improving financial literacy.
	✓ Youth Economic Empowerment Program (YEEP)	✓ YEEP provides financial education and entrepreneurship training to young people.
	✓ Tanzania Association of Microfinance Institutions (TAMFI)[159]	✓ TAMFI conducts financial literacy campaigns and workshops targeting microfinance clients and the general public.
Ghana	✓ National Banking College Financial Literacy Programs	✓ Educate individuals on various aspects of financial management including budgeting, saving, investing and debt management.
	✓ Ghana Stock Exchange (GSE) Investor Education Program	✓ Promote understanding and participation in the capital markets.
	✓ Financial Literacy and Education Initiative (FLEI)	✓ Flei conducts financial literacy campaigns and workshops targeting different segments of the population, including youth, women and rural communities.
	✓ Junior Achievement Ghana (JAG)[160]	✓ JAG implements financial literacy programs in schools to teach students about money management, entrepreneurship and career readiness.
	✓ Ghana Association of Savings and Loans Companies (CHASALC)	✓ CHASALC educates customers and the public on banking products, loan management and financial planning.

To achieve the goal of expanding financial inclusion, especially among vulnerable and marginalised groups, the collaboration between different sectors including government, non-government and the private sector, especially financial institutions (banks, insurance companies, brokerage firms and investment dealers), is essential[161]. Information and delivery methods for financial education and literacy programs need to be diverse and tailored to address the different needs of individuals. Therefore, it is important to determine and understand the existing needs, motivations and barriers. It is also important to consider the diverse backgrounds of individuals and develop financial education programs for specific sub-groups of individuals[162]. To achieve wider

158 https://tiob.or.tz/?page_id=2901
159 https://tamfi.com/
160 https://jaghana.org/
161 OECD. (2005). Recommendation on Principles and Good Practices for Financial Education and Awareness. Accessed online at: https://www.oecd.org/finance/financial-education/35108560.pdf
162 OECD. (2005). Recommendation on Principles and Good Practices for Financial Education and Awareness. Accessed online at: https://www.oecd.org/finance/financial-education/35108560.pdf

coverage and exposure, the use of all available media for the dissemination of educational messages should be promoted[163].

2.14. THE FEASIBILITY AND EFFICIENCY OF ELECTED DIGITAL SOLUTIONS TO ADVANCE FINANCIAL EDUCATION AND INCLUSION IN SOUTH AFRICA

This subsection gauges the guiding principles in designing and implementing digital financial education initiatives. The challenges posed by such initiatives as well as the feasibility considerations for the design and development of a digital financial program are also explored. Moreover, important statistical information is shared on digital adoption and use in South Africa to exclaim the many intricacies to consider when developing a digital solution for financial literacy applications for South Africa. The design, development and testing of a digital financial literacy eLearning module and application, being elected and identified as key FSCA digital solutions are also explored towards the end.

2.14.1 Guiding principles in designing and implementing digital financial education initiatives

The OECD (2022) developed a guidance document to assist policymakers in deciding when to adopt digital delivery and how to effectively design and implement digital financial education initiatives. According to the OECD (2022), innovative uses of digital technologies in the delivery of financial education can serve multiple complementary objectives and effectively support the building blocks of financial education[164]. The choice of digital delivery comes from an understanding that digital delivery, can potentially facilitate the effective provision of financial education, extend its reach and ultimately contribute to positive behavioural change among the target audience[165].

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[163] OECD (2005). Recommendations on Principles and Good Practices for Financial Education and Awareness. Accessed online at: https://www.oecd.org/finance/financial-education/35108560.pdf

[164] OECD (2022), OECD/INFE Guidance on digital delivery of financial education, www.oecd.org/financial/education/INFE-guidance-on-digital-delivery-of-financial-education.htm

[165] OECD (2022), OECD/INFE Guidance on digital delivery of financial education, www.oecd.org/financial/education/INFE-guidance-on-digital-delivery-of-financial-education.htm

Digital delivery can:

- Improve access to information and advice, through websites that often also offer calculators and tools for personal financial management, or mobile apps that can meet the needs of citizens with disabilities.
- Deliver financial education training, by design or as an adaptation of face-to-face programs, through synchronous and asynchronous teaching.
- Develop skills and confidence, such as money management and control over finances, in particular through the design of user-friendly personal financial management tools and mobile apps, or through the use of gamification to enhance learning.
- Tailor the content of the initiatives to the audience, thanks to the new possibilities offered by data analytics[166].

However, despite these potential advantages, the OECD document highlights that the effective application of digital technologies to deliver financial education comes with specific challenges[167]. These include:

- Adapting the content to a digital or online format.
- Building ICT project management and design capacity within public authorities.
- Training the trainers, equipping them with a new skill set and competencies.
- Finding new ways to engage with and motivate the target audience (including potentially vulnerable ones).
- Address and overcome the limited access to digital tools and lack of digital skills among some target groups.

166 OECD (2022), OECD/INFE Guidance on digital delivery of financial education, www.oecd.org/financial/education/INFE-guidance-on-digital-delivery-of-financial-education.htm

167 OECD (2022), OECD/INFE Guidance on digital delivery of financial education, www.oecd.org/financial/education/INFE-guidance-on-digital-delivery-of-financial-education.htm

- Consider personal data protection issues in a digital environment.
- Making sure that technology does not amplify existing inequalities in access and quality of learning.

2.14.2 Feasibility considerations for a digital financial literacy program and application

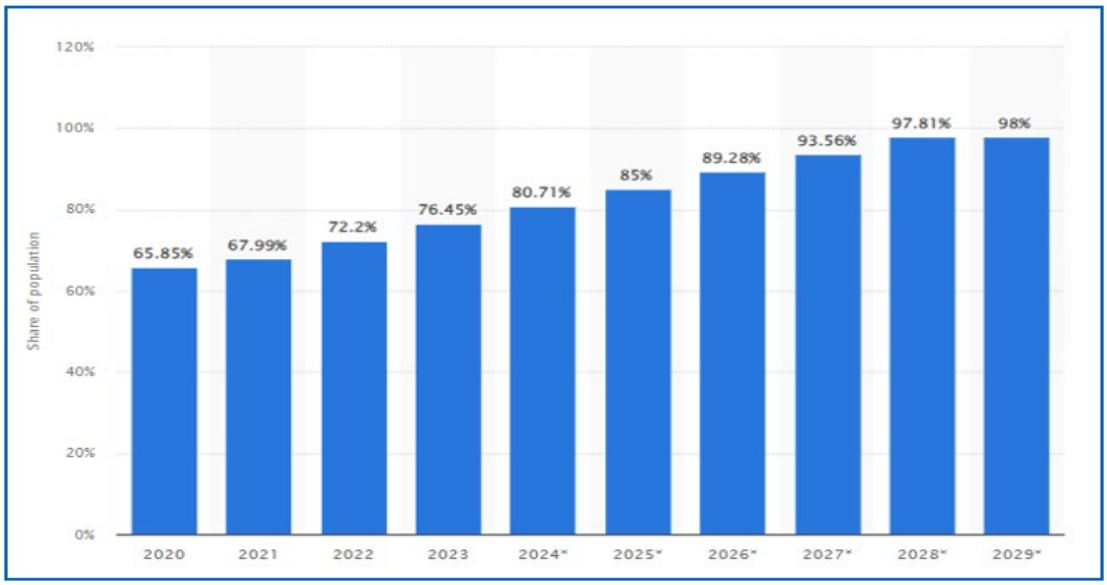
Several feasibility considerations for the design and development of digital financial programmes were identified in the literature. The access and usage of technology is one of the key considerations when reviewing the feasibility of a digital financial literacy platform within the South African context. As mentioned earlier, approximately 72.3% of South Africans have access to the internet predominantly through smartphones[168]. This view closely corresponds with the statistics published by DataReportal[169] and Statista[170] on Internet and Mobile internet user penetration in South Africa, as shown in figures 7, 8 and 9.

Headlines for Digital Adoption and Use in South Africa, 2024[171]

- ✓ There were 45.34 million internet users in South Africa at the start of 2024 when internet penetration stood at 74.7 percent.
- ✓ South Africa was home to 26.00 million social media users in January 2024, equating to 42.8 percent of the total population.
- ✓ A total of 118.6 million cellular mobile connections were active in South Africa in early 2024, with this figure equivalent to 195.4 percent of the total population.

168 Digital 2023: South Africa. Simon Kemp. Accessed online at: https://datareportal.com/reports/digital-2023-south africa#:~:text=Internet%20use%20in%20South%20Africa,at%20the%20start%20of%202023.
169 https://datareportal.com/about
170 https://www.statista.com/markets/
171 https://datareportal.com/reports/digital-2024-south-africa

Figure 2.7: Internet User Penetration in South Africa, 2020 – 2029



After the ninth consecutive increasing year, internet penetration, referring to the share of the total population having access to the internet via any means, is estimated to reach 98% and therefore a new peak is projected in 2029. Notably, the population share with internet access continuously increased over the past years as shown in figure 2.7.

Figure 2.8: Number of Internet Users in South Africa from 2013 to 2024

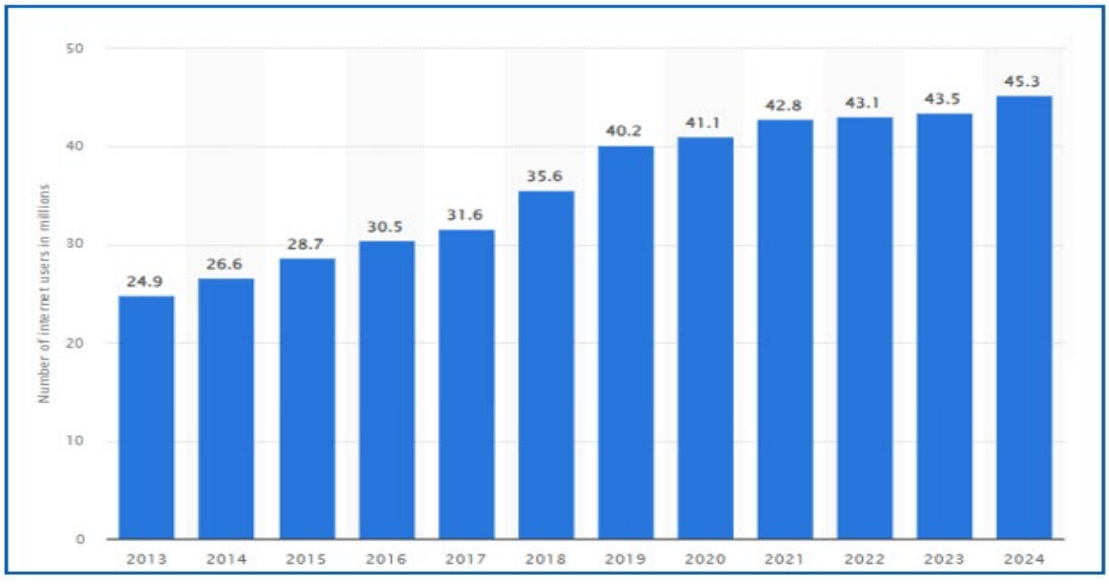


Figure 2.8 shows that, as of January 2024, there were 45.3 million internet users in South Africa. This was an increase of roughly 1.8 million individuals compared to 2023. The digital population increased significantly from close to 25 million in 2013.

Figure 2.9: Mobile Internet user Penetration in South Africa from 2020 to 2029

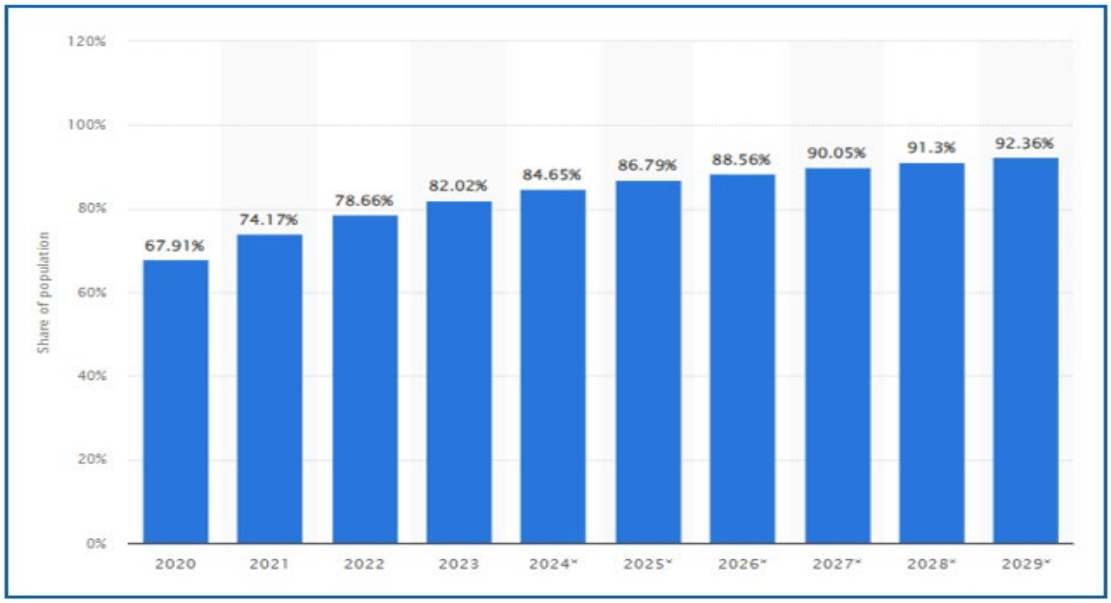
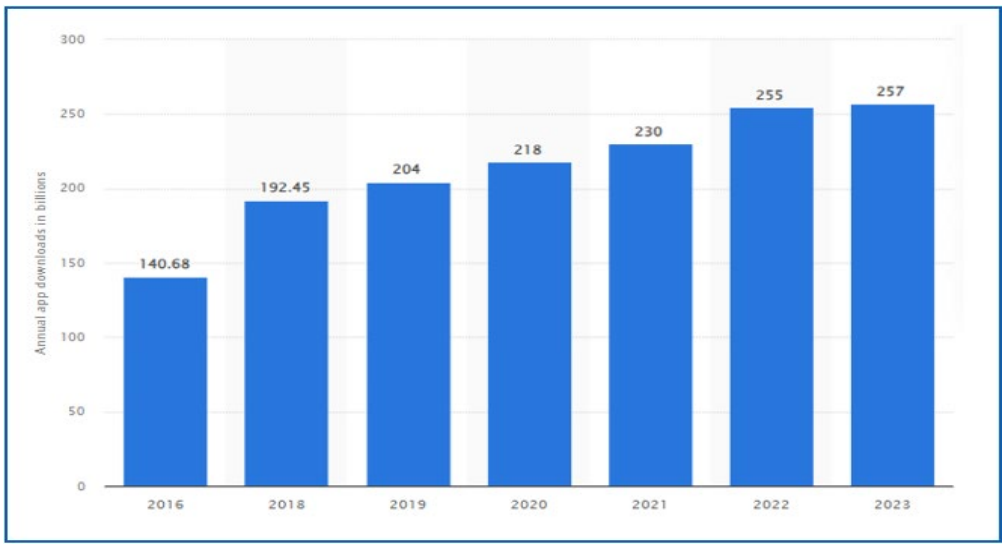


Figure 2.9 shows that the population share with mobile internet access has continuously increased over the past years. The population share with mobile internet access in South Africa was projected to continuously increase between 2024 and 2029 by a total of 7.7 percentage points. After the ninth consecutive increasing year, the mobile internet penetration, referring to the share of the total population having access to the internet via a mobile broadband connection, is estimated to reach 92.36% and therefore a new peak in 2029.

Application downloads worldwide kept increasing between 2016 to 2022. However, in 2023, the global app downloads stagnated, reaching 257 billion downloads and experienced only a 1% year-over-year increase as shown in figure 2.10.

Figure 2.10: Application Downloads at an All-time Global High



Despite the growth prospects of mobile internet penetration, ominously global application downloads have seemingly stagnated and approximately 30% of the South African population is still excluded from the online world for various reasons, including limited access to appropriate devices and cost considerations.

Figure 2.11: Number of Smartphone Users in South Africa from 2014 to 2023 (in millions)

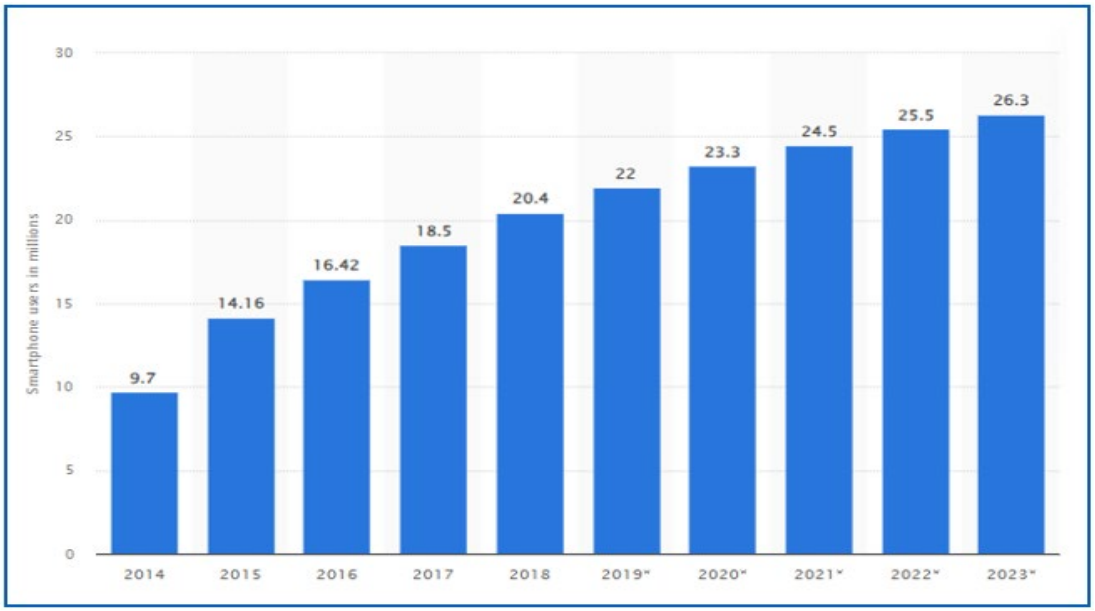


Figure 2.11 shows that about 20 to 22 million people in South Africa use a smartphone, which accounts for about one-third of the country's population. As is the case in Africa, feature phones make up a significant share of the mobile phone market in South Africa, in contrast to many other regions around the world where smartphones dominate.

Besides digital exclusion, a digital divide is also notable in South Africa. The digital divide[172] describes the gap between people who have access to affordable, reliable internet service (and the skills necessary to take advantage of that access) and those who lack it. The digital divide in South Africa is particularly evident in rural and urban populations, gender (male/ female) and age cohorts.

Besides access and connectivity issues, it was highlighted earlier that, although individuals might be able to access available online information, there are generally low levels of digital literacy which impact their ability to benefit from online educational initiatives and protect themselves from possible online risk factors.

The importance of considering the culturally diverse South African population is emphasised in the literature. South Africa is characterised by a diverse cultural and linguistic landscape that impacts the understanding of financial information, decision-making and behaviour. This needs to be considered in the design and implementation of financial education programs and digital financial literacy applications, to ensure optimal financial inclusion and accessibility.

While FinTech has the potential to also benefit low-income groups, several challenges and limitations still hinder its impact on these populations. As mentioned before, these include lack of access to the internet, smartphones, or other digital devices required to utilise FinTech services, the lack of the necessary digital literacy skills to effectively

[172] https://www.investopedia.com/the-digital-divide-5116352

navigate FinTech platforms, the lack in the creditworthiness of individuals with limited credit histories (low-income or underbanked individuals).

Fraud or exploitation has also evoked public concerns regarding the security and reliability of FinTech platforms. Therefore, building trust in FinTech services among, especially underserved communities, will be essential for fostering the adoption and utilization of FinTech to promote financial inclusion and equity.

2.14.3 Efficacy considerations for a digital financial literacy program

It is important to design and develop **interactive and engaging content**. This can be achieved through using multimedia elements such as gamification, that make the learning experience more enjoyable and effective. In addition, incorporating **personalised learning pathways** to address the diverse financial needs and literacy levels of individuals as well as **real-life application**, can enhance the applicability and effectiveness of programs.

OECD Actionable Recommendations

The OECD offers the following actionable recommendations across the key steps in the choice, design, delivery and evaluation of digital financial education initiatives[173]. The OECD guidance is intended to support public authorities in deciding when to opt for digital delivery of financial education, when to prefer traditional or hybrid approaches and in designing and implementing. An analysis of the issues identified in this guidance can help policy makers to decide whether to adopt a fully digital, a hybrid, or a traditional delivery method. A synopsis of the OECD actionable recommendations is presented in exhibit 7 and should serve as a guiding principle in the design,

[173] Evaluating Financial Education Programs: OECD/INFE Stocktake and Framework. Accessed online at: https://www.oecd.org/daf/fin/financial-education/TrustFund2013_OECD_INFE_Evaluating_Fin_Ed_Programmmes.pdf

development, testing and implementation of effective eLearning and digital financial literacy application platforms.

Exhibit 2.7: Synopsis of OECD Actionable Recommendations

Choice of Digital Tools and Platforms	• Ensure that digital tools and platforms are accessible across different devices and internet connections to reach a wide audience. • Select platforms that offer interactive features, personalized learning pathways and engaging content to enhance user engagement and effectiveness. • Prioritise platforms with strong security measures and data privacy protections to safeguard the personal and financial information of users.
Design of Digital Content and Resources	• Develop digital content and resources that are tailored to the needs, preferences and literacy levels of the target audience. • Use plain language and multimedia formats (e.g., videos and infographics) to convey complex financial concepts in an understandable and engaging manner. • Incorporate real-life scenarios, case studies and interactive simulations to illustrate practical applications of financial concepts and encourage active learning.
Delivery of Digital Financial Education	• Implement multi-channel delivery strategies to reach users through a variety of digital platforms, including websites, mobile apps, social media and online learning portals. • Collaborate with schools, employers, financial institutions and community organisations to promote digital financial education and integrate it into existing educational and training programs. • Provide opportunities for peer learning, mentorship and community support through online forums, discussion groups and social networking platforms.
Evaluation of Digital Financial Education Initiatives	• Establish clear goals, objectives and performance indicators to measure the effectiveness and impact of digital financial education initiatives. • Use a mix of quantitative and qualitative evaluation methods, including surveys, assessments, user feedback and behavioural metrics, to assess knowledge, skills, attitudes and behaviours of learners. • Continuously monitor and evaluate the usability, accessibility and engagement of digital platforms and make iterative improvements based on user feedback and performance data.
Capacity Building and Training	• Provide training and capacity building support to educators, trainers and facilitators to effectively use digital tools and platforms for financial education delivery. • Offer professional development opportunities, resources and technical assistance to enhance digital literacy skills and confidence of educators in integrating technology into their teaching practices.

By leveraging digital delivery methods, such as digital financial literacy applications, national financial literacy strategies can reach a larger audience, deliver personalized education, foster engagement and collect valuable data to inform ongoing efforts to improve financial literacy nationwide. The feasibility and efficacy of using a digital platform for financial education in South Africa depends on careful consideration of

infrastructure, technology access, content relevance and collaboration with stakeholders, whilst regular evaluation and adaptation, based on user feedback, are essential for ensuring ongoing effectiveness. Key considerations and best practices which will be prioritised in designing and implementing the digital financial literacy application include:

- Prioritising **user experience (UX) and user interface (UI) designs** to ensure the application is intuitive, easy to navigate and engaging for users of all ages and backgrounds.
- Developing **high-quality educational content** that covers essential financial literacy topics that are also tailored to the target audience's demographic characteristics, financial goals and knowledge levels.
- Incorporating **interactive features** such as quizzes, calculators, simulations and games to enhance user engagement and learning outcomes.
- Providing **personalised learning experiences** by offering customised content recommendations, learning pathways and goal-setting tools based on the interests, preferences and progress of users.
- Design the application with **accessibility features** to ensure it is usable by individuals with disabilities, including alternative text for images, keyboard navigation and adjustable font sizes and provide language options, translation services and culturally sensitive content to accommodate diverse linguistic and cultural backgrounds.
- Implement robust security measures, encryption protocols and data protection policies to safeguard the personal and financial information of users.
- Offer multichannel delivery options, including web-based platforms, mobile applications, social media channels and offline resources, to reach users across different devices and contexts.
- Track usage metrics, user feedback and learning outcomes to evaluate the effectiveness and impact of the application.

2.14.4 **Design for elected e-learning module**

The online modules (educational content) examples comprise the following themes:

- Key financial concepts and money and transactions.
- Planning and managing finances and financial protection.

To repurpose and repackage the FSCA's MyMoney Learning Series content, as guided by the FSCA and with the consideration of the time that was allocated to conclude the project, the design and development of the eLearning module was restricted to the topic "**Basic Money Management**". This topic also aligns well with the underserved population segment of South Africa, being targeted as the experimental group for the design and development of the eLearning module.

Module 1 – key financial concepts

Understanding your money matters! Financial literacy is a fundamental life skill, essential to successfully navigate life's complicated financial decisions in pursuit of greater and more sustainable financial well-being.

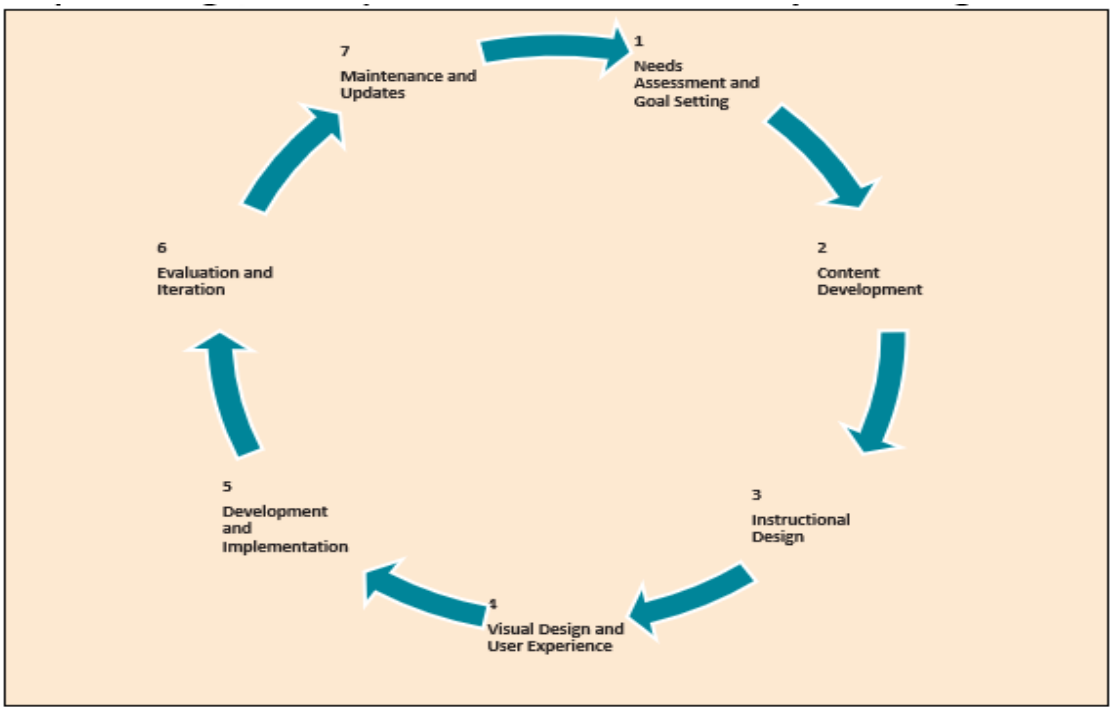
Key financial concepts may be intimidating, but understanding some of these concepts can help you plan for and undertake the journey toward financial well-being, while you take more control of your financial situation and financial future and become empowered to save for memorable life experiences and emergencies.

This module would first introduce five key concepts to help you on your financial literacy journey namely:

- Currency.
- Receipts and earnings.
- Payments and expenses.
- Assets versus liabilities.
- Savings and investments versus borrowings.

The references to digital financial literacy are provided as these concepts are essential for sound financial decision-making towards economic well-being.[174] Designing, developing and testing the financial literacy e-learning module will entail several key steps to ensure effectiveness, engagement and relevance. These steps are illustrated in figure 2.12.

Figure 2.12: Steps to design, develop and test a financial literacy e-learning module



The steps outlined in figure 2.12 and adopting a systematic approach to the design, development and testing of the financial literacy e-learning module, will present an ideal configuration to create engaging, effective and impactful learning experiences that empower consumers to improve their financial knowledge and skills.

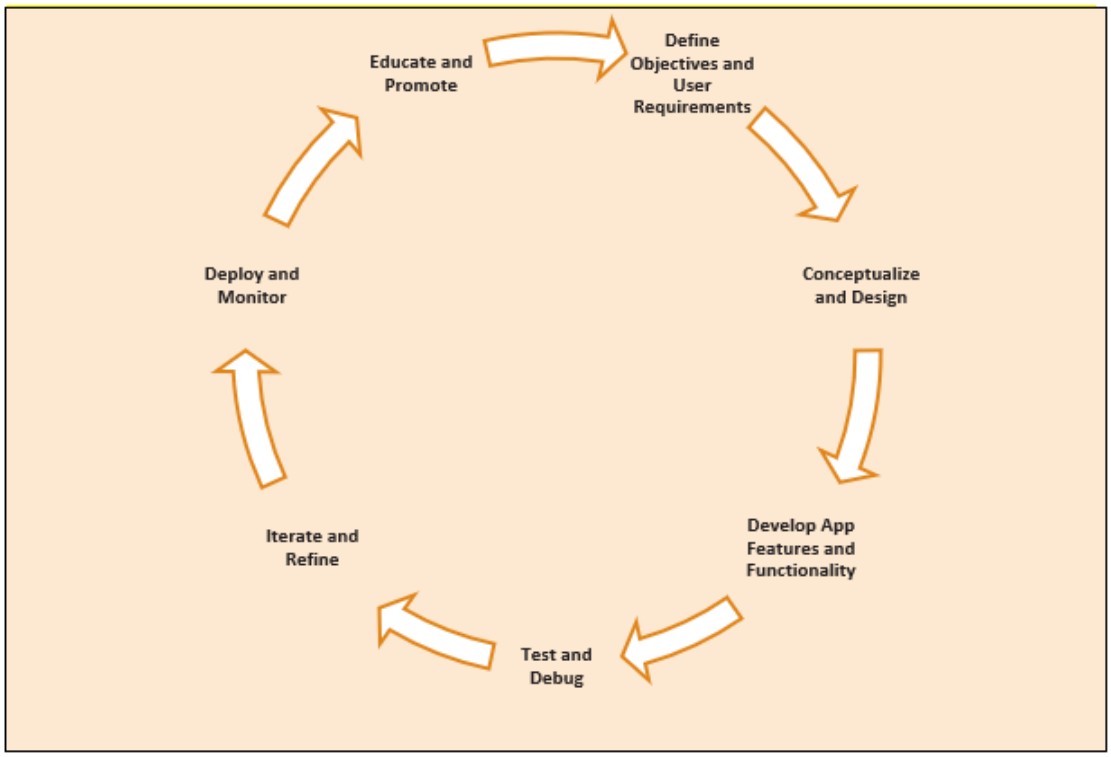
[174] Golden, W., & Cordie, L. (2022). Digital Financial Literacy. Adult Literacy Education, 4(3), 20-26.

2.14.5 Design for elected digital financial literacy application

The framework for the design, development and testing of the intended digital financial literacy application was inclusive of both front-end and back-end designs and associated tasks to design the application.

Designing, developing and testing a financial literacy prototype app involves several stages, as illustrated in figure 2.13.

Figure 2.13: Steps in designing, developing and testing a financial literacy prototype app



By following the steps outlined in figure 2.13 and adopting a user-centered approach, presented an ideal configuration to design, develop and test a financial literacy prototype application that effectively educates and empowers consumers to improve their financial well-being.

2.15 CONCLUSION

The literature review section served to outline and analyse the secondary research information that addresses the study objectives and identified research questions and guided the design and development of the elected digital solutions. This approach further secured a holistic understanding of the required steps to plan, design, develop and test a digital financial eLearning module and application.

A detailed description of the meaning of financial literacy, digital financial literacy and financial technology were provided. These are the crucial concepts to comprehend in planning for the design, development and testing of a prototype eLearning module and digital financial literacy application for South Africa, which anticipates enhancing financial well-being and inclusion. It was further highlighted that digital financial literacy presents good opportunities to leverage digital tools and technologies to manage finances effectively in the digital age which supports the design, development and testing of a digital financial learning module and application to advance financial well-being and inclusion. Also, it was highlighted that low levels of financial literacy, fluctuating interest and challenges experienced with the implementation and sustainability of financial literacy initiatives presented reasonable motivation for the feasibility of designing, developing and testing an efficient eLearning and digital financial literacy application, which will impact the financial wellbeing and inclusion in South Africa. Furthermore, for both elected digital solutions (eLearning module and digital app designs), the significance and inputs from the business intelligence gained from the secondary are notable.

It was further shown that the OECD advocates for initiatives that improve digital literacy and skills development among individuals of all ages. This includes effective marketing campaigns that can raise awareness about the availability and benefits of e-learning platforms and educational apps, encouraging more people to engage with digital learning resources. In this regard, marketing efforts can also help to bridge the digital divide by promoting access to educational content and training opportunities,

particularly for underserved populations or those with limited awareness of available resources. Overall, an effective digital financial literacy eLearning module and application will facilitate the development of financial literacy, digital financial literacy, financial wellness and financial inclusivity in South Africa.

It was also highlighted that the final impact of the digital innovations and solutions will only become evident after a certain period following the launch of the application when the real-time monitoring and evaluation functions, as advocated by the OECD, need to be prioritised by the FCSA. Ultimately, the challenge will be to secure the longevity and sustainability of the eLearning module and digital application, which could ideally be tracked by future longitudinal studies to evaluate the long-term impact of digital solutions on users' financial knowledge, skills and behaviours. In this regard, this section has presented sound frameworks to guide the design, development and testing of effective and impactful digital solutions which will confidently guide the future implementation, funding, marketing, monitoring and evaluation strategies of the FSCA to maintain and sustain lucrative digital content and eLearning/application platforms beneficial to the national cause of long-term digital financial literacy advancement, sustainable financial well-being and life-long learning.

The next section will provide a detailed exposition of the quantitative primary research findings obtained in this study.

SECTION C: PRIMARY QUANTITATIVE RESEARCH

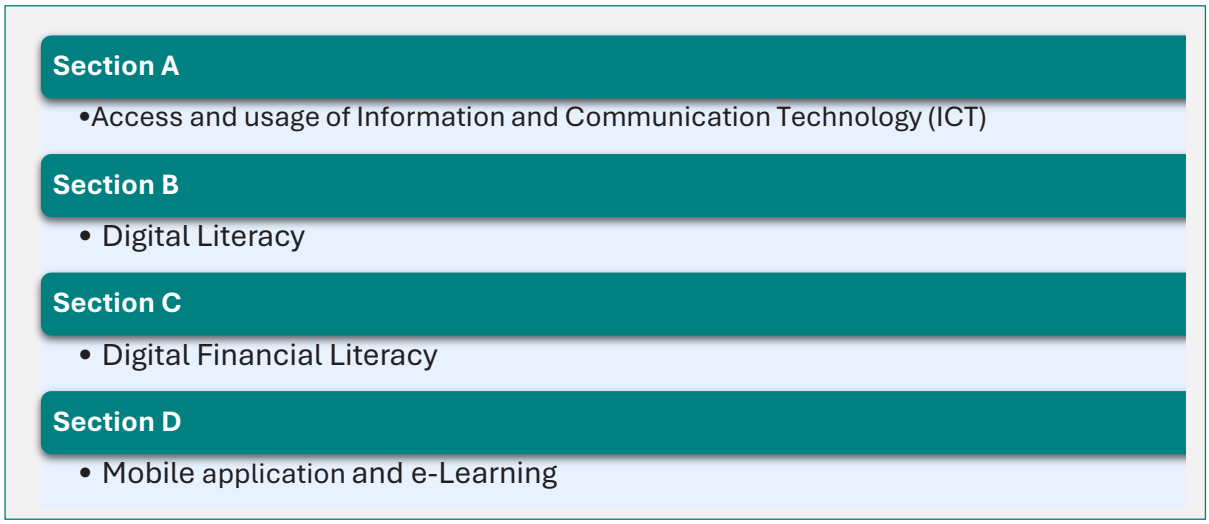
3.1 INTRODUCTION

To obtain views on topics pertinent to this study prior to the design and development of the e-learning modules and digital financial literacy platforms, primary quantitative research was conducted using a questionnaire that included a series of questions related to various aspects of digital financial literacy. This section provides a summary of the research methodology, respondent demographic characteristics and the main findings of this survey. The section also provides a summary of the recommendations for the design phase of the e-learning module and digital application resulting from the overall research study.

3.2 RESEARCH METHODOLOGY

The primary quantitative phase of the research study followed an interviewer-aided data collection approach. Data was collected by trained BMR interviewers, using the Lime Survey online platform, which allows instant and secure data capturing through a structured questionnaire. The development of the questionnaire was informed by the outcome of the secondary research review conducted for the purposes of this study. Four main areas of exploration were covered and uncovered during the primary research phase through relevant research questions (see figure 3.1).

Figure 3.1: Main areas of exploration during primary quantitative research phase



Prior to commencement with the interviewing process, the research instrument was submitted to the project steering committee for approval. After obtaining approval, the questionnaire was pilot tested, whereafter minor changes were effected to the layout and content before being finalised. All interviewers participated in a mandatory training session during which the questionnaire was discussed in detail. The research instrument is shared in Annexure B (Questionnaire for financial customers and potential financial customers).

Following the training, the computer-aided-telephone interview (CATI) facility of the BMR was set up for telephonic interviewing purposes and a fieldwork supervisor was assigned. Besides being controlled from a centrally located CATI facility at the BMR laboratory in Pretoria, progress of the interviews was tracked daily. In addition, weekly meetings were held with the CATI interviewers to discuss progress and address any risks that could impact negatively on the progress and quality of the interviewing and data collection process. These monitoring and evaluation sessions were led by a member of the BMR research team, who was able to address issues expressed at the meetings while also ensuring that all risk were timely mitigated to allow the fieldwork process to proceed uninterrupted. This strategy ensured that survey responses were checked regularly for progress and quality.

3.3 SAMPLING DESIGN AND SAMPLE SIZE

A total of 1 144 respondents completed the survey. After downloading the data from LimeSurvey, the data was cleaned and stored for analysis purposes. Just more than half (54.5%) of the interviews were completed via computer-aided telephone interviews (CATIs), while 45.5% of the total sample of 1 144 respondents was realised via a self-administrated web-based survey.

All (100%) of the respondents confirmed that they have access to the internet. This finding aligns with the qualifying inclusion criteria, which was tailored to only interview respondents who have access to the internet. This qualification criteria

secured objective reporting by respondents who were well positioned to constructively respond to the research questions contained in the research instrument.

3.4 DATA QUALITY AND ANALYSIS

3.4.1 Data quality

The necessary diagnostic analyses were performed on the collected data before additional analysis was done to determine the quality of the collected data. This included the following:

- **Reliability analysis** to determine to what level the survey data is internally consistent. This is an important measure to determine whether the data is sufficiently reliable to draw conclusions. By means of the Cronbach's Alpha test the level of data consistency (reliability) can be determined on a scale from '0' to '1' where '0' is indicative of complete inconsistency at all and '1' of complete consistency. Results of an Alpha ranging between 0.700 and 0.866 were obtained, which is indicative of a high level of data consistency and therefore the data obtained by means of the FSCA Digital Financial Literacy survey was **reliable**.
- **Validity analysis** to determine whether the survey measured what it was supposed to measure. It is important for survey data to be valid otherwise it will not be possible to draw valid conclusions from such data. By means of Principal Component Analysis (PCA), it was determined whether the variables in the FSCA Digital Financial Literacy survey measured aspects of digital financial literacy as intended. The results of the PCA tests provided component loadings ranging between 0.691 and 0.839. Given that '1' is an indication of perfect validity, the component loadings obtained are indicative of highly **valid** survey results.
- **Structural integrity analysis** to determine whether the survey dataset forms a logical whole, i.e. whether expected relationships between variables are found. If there is little or no structural integrity of the dataset any inferential statistics in which the strength of interrelationships between variables is investigated will

provide questionable results. By means of Neural Network analyses it was determined that about 66.25% of the relationships in the underlying data structure of the data could be successfully identified, which is indicative of a fairly high level of **structural integrity**. The implication of this finding is that there is an underlying logical structure to the survey data making higher-order inferential analyses and data modelling possible.

- **Representivity analysis** to determine whether the survey population is sufficiently representative of the sampling population. The central limit theorem states that if a sample is sufficiently large, the sampling distribution will always tend to a normal distribution. By means of Bayesian modelling all the interval and ratio variables in the survey were tested by considering the log likelihood that their sampling distributions will be normally distributed. All statistical inference results showed large values, indicating a tendency to normal distributions. This is a clear indication that the sample size was large enough to be representative of the sample population.

The collected data passed the necessary diagnostic analysis testing and therefore any conclusions drawn from the analysis may be deemed valid and reliable.

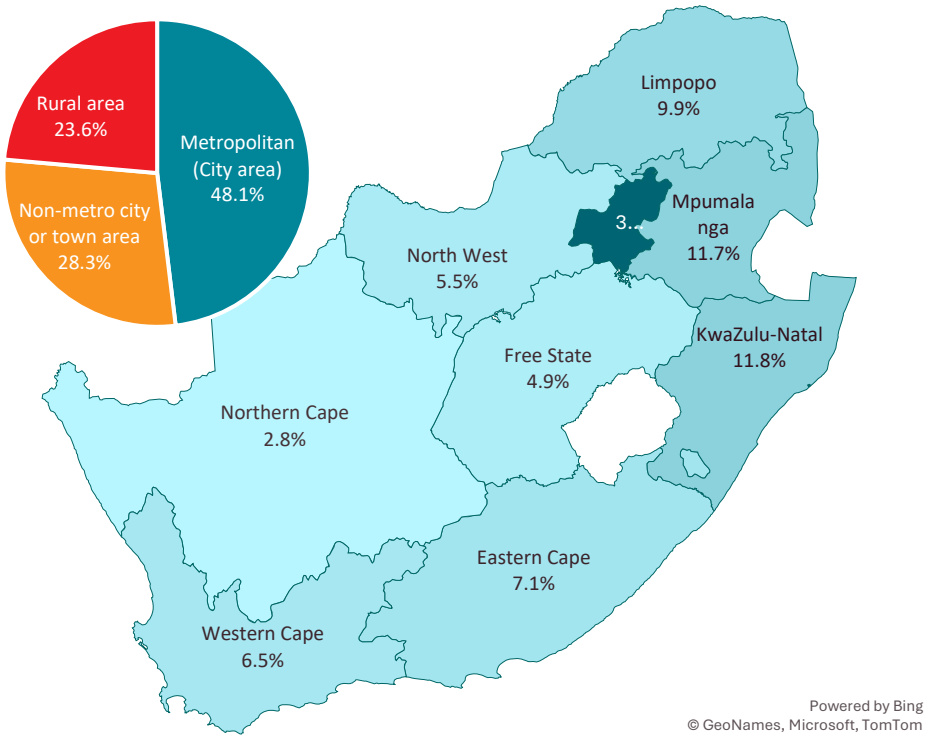
3.4.2 Statistical data analysis

The data analysis procedure included editing, coding and analysing the information gathered from the CATI interviews. The statistical data was analysed using the Statistical Package for Social Sciences (SPSS). The data analysis comprised both basic descriptive and more comprehensive analyses, which are reported in this section of the report.

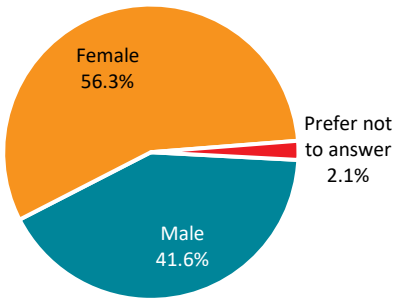
3.5 DEMOGRAPHIC INFORMATION

The following figures provide a summary of the respondent demographic characteristics.

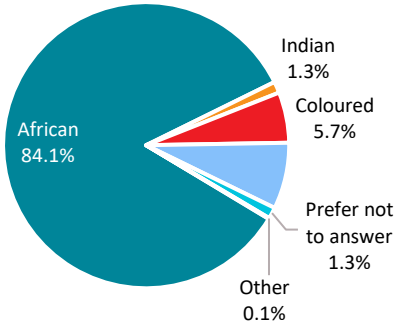
Province and area



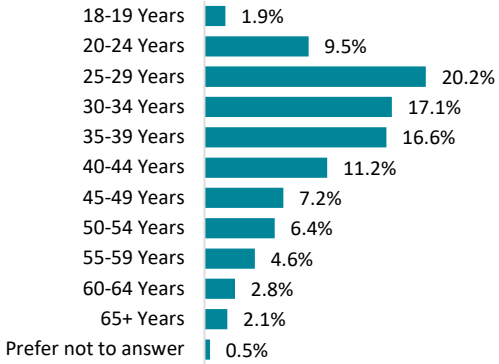
Gender



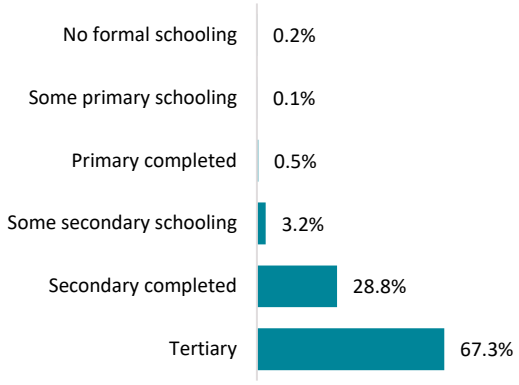
Population group

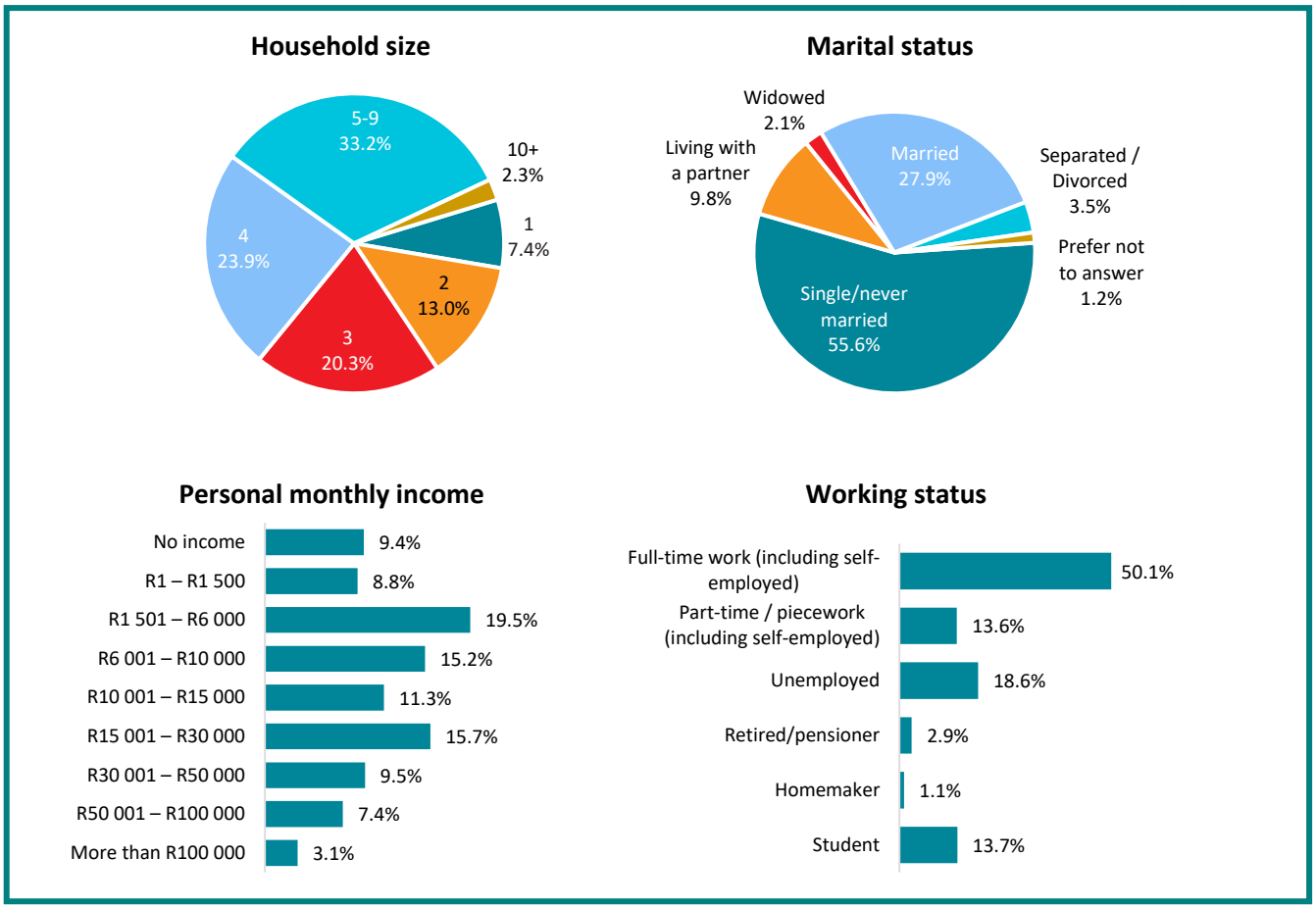


Age



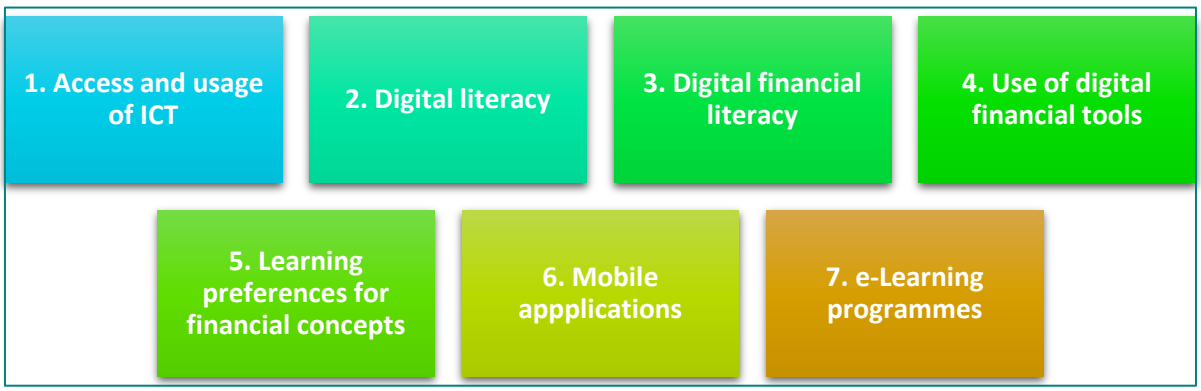
Education level





3.6 RESEARCH FINDINGS

The results are structured according to the different themes that were covered in the research instrument. The following themes are discussed in the subsections that follow:

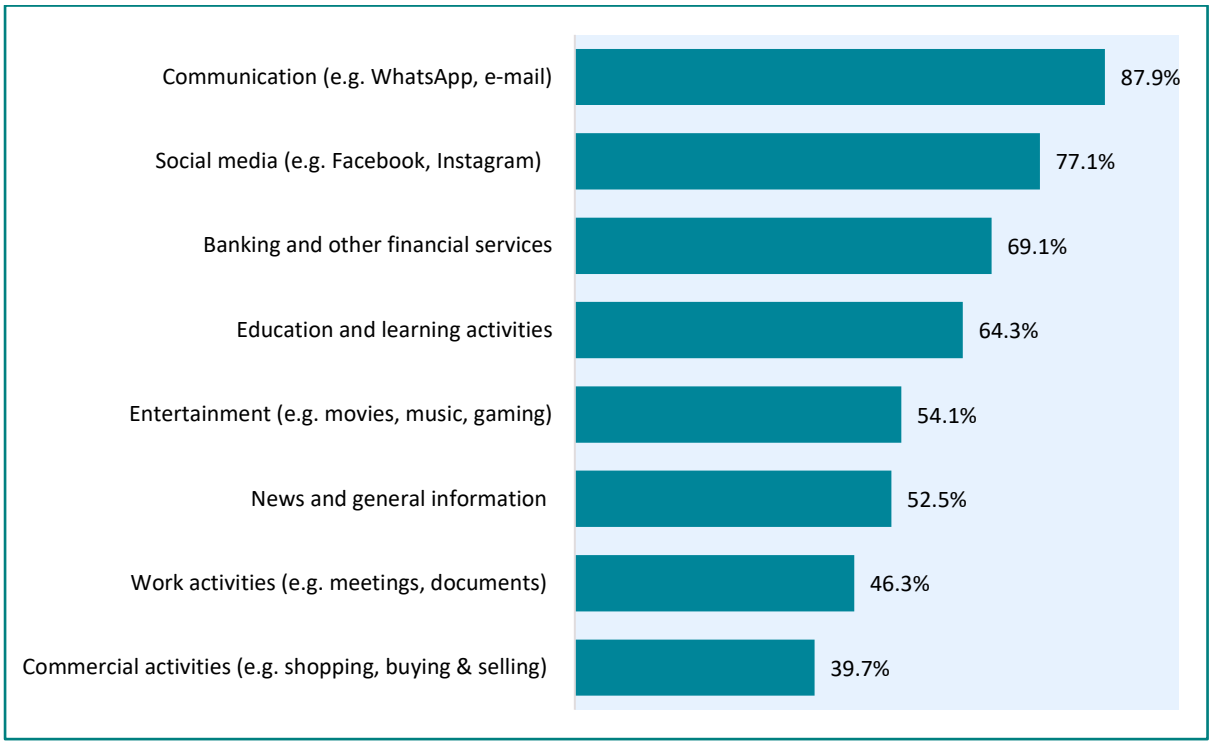


3.6.1 Access and usage of Information and Communication Technology (ICT)

Most respondents access the internet from home and primarily use a smartphone device that they do not share with anyone else (only a third of respondents stated that they share an internet-enabled device) to access the Internet. The frequency of internet use is significant, with almost half (47.9%) of the respondents using the internet almost all the time, while between 15% and 30% use the internet several times a day or almost daily. These statistics reflect a significant daily internet penetration rate.

Respondents indicated that the internet is mainly used for communication and social media, followed by banking and other financial services, education and learning activities and entertainment (see figure 3.2). Specifically, about six in every 10 respondents (64.3%) have acquired experience through online educational content and learning activities.

Figure 3.2: Main activities that the internet is used for



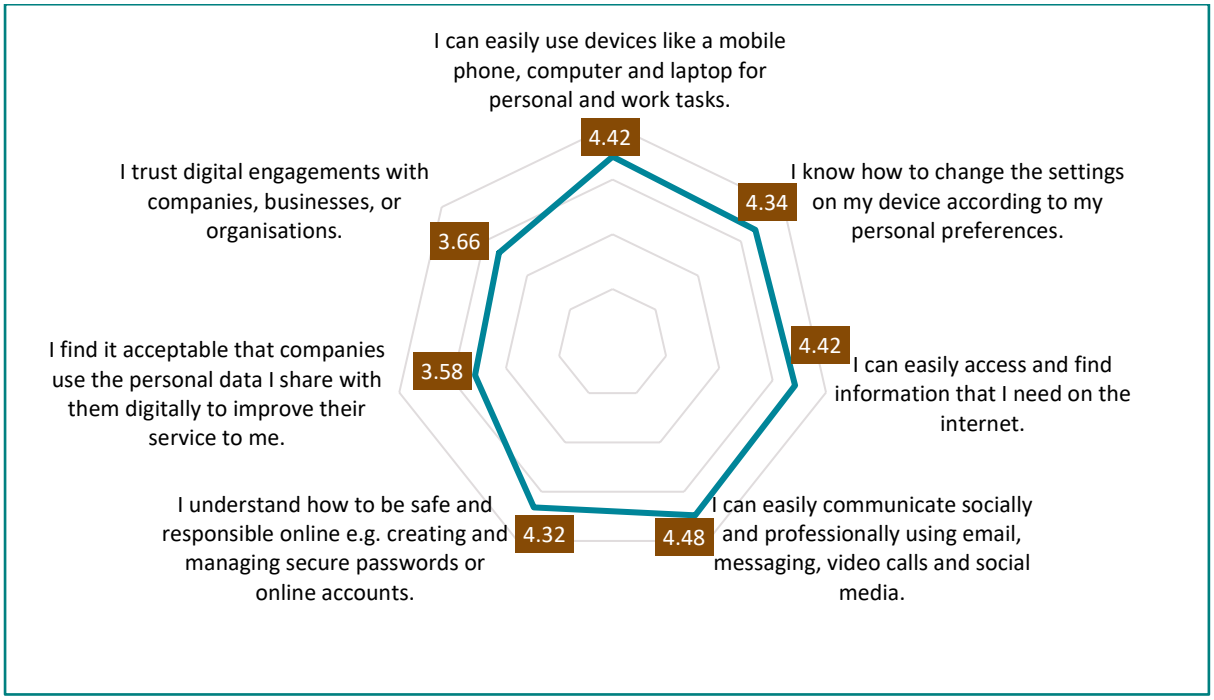
n = 1 138.

In terms of market potential, these findings bode well for the study which aims to develop and test the feasibility of a digital financial literacy tool which contains interactive and engaging educational content using a cell phone device as digital media platform.

3.6.2 Digital literacy

The respondents were asked a series of questions pertaining to their ability to find, evaluate and communicate information using digital media platforms (digital literacy). From the self-assessment it appears that most respondents deem themselves to be digitally literate. High levels of digital skills were evident for specifically (i) the ease of use of cell phone devices, (ii) good knowledge to change the device settings, (iii) ease of accessing the internet and finding information and communicating professionally and (iv) a good understanding of online safety (see figure 3.3). More cautionary ratings were evident for the use of personal data shared digitally with companies to enhance service delivery to customers and the trust in digital engagements with businesses.

Figure 3.3: Digital literacy assessment



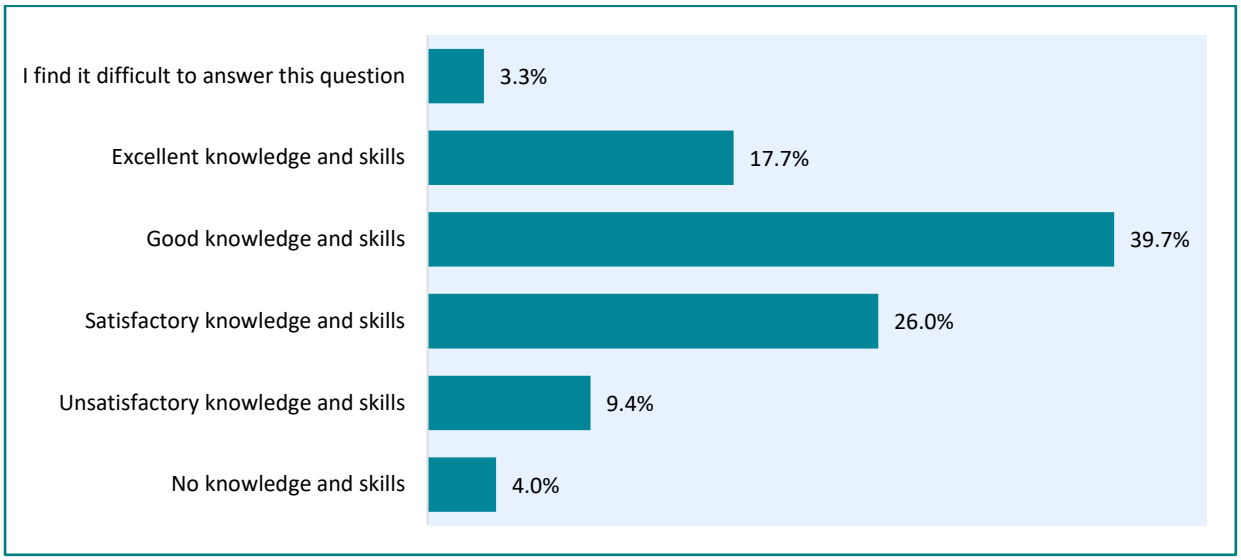
Scale anchor: 1 = strongly disagree, 5 = strongly agree.

Respondents generally seem to practice sound online safety as a very high percentage of respondents (88.3%) confirmed the use of strong passwords and 55.2% of respondents indicated that they deliberately avoid suspicious links and downloads. However, the online accounts of about two-thirds of respondents may be at risk due to irregular updates of antivirus software and not using a two-factor authentication (2FA) as an additional security layer. These security risks are key factors to consider when developing an online digital application which contains interactive and engaging educational content. This will require user education and awareness and pre-empts the recommendation to use security training, which will provide users with the necessary resources to protect their accounts and recognise security threats. This finding also supports the need for clear security policies and guidelines for users to follow.

3.6.3 **Digital financial literacy**

Respondents were asked to rate their financial knowledge and skills in the management of personal finances (figure 3.4) and most respondents (57.4%) rated their financial knowledge and skills as ‘excellent’ and ‘good’. About a quarter of respondents indicated that they have satisfactory knowledge and skills in the management of personal finances.

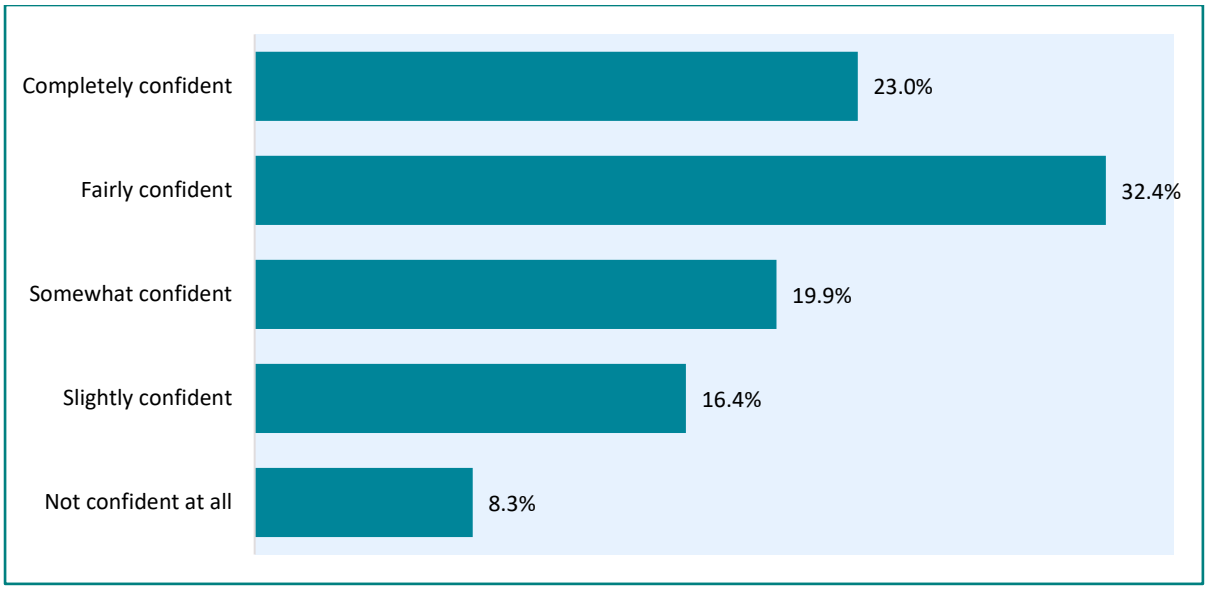
Figure 3.4: Self-rating of financial knowledge and skills in the management of personal finances



n = 1 137.

However, when it comes to the confidence ratings of respondents in doing a good job of managing their finances (figure 3.5), less self-assured responses were notable. Only about one in every four respondents (23.0%) is 'completely' confident that they are doing a good job of managing their finances.

Figure 3.5: Confidence in doing well in managing personal finances



n = 1 132.

3.6.4 Use of digital financial platforms or tools

The regularity of using the internet to manage finances was motivated by factors such as convenience, speed, ease of accessibility, ability to provide real-time access to financial information, cost efficiency and safety. Cost efficiency and safety and security were lower-order single mentions for using the internet for financial activities or to access financial information. Not being aware of the financial platforms or applications and not trusting online financial platforms were stated as the key reasons for 'never' using the internet for financial activities or accessing financial information.

Table 3.1 indicates the usage of digital channels for financial activities and services used. From this it is evident that transferring money to others, making online payments (via bank EFT or credit card), managing financial products and services (such as savings, investments, insurance) and opening a bank account featured as the leading digital financial services and activities being used. *Completing training about financial matters*, conducting budgeting and obtaining advice or information on financial matters were cited as the leading financial services and activities which respondents would like to use in the near future. Likewise, trading in crypto assets, trading in stocks and shares, conducting debt management, taking out a loan and *completing training about financial matters* were cited as the leading financial services and activities never used.

Table 3.1: Usage of digital channels for financial activities and services

Financial services and activities	Currently use	Never used	Would like to use in future
Completed training about financial matters	14.8%	**51.8%**	23.9%
Conduct budgeting	32.1%	**35.5%**	22.0%
Conduct debt management	16.8%	**58.9%**	17.4%
Make online payments (via bank EFT or credit card)	**85.0%**	5.7%	3.2%
Manage financial products and services (such as savings, investments, insurance)	**64.2%**	17.1%	9.7%

Table 3.1 (continued): Usage of digital channels for financial activities and services

Financial services and activities	Currently use	Never used	Would like to use in future
Obtain advice or information on financial matters	27.2%	**40.8%**	20.6%
Open a bank account	**56.1%**	26.0%	11.8%
Other	5.6%	17.2%	7.7%
Taken out a loan	17.5%	**53.8%**	13.6%
Trade in crypto assets	5.2%	**71.0%**	16.7%
Trade in stocks and shares	10.2%	**63.5%**	17.6%
Transfer money to others	**90.3%**	3.8%	1.8%
Use e-filing for my tax returns	**44.4%**	33.5%	12.3%

n = 1 136.

Respondents were also requested to rate their confidence in using digital financial tools. As shown in table 3.2, most respondents indicated that they are concerned about the security of their personal information online, but they remain confident in using digital tools to manage their finances. Most respondents believe that digital financial tools can help them in saving more money. Also, only half of the respondents indicated that they are willing to try a new digital financial tool if it was recommended to them.

Table 3.2: Confidence in using digital financial tools

	Disagree	Neither disagree or agree	Agree
I am concerned about the security of my personal information online.	9.2%	9.1%	81.7%
I feel confident using digital tools to manage my finances.	8.6%	13.1%	78.3%
I believe digital financial tools can help me save more money.	6.6%	19.2%	74.2%
I feel confident that I will be able to recognise a financial scam.	10.1%	18.6%	71.3%
I will try a new digital financial tool if it was recommended to me.	7.5%	38.4%	54.1%

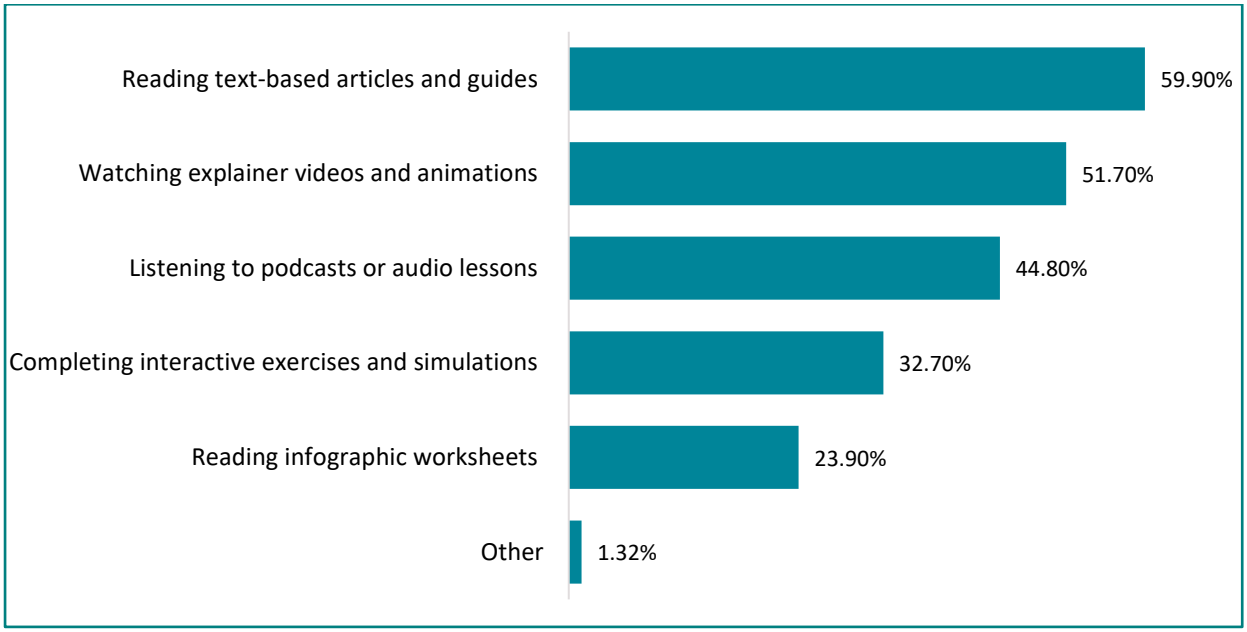
n = 1 133.

Respondents were not aware of all the different digital financial tools available, mainly familiar with mobile banking apps, online banking and e-wallets, while tools such as cryptocurrency and budget and investment apps were unfamiliar.

3.6.5 Learning preferences for financial concepts

When developing any training material, it is important to consider the learning style of the target market. Figure 3.6 indicates that reading text-based articles and guides and watching explainer videos and animations topped the list of preferred learning styles to enhance knowledge of financial concepts. In turn, the least preferred learning styles to enhance knowledge of financial concepts included the reading of infographic worksheets and completing interactive exercises and simulations.

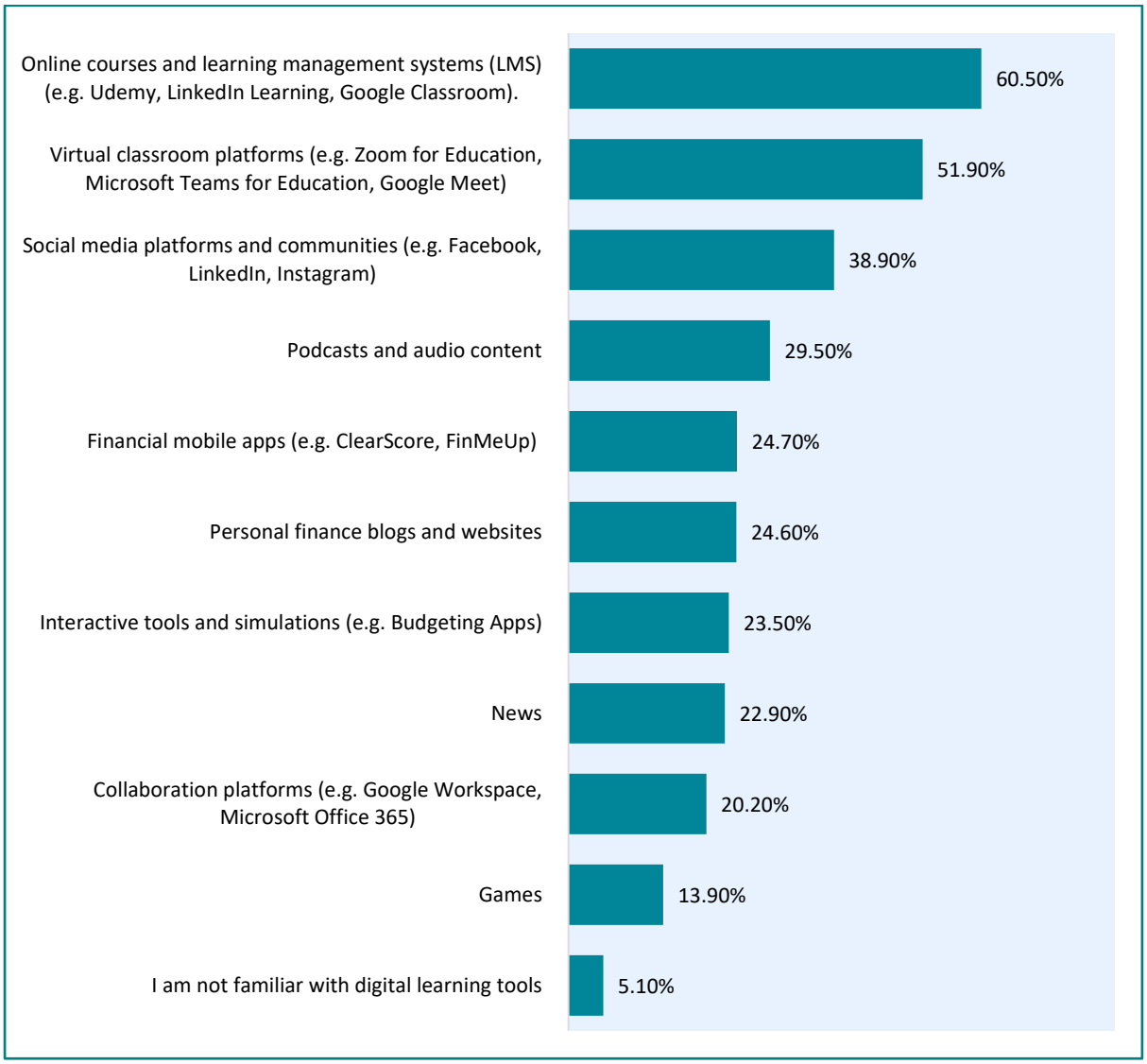
Figure 3.6: Preference of learning style for financial concepts



n = 1 133.

Various platforms are available to learn about financial concepts. As is evident from figure 3.7, respondents noted online courses and learning management systems (LMS), (e.g. Udemy, LinkedIn Learning, Google Classroom) and virtual classroom platforms, (e.g. Zoom for Education, Microsoft Teams for Education, Google Meet) as being the most effective digital learning platforms. Games and collaboration platforms, (e.g. Google Workspace, Microsoft Office 365) were cited as the least effective digital learning platforms for enhancing learning about financial concepts.

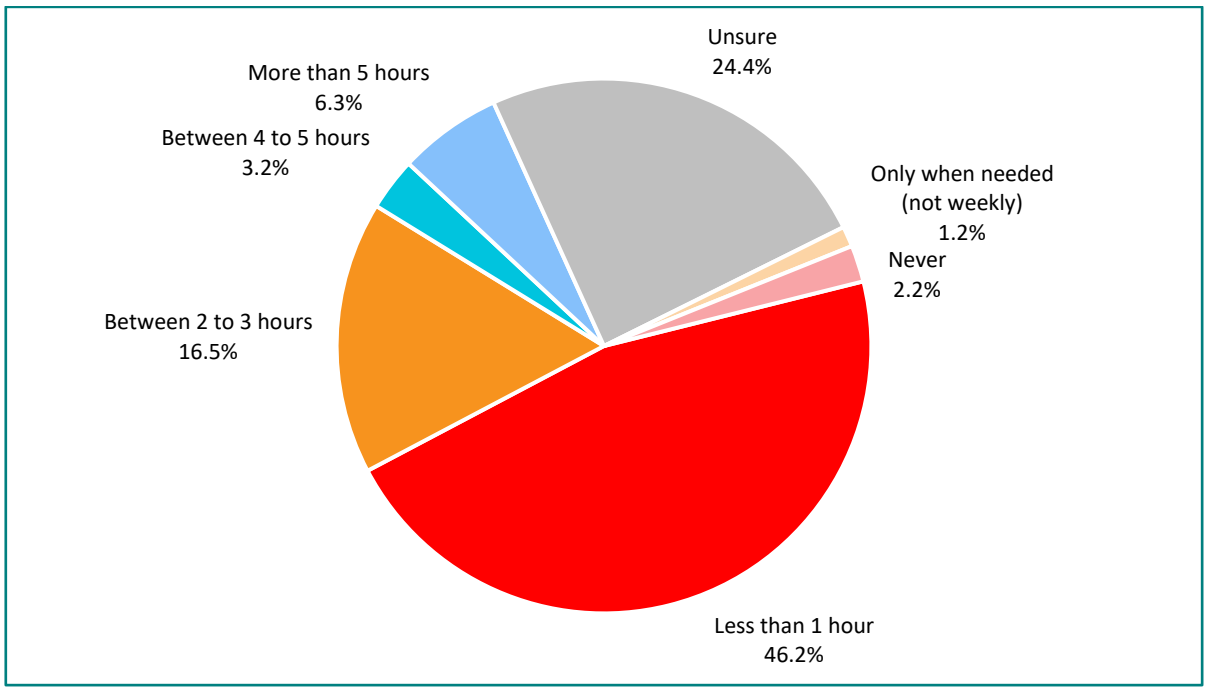
Figure 3.7: Effectiveness of digital learning tools for learning about financial concepts



n = 1 133.

Concerning time spent on online searching and learning about financial concepts, most respondents (46.2%) devote less than an hour to these activities on a weekly basis (see figure 3.8). About two in every five respondents (16.5%) spent between two and three hours weekly conducting online searches for and learning about financial concepts. About a quarter of respondents were unsure about the amount of time spent on these activities.

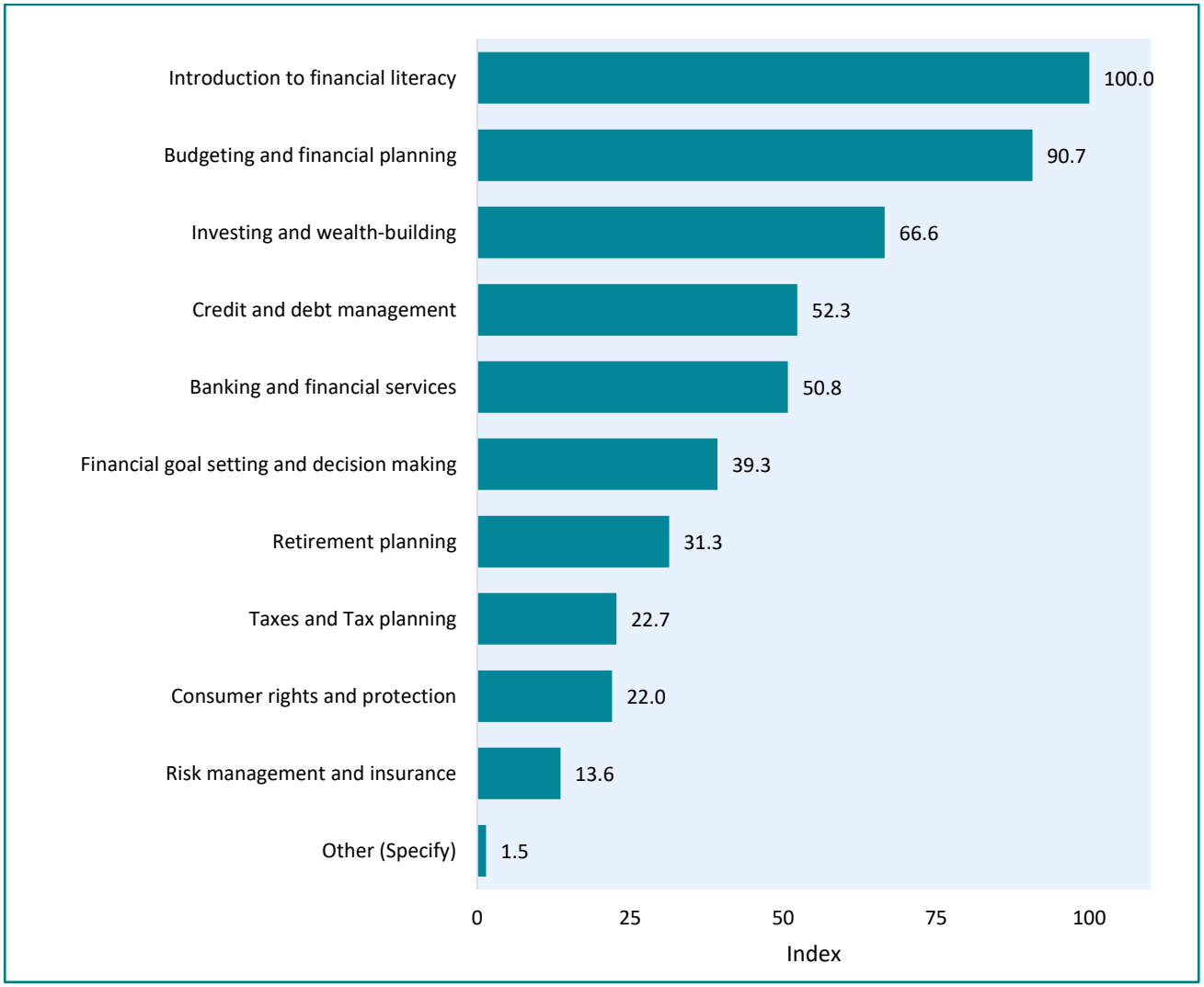
Figure 3.8: Average amount of time spent online searching for and learning about financial concepts per week



n = 1 133.

Figure 3.9 indicates the ranking of the top three topics that respondents noted that they think is important to include in a digital financial literacy programme. An introduction to financial literacy, budgeting and financial planning and investing and wealth-building topped the rankings of preferred topics for a digital financial literacy e-learning programme aimed at improving the necessary knowledge and skills to make informed financial decisions, manage finances responsibly and work towards financial goals. Respondents were less interested in risk management and insurance, consumer rights and protection and tax and tax planning.

Figure 3.9: Ranking of top three topics which should be included in digital financial literacy e-learning programme



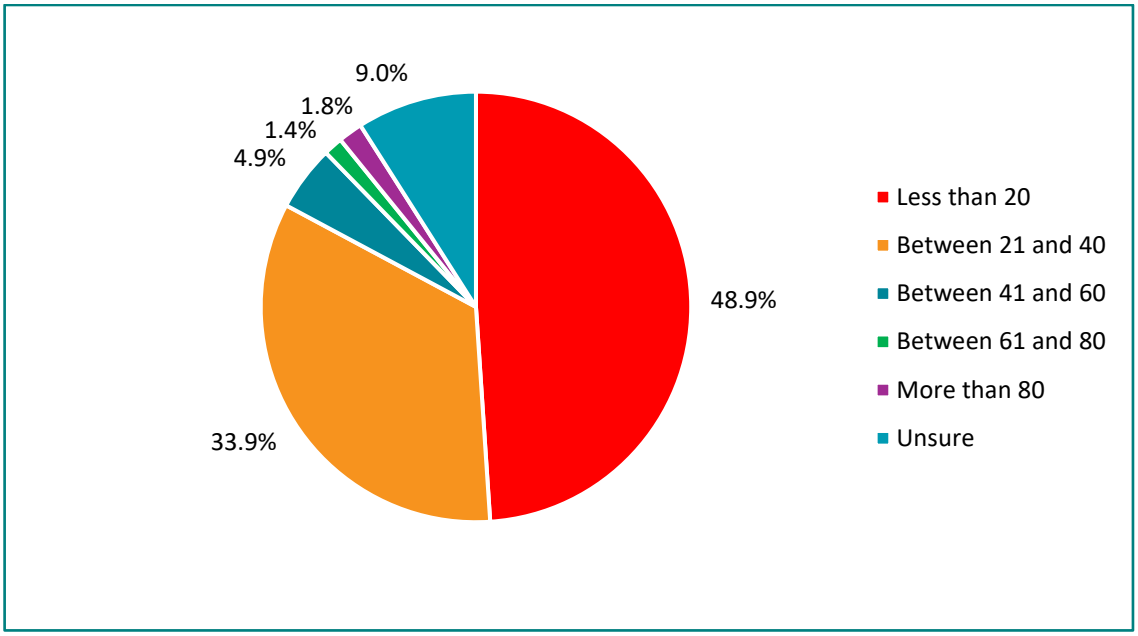
**Index is based on a weighted score (number of times a topic was selected by respondents, weighted based on rank) expressed as percentage of highest ranked topic.*
n = 1 073.

3.6.6 Mobile applications

Most respondents (88.0%) indicated that they use mobile apps daily, although only one in 10 respondents (10.5%) confirmed that they have in the past specifically used financial literacy education mobile apps. The analysis shown in figure 3.10 indicate that almost half of the respondents (48.9%) have less than 20 applications on their mobile devices and an additional 33.9% indicated that they have between 21 and 40

applications on their mobile devices. A crude computation shows that respondents have an average of 25 apps installed on their mobile devices.

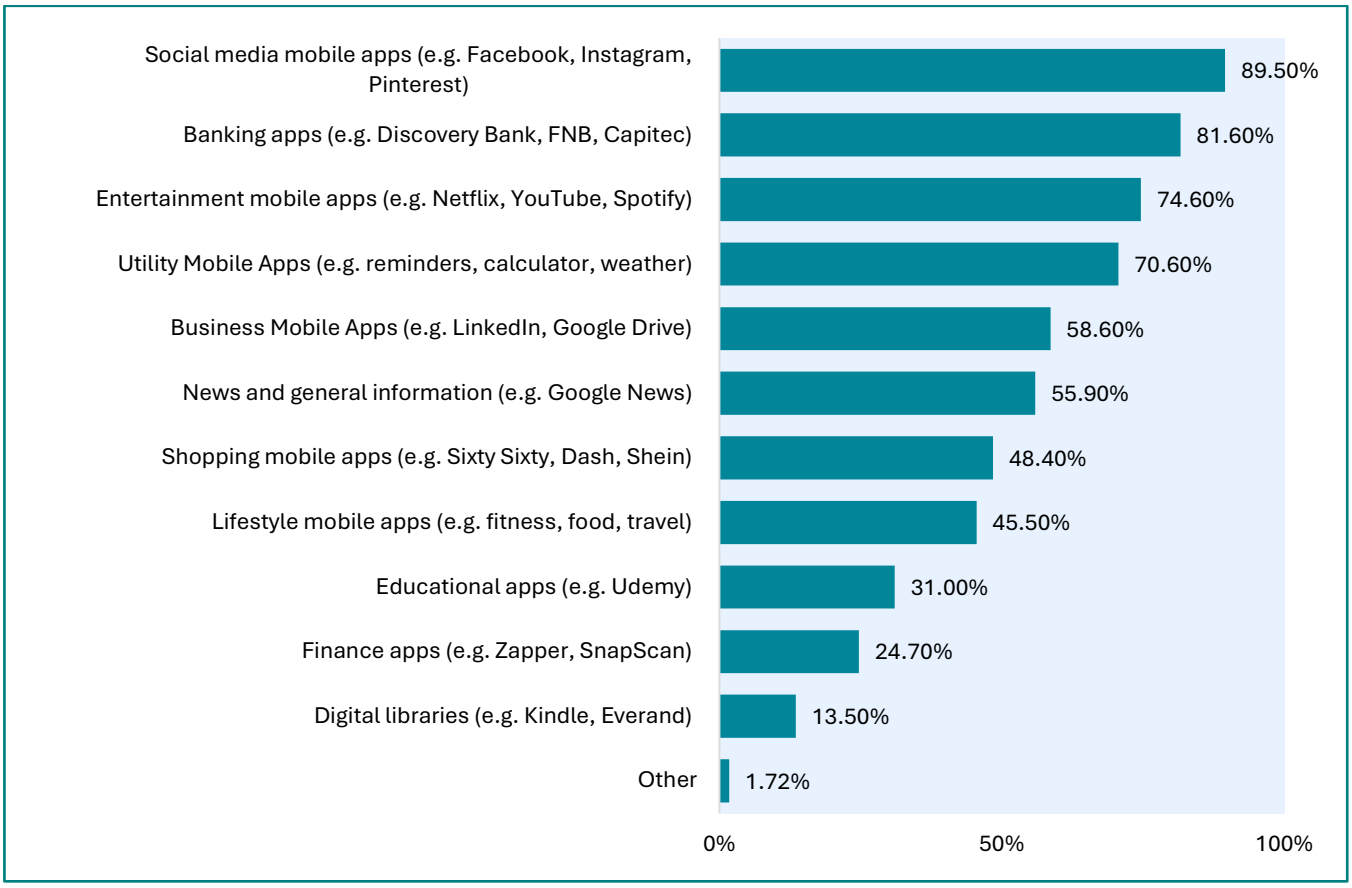
Figure 3.10: Number of applications on mobile device



n = 1 045.

The typical applications that respondents had installed on their mobile devices were mainly social media mobile apps (e.g. Facebook, Instagram, Pinterest), banking apps and entertainment mobile apps (e.g. Netflix, YouTube, Spotify) (see figure 3.11). Finance apps and education apps are at the lower order of applications installed on digital devices.

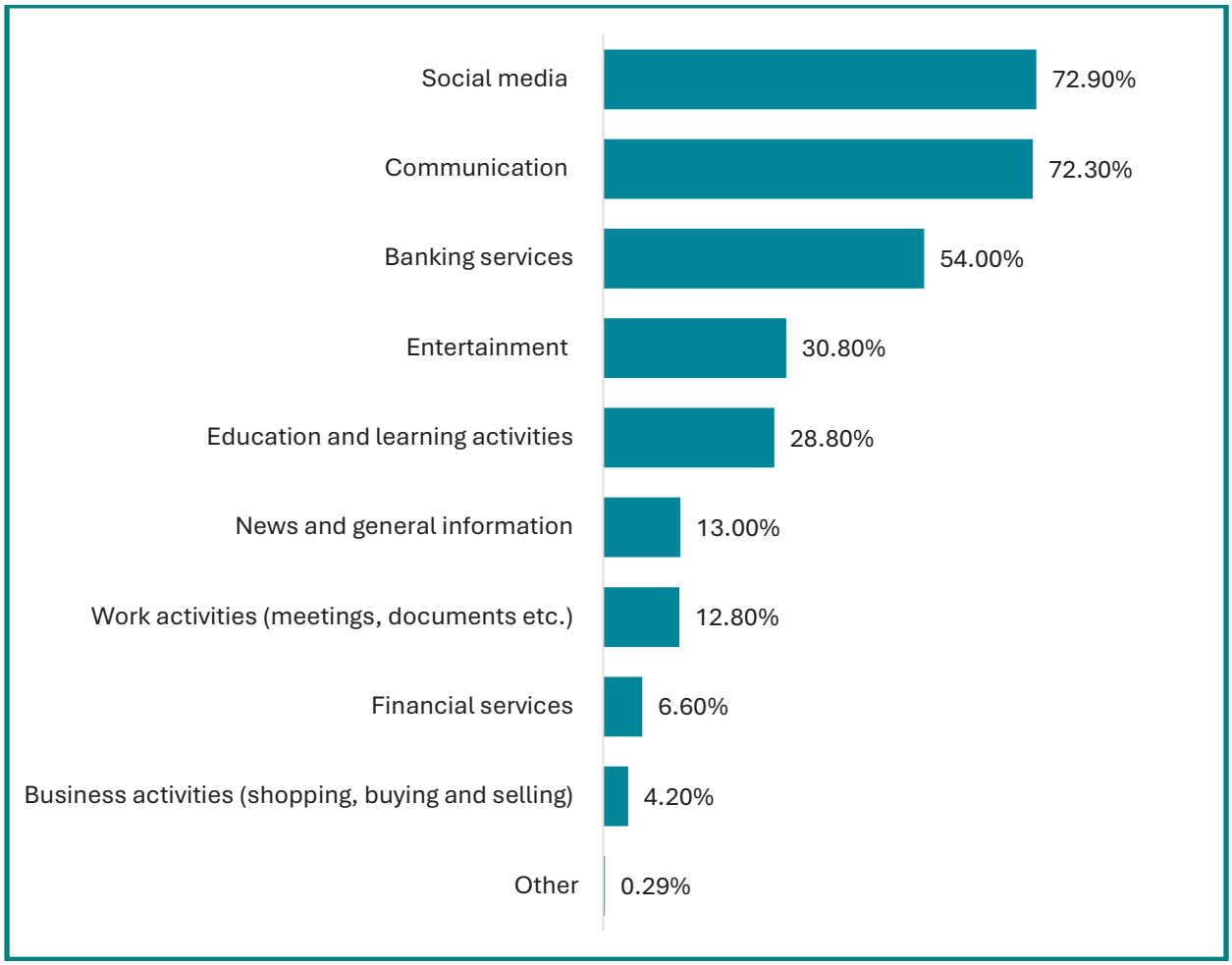
Figure 3.11: Applications typically installed on mobile devices



n = 1 045.

This finding was also supported by asking respondents to indicate the top three activities for which they use mobile applications. Figure 3.12 shows that social media and communication were indicated as the top activities by close to three quarters of respondents, while education and learning activities on mobile apps were cited as a top activity by only a quarter of respondents.

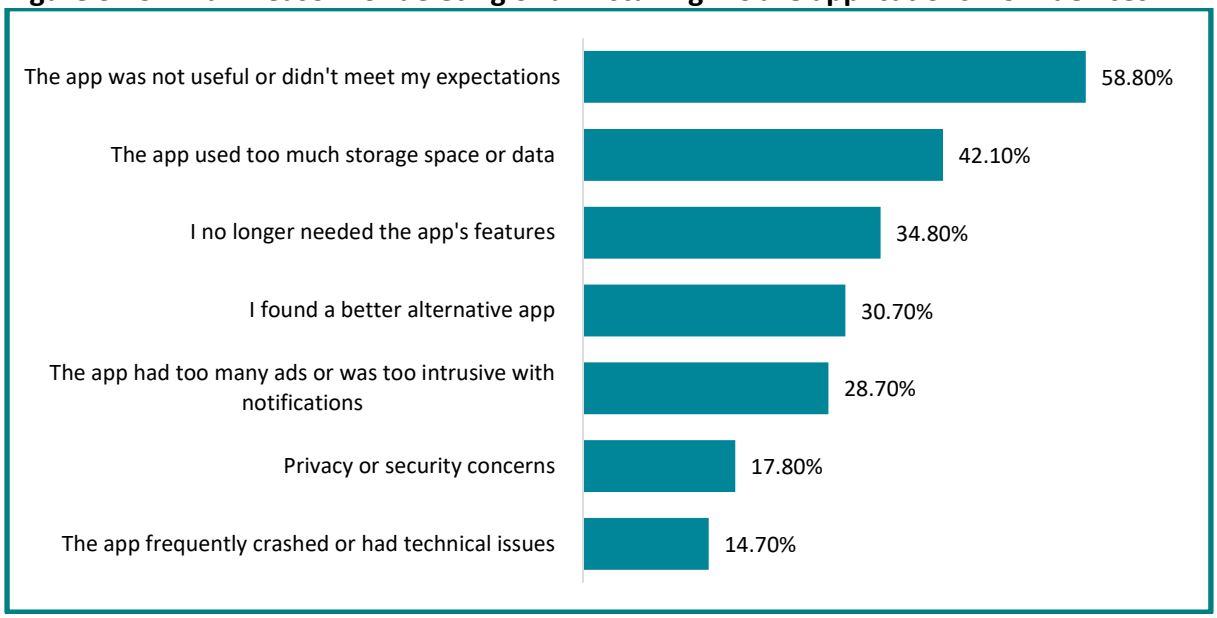
Figure 3.12: Main activities that mobile applications are used for



n = 1 045.

Considering the lifespan of mobile applications, figure 3.13 indicates that about four in every 10 respondents (44.2%) rarely delete mobile applications, while about a quarter (25.2%) of respondents delete mobile apps within a month or less. The main reasons cited for deleting mobile applications shown in figure 3.13 indicate that it was because they were not useful or didn't meet user expectations (58.8%) or that the application used too much space or data (42.1%). Just less than a fifth of respondents (17.8%) delete apps due to security concerns.

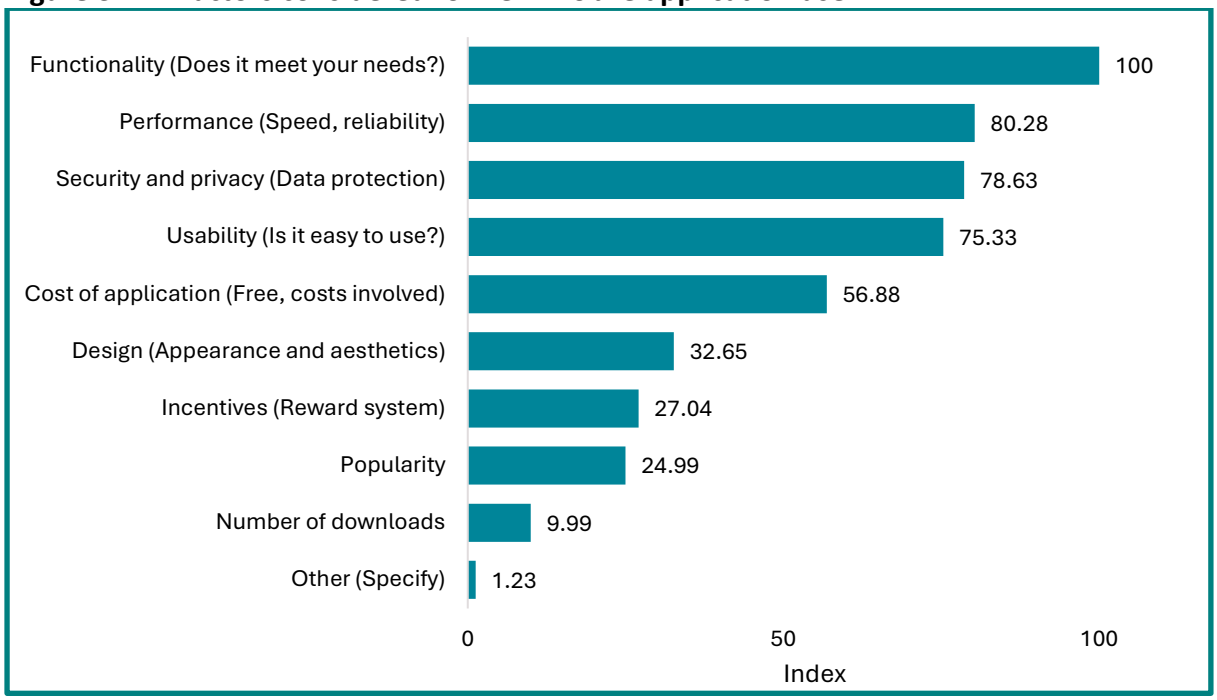
Figure 3.13: Main reason for deleting or uninstalling mobile applications from devices



n = 1 038.

When installing a new application, respondents highlighted that they regard functionality, performance, security and privacy and usability as the main considerations (see figure 3.14).

Figure 3.14: Factors considered for new mobile application use

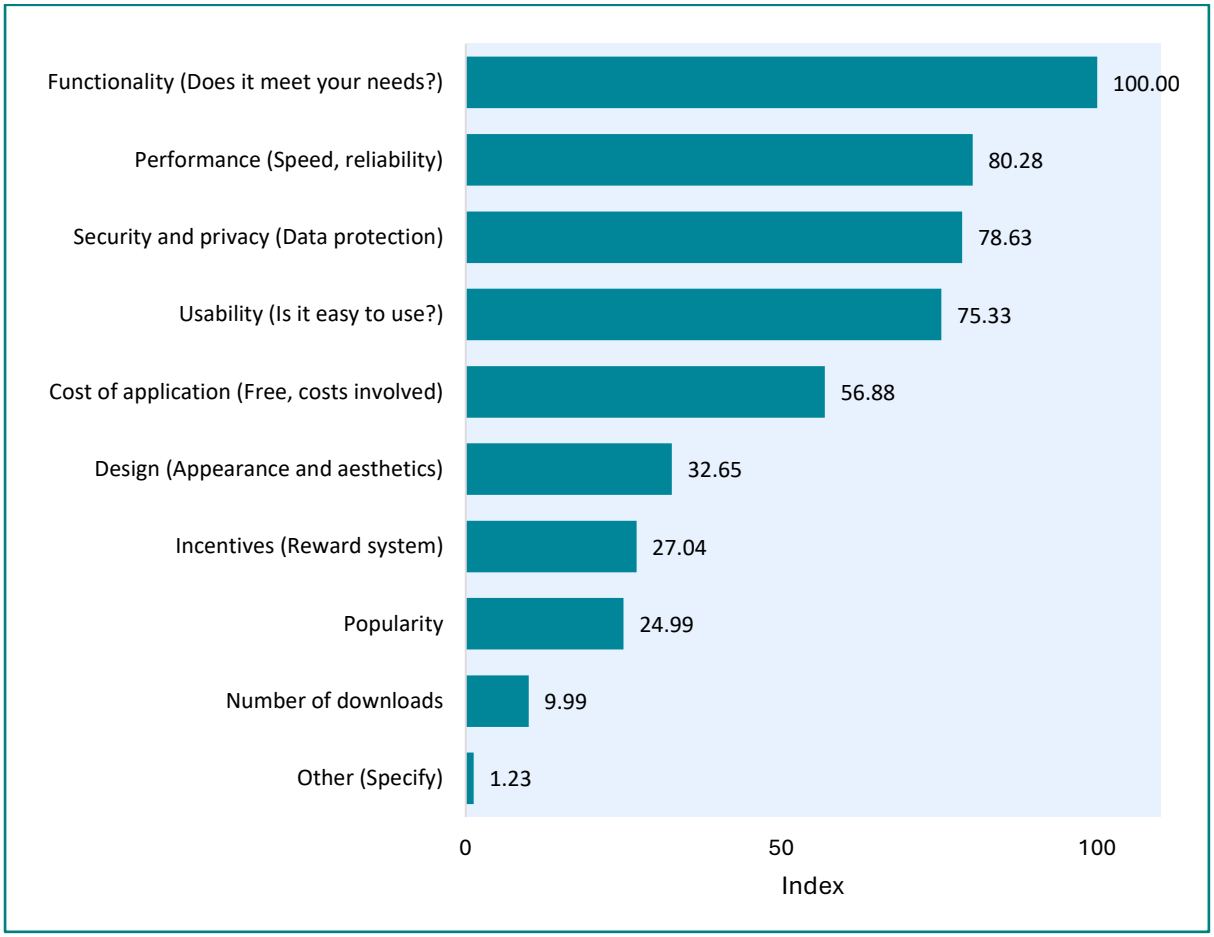


**Index is based on weighted score expressed as percentage of highest ranked feature.*

n = 1 014.

When installing a new application, respondents highlighted that they regard functionality, performance, security and privacy and usability as the main considerations (see figure 3.15).

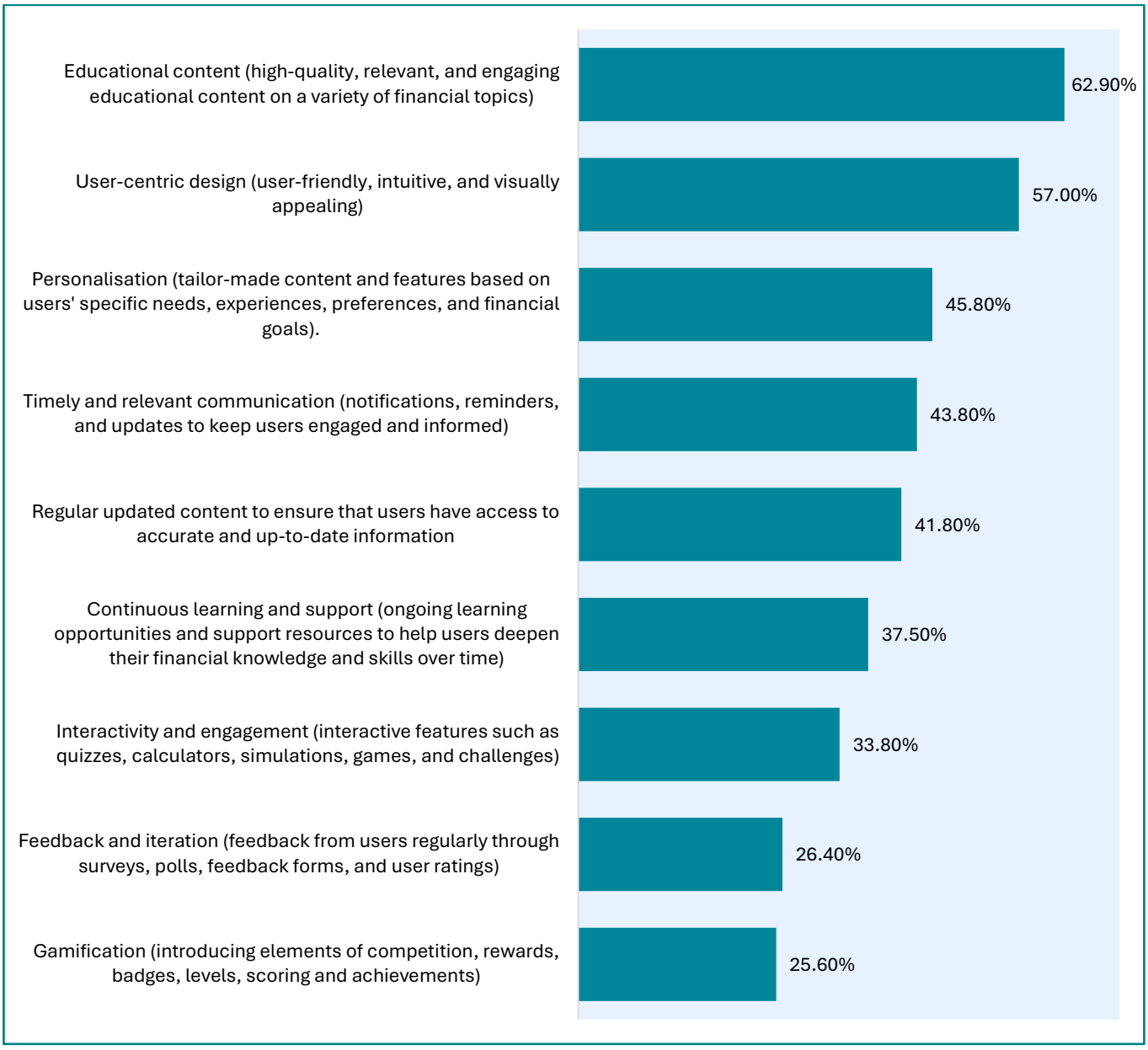
Figure 3.15: Factors considered for new mobile application use



**Index is based on weighted score expressed as percentage of highest ranked feature*
n = 1 014.

The key drivers of continued use of a mobile application shown in figure 3.16 includes apps with high-quality, relevance and engaging educational content on a variety of financial topics. User-friendly, intuitive and visually appealing apps were recorded as the second-order motivator for continued mobile app use. Gamification (introducing elements of competition, rewards, badges, levels, scoring and achievements) recorded a low-order rating as the reason for continued mobile app use and can therefore be regarded as the least motivating factor to secure continued use of apps.

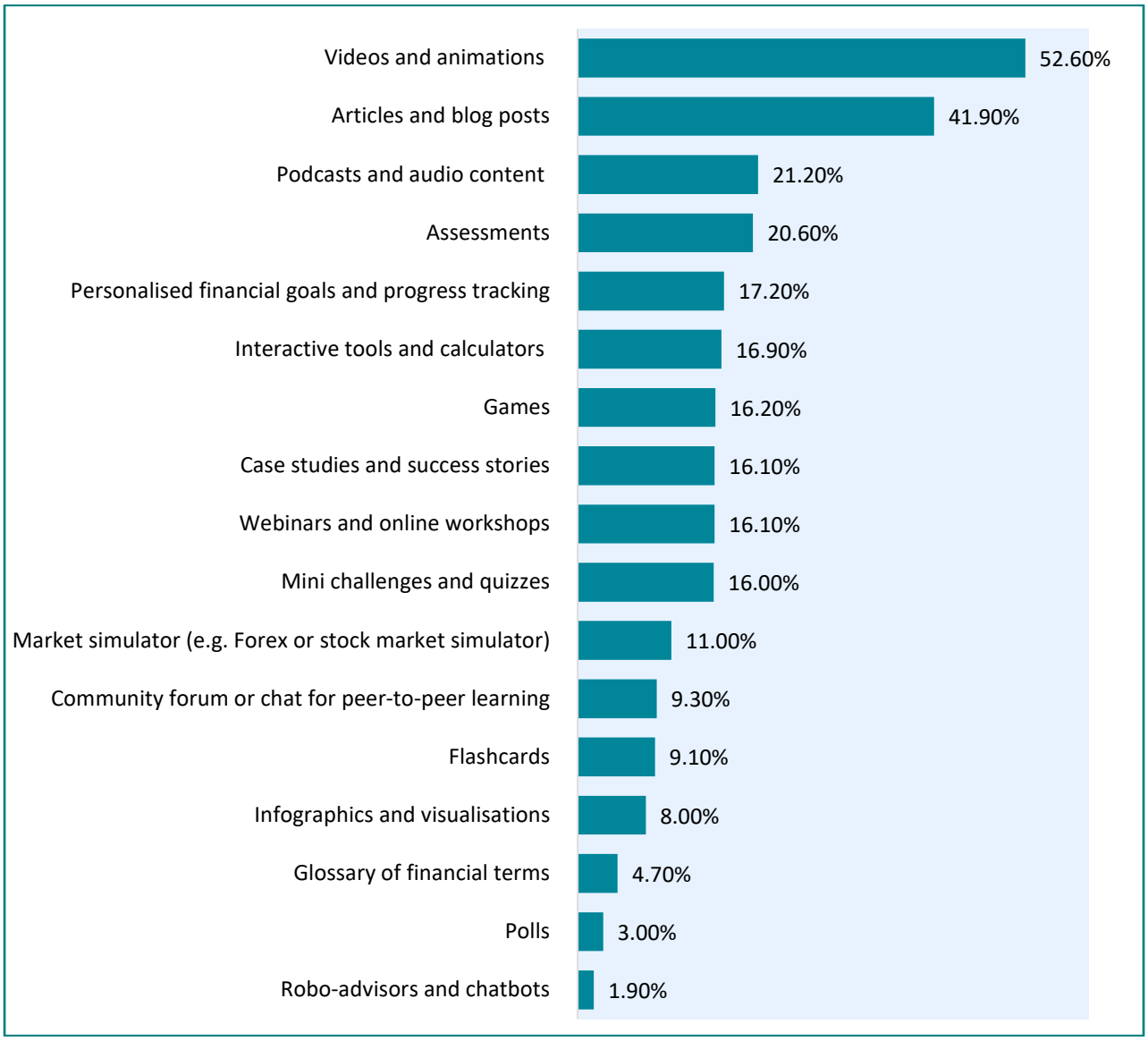
Figure 3.16: Factors motivating continued use of a mobile application



n = 1 040.

Features of applications that are regarded as most helpful to educate individuals regarding their financial matters included videos and animations as well as articles and blog posts. Robo-advisors and chatbots, polls and glossaries of financial terms were regarded as important by less than 5% of respondents (see figure 3.17).

Figure 3.17: Most helpful features of apps to educate on financial matters



n = 1 040.

The limited number of respondents that indicated that they have made use of financial literacy applications, provided the names of various existing mobile applications that they make use of. Respondents indicated that such apps help users understand and use various financial skills, including budgeting, saving and investing. Some apps used were indicated as being user-friendly, updated daily, offering discounts, offer easy budgeting tools and a variety of savings options. On the other hand, some apps for financial literacy education used by respondents were criticised for its ads, being costly

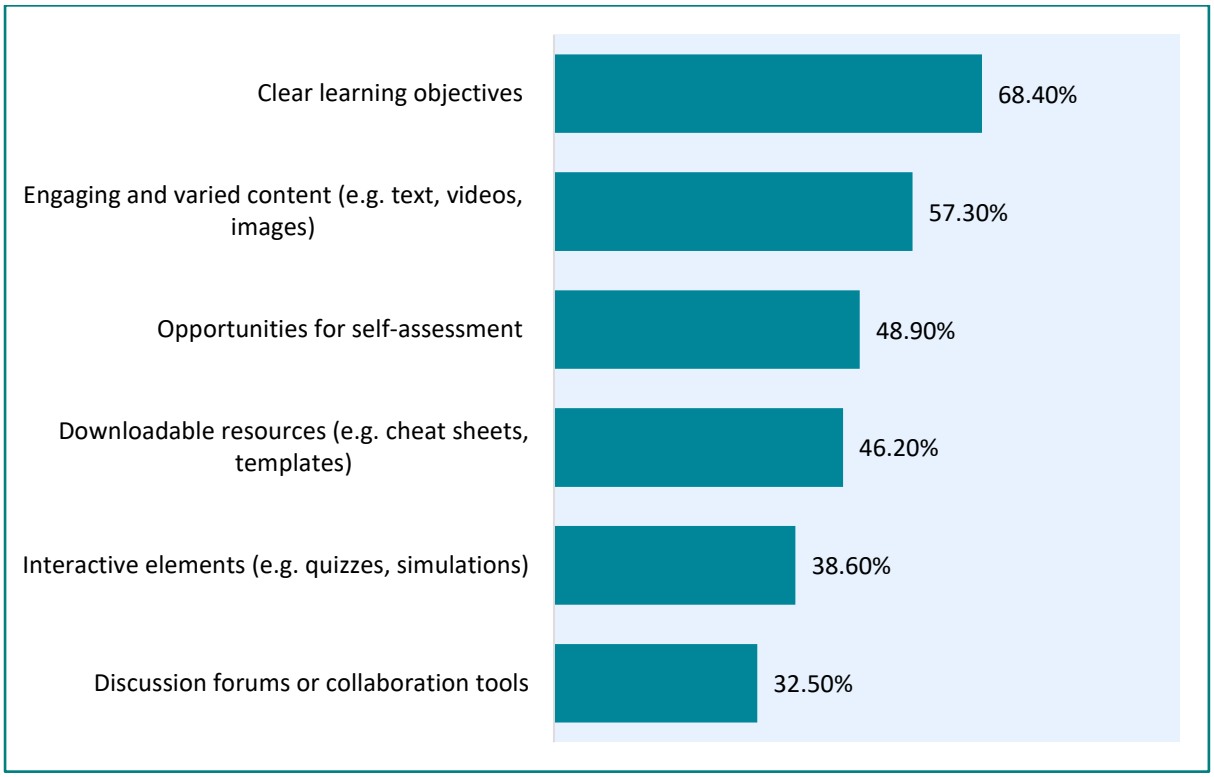
and data intensive, lacking search/AI features, providing irrelevant information for Africa, being too complicated and not having any rewards when completing a course.

3.6.7 eLearning programmes

Only 15.8% of respondents indicated that they have completed any online financial literacy and education courses or programmes (e-learning) before.

The main features of e-learning programmes that these respondents indicated to be helpful as shown in figure 3.18 were clear learning objectives and engaging and varied content (e.g. text, videos, images), while discussion forums or collaboration tools and interactive elements (e.g. quizzes, simulations) were regarded as helpful by less of the respondents.

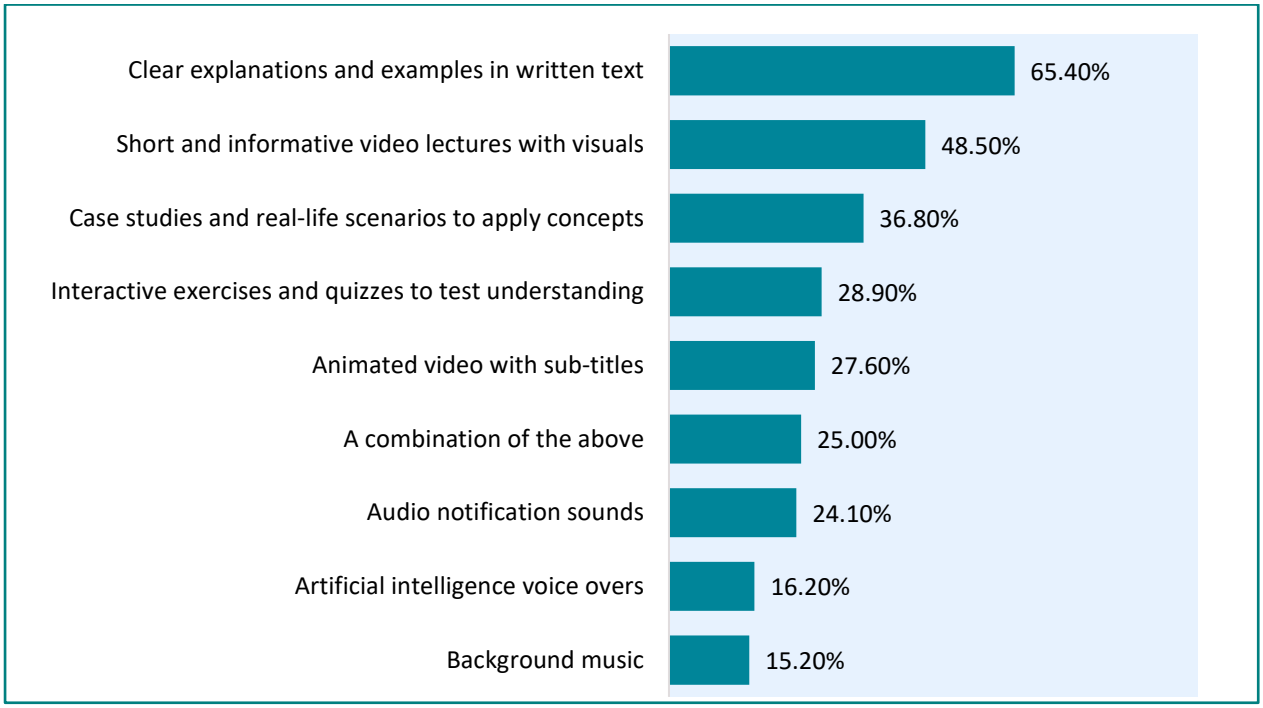
Figure 3.18: Most helpful features in an e-learning programme



n = 1 034.

As is shown in figure 3.19, clear explanations and examples in written text and short and informative video lectures with visuals were recorded as the most preferred format for information on an e-learning platform. The least preferred formats for information in an e-learning programme that were indicated by respondents were background music and artificial intelligence voice-overs.

Figure 3.19: Preferred format for information in an e-learning programme



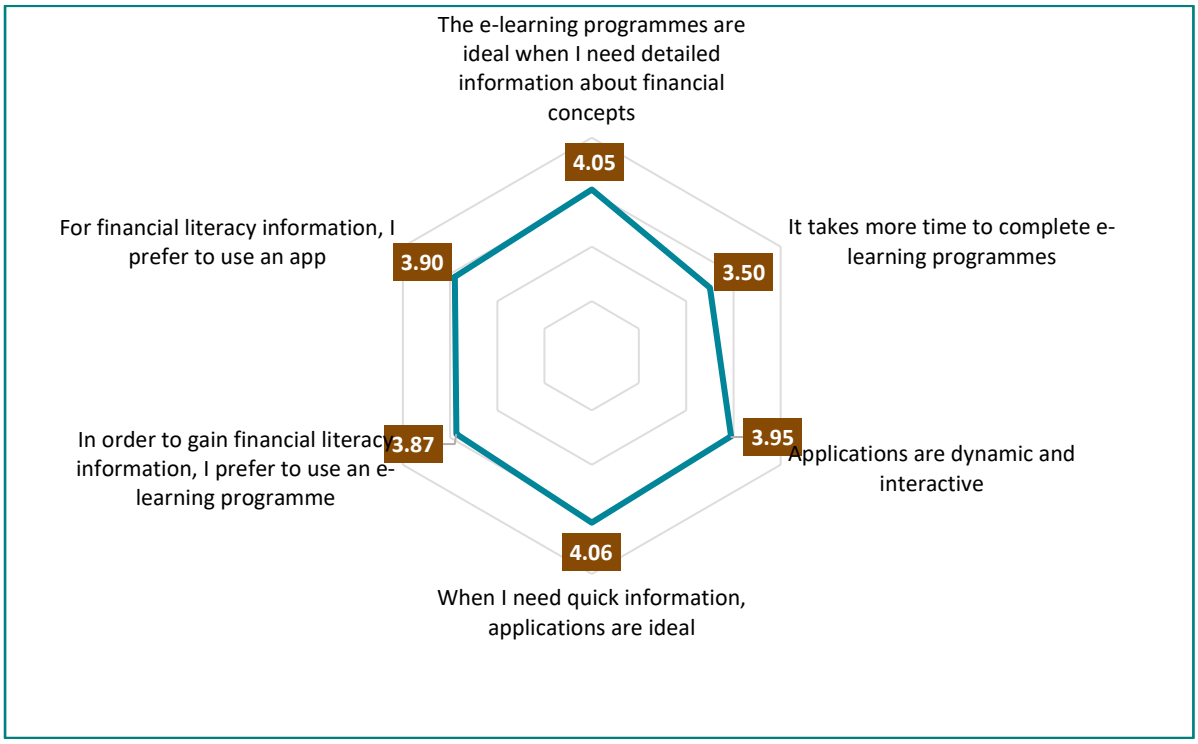
n = 1 034.

Access to resources (download free learning resources for reading) and mobile platform friendliness (easy to access and engage with) were regarded as the most important when accessing and using an e-learning programme.

3.7 CONCLUSION

Some key considerations for e-learning programmes and applications stem from the respondent's level of agreement to statements posed about such platforms. Figure 3.20 shows that respondents prefer applications for quick information, but e-learning programmes are ideal when they need detailed information about financial concepts.

Figure 3.20: Key considerations for e-learning programmes and applications



Scale anchor: 1 = Strongly disagree, 5 = Strongly agree.

It appears form the primary research that there are several reasons why a digital financial skills programme that is designed based on the findings of this study will contribute greatly to digital financial education in South Africa. Some of the main reasons for this are:

- **High levels of digital inclusion in South Africa**: This serves both as a motivation for using digital means for digital financial education purposes as well as a motivation why such education programmes are important.

- **Low levels of financial skills and digital financial skills/confidence in South Africa**: Such low levels of financial and digital financial skills require an education intervention and here especially given the financial education mandate of the FSCA.

- **High use of financial applications for transactional, saving and credit-taking purposes**: It is clear from the results of this study that respondents are making use of financial applications and the financial education features of such applications (i.e. on the Capitec App). This clearly shows that there is a substantial need for actionable financial information.

- **Digital financial education programmes are required to optimize financial application use and for budgeting purposes**: There is a clear need of respondents for financial education to improve their digital financial skills although only a relatively small proportion of respondents already made use of such programmes.

- **The architecture of a digital financial education programme should be aligned to the digital and information needs of users**: It is clear from the findings of this study that apps which are aligned with consumer preferences are in high demand, i.e. the Capitec App, with its financial education features and tools. It is also imperative that apps and e-learning programmes should be easy to use and the financial education provided should be easy to understand and usable.

SECTION D: DEVELOPMENT OF A PROTOTYPE ELEARNING PLATFORM AND MOBILE APPLICATION

4.1 INTRODUCTION

This section of the report deals with the design and development of prototype eLearning platform and prototype mobile application. Following the review of the secondary and primary data collection phases, the digital financial literacy platforms were designed and developed in consultation with expert consultants and the project steering committee.

4.2 CONTENT DEVELOPMENT

The first step in the development process was the development of educational content. The primary purpose of an online digital financial platform is to educate users, therefore high-quality, well-structured content is a critical component to ensure that financial customers and potential financial customers gain the necessary financial knowledge and skills.

According to the FSCA project scope, two prototype eLearning modules had to be designed and developed by considering the FSCA MyMoney series, the OECD financial literacy education frameworks and the outcome of the primary quantitative research. After careful consideration of the research outcome, it was agreed by the project steering committee to develop four eLearning modules based on four key focus areas.

The four eLearning modules included the following:

- ✓ **Module 1: Income and expenditure:** This module introduces key concepts to help individuals on their financial literacy journey, namely money, income (earnings and receipts), expenses and payments.
- ✓ **Module 2: Savings and investments:** This module demonstrate the importance of saving and offers basic information on savings as well as strategies for effective saving. It explains the difference between saving and investment and introduce

individuals to different types of investment options, while taking the risk-return into consideration.

- ✓ **Module 3: Credit and debt:** This module enables individuals to understand the types of debt, including good and bad debt, how to use and manage different types of debt and how to avoid some risks that come with taking on debt. Tools for managing debt and making wise financial decisions are included.
- ✓ **Module 4: Protection and resilience:** This module assists individuals in understanding their rights and responsibilities when selecting financial products, as well as in taking measures to safeguard their personal data and identifying suitable financial products and services to manage their risks. The module also addresses considerations when drafting a will and how to build financial resilience during tough times.

Guided by the FSCA Terms of Reference and input from the project steering committee, the module content needed to be applicable to the broader South African population. Further guiding features included the use of simple and understandable language, as well as the inclusion of elements pertaining to grammar, text, visual aspects and illustrations accessible to any reader in the public domain. The emphasis on the use of simple and understandable language was to ensure clear effective content that will empower and engage users to gain and advance financial knowledge and make informed decisions.

It was agreed to use the content for both an eLearning platform and mobile application, which will be discussed in the next section.

4.3 DESIGN AND DEVELOPMENT OF eLEARNING PLATFORM AND MOBILE APPLICATION

4.3.1 eLearning platform

Following the development of the four modules, the contents of modules one (income and expenditure) and four (protection and resilience) were used to create an

eLearning platform. A Storyboard was created for modules one and four, which was approved by the FSCA project steering committee.

The eLearning platform's welcome pages for modules 1 and 4 are shown in exhibits 4.1 and 4.2. The welcome page includes usage instructions, an introduction video to the Genie. The "Next" button at the bottom of the page allowed the user to navigate to the subsequent page.

Exhibit 4.1: Welcome Page of eLearning Platform Module 1

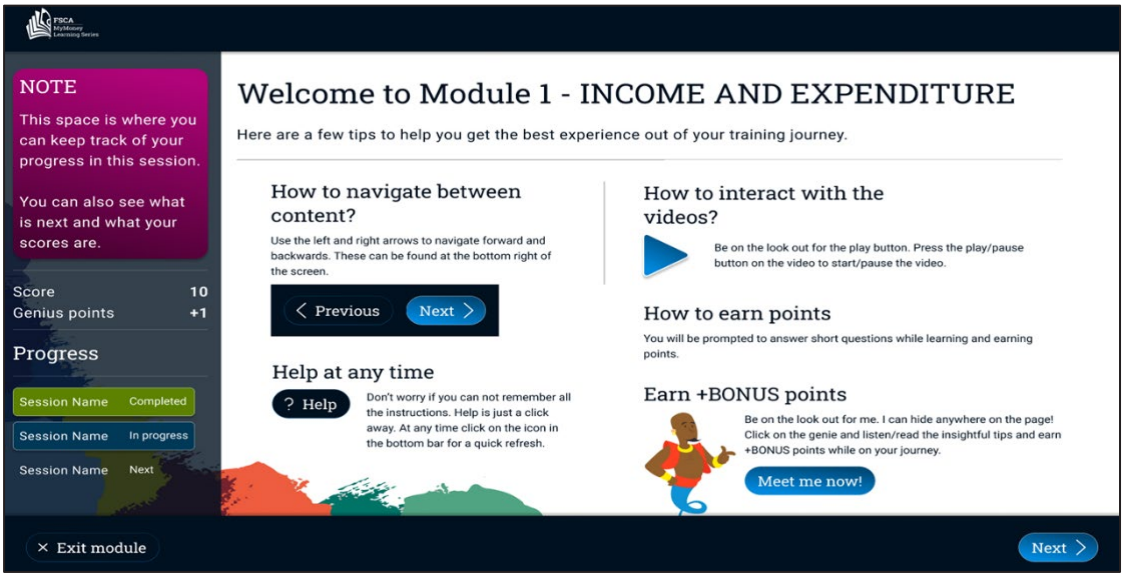
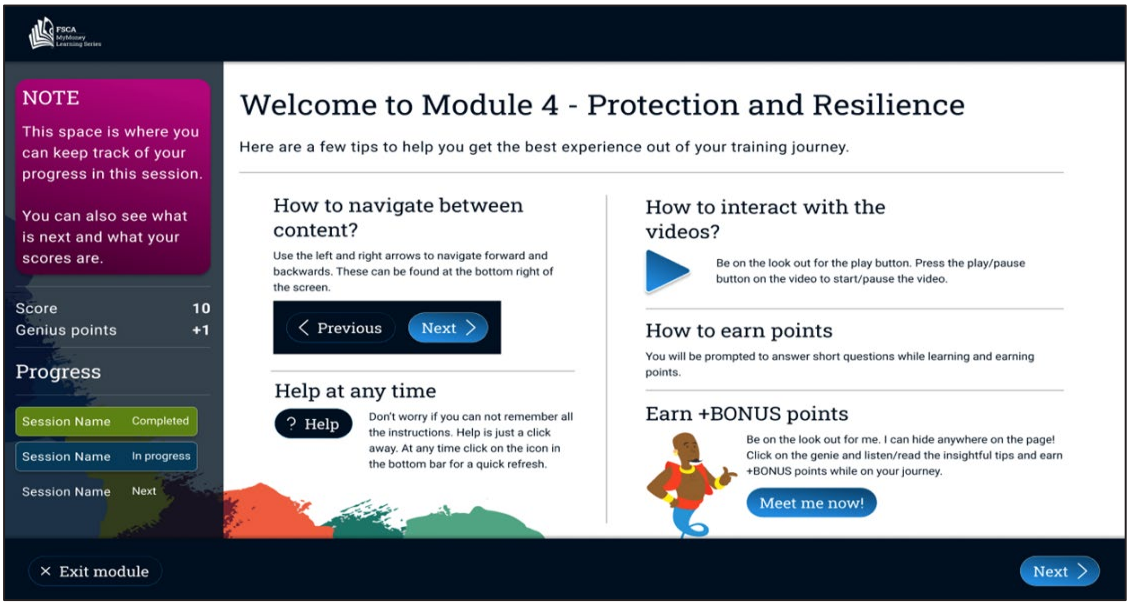


Exhibit 4.2: Welcome Page of eLearning Platform Module 4



eLearning Platform - Content

The eLearning platform's content was comprehensive and accessible through a range of electronic devices, such as tablets, laptops and desktop computers. The content was designed to ensure that financial customers and potential financial customers gain financial knowledge and retain the information and apply it to real-life situations. Therefore, the content had to be relevant, interesting and well structured. Examples of the material covered in modules 1 and 4 are shown in exhibits 4.3 and 4.4.

Exhibit 4.3: Content Module 1

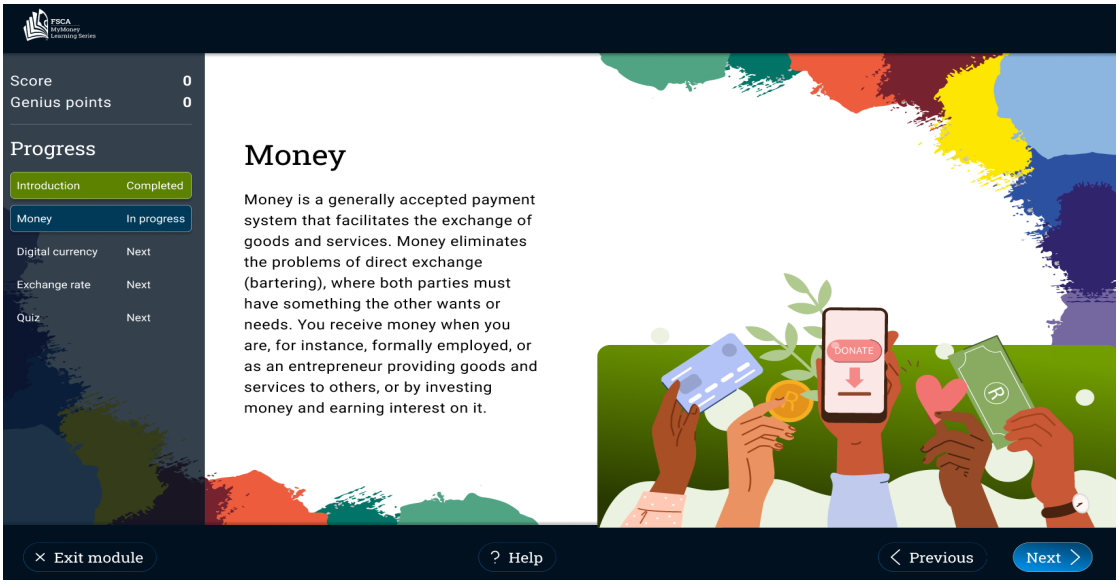
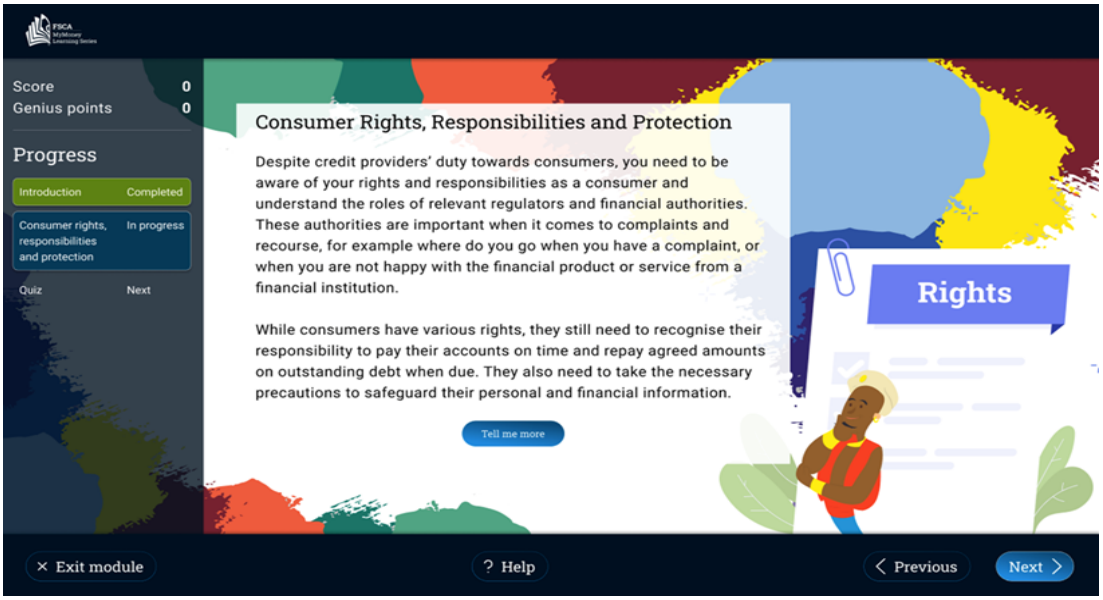


Exhibit 4.4: Content Module 4



eLearning Platform - Design and Development

The eLearning platform's design considered several important factors to ensure that it is efficient, interesting, interactive and easy to use. The following components were included in the layout and design specification, which was informed by the FSCA Terms of Reference and research outcomes: audio, notification sounds, background music, voiceovers, animated videos with subtitles, integrated graphics, whiteboard animation and mini quizzes. Considering these key specifications, a prototype eLearning platform was designed and developed using Figma, a user interface (UI) design tool that mimics the features of top eLearning publishing platforms such as Adobe Captivate.

Accessibility testing was conducted on the launch and content pages, focussing on best practices, colour and contrast. The user flow was streamlined, with clear call-to-action and other interaction methods. Accessibility was ensured by adhering to international standards for font sizes and content contrast. The main launch page allowed for easy navigation and clear call-to-actions. Four different interfaces were introduced, with clear “help” and “exit” buttons for easy navigation. Hidden content, gamification, a point system and dark and light modes were also incorporated in the design.

Platform technical specifications included Adobe Captivate, which is Sharable Content Object Reference Model (SCORM) compliant and easily integrated with a Learning Management System (LMS) system. Regular updates to Moodle and trusted plugins were implemented to address vulnerabilities. Security practices included code review and testing, penetration testing and dependency management using tools like Dependabot. These measures ensured the confidentiality, integrity and availability of user data, fostering trust and compliance with regulatory standards.

Benefits of developing an eLearning platform for financial literacy

Developing an eLearning platform for financial literacy can have numerous benefits including the following:

- **Increased accessibility:** An eLearning platform can reach a wider audience, making financial education accessible to people from all walks of life, especially in areas where traditional educational resources may be limited.
- **Personalised learning:** eLearning platforms can offer tailored learning experiences, catering to individual learning styles, speeds and needs.
- **Cost-effective:** Online education reduces costs associated with traditional classroom-based learning, such as venue rental, transportation and instructors' fees.
- **Flexibility and convenience:** Learners can access the platform at their own pace, anytime and from anywhere, making it ideal for those with busy schedules.
- **Scalability:** eLearning platforms can easily be scaled up or down to accommodate a growing or changing user base.
- **Interactive and engaging:** Online platforms can incorporate multimedia content, gamification and simulations to make learning more engaging and fun.
- **Data analysis and feedback:** eLearning platforms can track learners' progress, providing valuable insights for improvement and offering personalized feedback.
- **Up-to-date content:** Online platforms can be easily updated, ensuring that learners receive the most recent and relevant information on personal finance and money management.
- **Self-paced learning:** Learners can revisit concepts as many times as needed, building confidence and mastery over time.
- **Democratization of financial knowledge:** An eLearning platform can bridge the gap in financial literacy, promoting a more informed and financially savvy population.

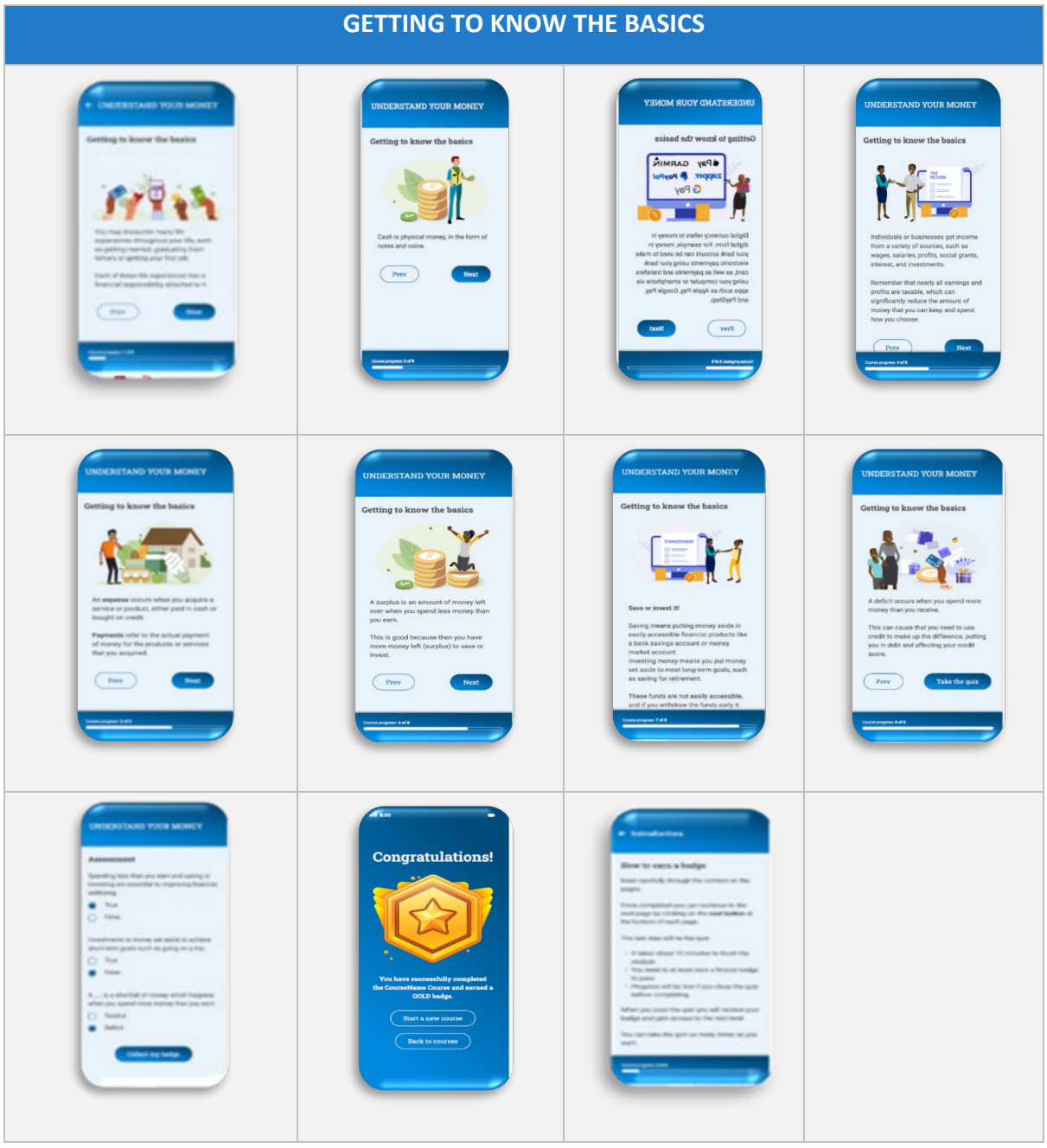
4.3.2 Mobile application

Content

In addition to the FSCA's request to design, develop and test eLearning modules, the FSCA also requested the design, development and testing of a prototype mobile application which could provide most of the South African population easy access to financial information. To meet this requirement, the content used for the eLearning platform was adapted for the mobile application design, including text, images and video format.

The application was built on the premise that it should be accessible, load quickly and use plain English for easy interaction. Further prerequisites included that the design should include a reward system for users, such as stickers and trophies, as part of the ranking system. Also, the application design should be scalable for future development and continuous usage, ensuring that users will be able to access new information through continuous usage. Figure 4.5 displays screenshots of the mobile application prototype.

Exhibit 4.5: Mobile Application Prototype Screenshots



Design and Development

The mobile app, developed using Flutter for cross-platform compatibility and powered by Firebase and Firestore, provides an intuitive, mobile-first interface for financial literacy education. It features user authentication, offline access, interactive learning, push notifications and a responsive user interface (UI). The frontend uses a Flutter

framework and Cupertino widgets for a native-like user experience. The backend uses Firebase Services for authentication, storage and API integration. The application is responsive, maintains an average frame rate of 60fps and optimises UI components to minimise startup time.

Security requirements included authentication and data protection, role-based access control and compliance with POPIA and General Data Protection Regulation (GDPR). Integration with Moodle involved content synchronisation, real-time updates and a pay-as-you-grow model. Flutter and Firebase offer cross-platform development, real-time updates and a pay-as-you-grow model. Finally, the prototype mobile application was designed and developed to be accessible on a mobile device and scalable for future development.

Benefits of developing a mobile application for financial literacy

- **Portability and convenience:** A mobile app can be accessed anywhere, anytime, making it easy for users to learn about personal finance and money management on-the-go.
- **Wider reach:** With a significant majority of the global population owning smartphones, a mobile app can reach a broader audience, including those in underserved communities.
- **Push notifications and reminders:** The app can send personalized reminders and notifications to help users stay on top of their finances, promoting healthy financial habits.
- **Gamification and engagement:** Mobile apps can incorporate gamification elements, such as quizzes, challenges and rewards, to make learning about finance more engaging and interactive.
- **Personalized financial planning:** The app can use user input and data to provide tailored financial advice, budgeting tools and investment guidance.
- **Real-time tracking and monitoring:** Users can track their spending, income and savings in real-time, helping them make informed financial decisions.

- **Accessibility features:** The app can be designed with accessibility features, such as text-to-speech functionality, to accommodate users with disabilities.
- **bite-sized learning:** Mobile apps can break down complex financial concepts into bite-sized, easy-to-understand chunks, making learning more manageable.
- **Social sharing and community:** The app can facilitate social sharing, discussions and community building, encouraging users to learn from each other and share financial knowledge.
- **Offline access:** A mobile app can allow users to access financial education and tools even without internet connectivity, making it useful in areas with limited internet access.

4.4 CONCLUSION

Following the development of the eLearning modules and design of the eLearning platform and mobile application, the prototypes were tested during interactive user testing sessions. The outcomes of these tests are discussed in the next section of the report.

SECTION E: INTERACTIVE USER TESTING | PRIMARY QUALITATIVE RESEARCH

5.1 INTRODUCTION

The purpose of the interactive user testing sessions or focus group discussions was to showcase the prototype financial literacy eLearning platform and mobile application to users from different backgrounds in a test environment (computer laboratory). This approach was used to gain user experience insights and to guide the FSCA regarding the development of a fully-fledged digital financial literacy platform. Against this background, this section provides a summary of the research methodology, participant demographics and main findings of the user testing research phase. The section also presents some final research insights.

5.2 RESEARCH METHODOLOGY

5.2.1 Elected learning modules

The prototype eLearning platform was uploaded on desktop computers to assess user experience (UX), user interface (UI) experience and satisfaction of test participants. Learning modules 1 and 4 (discussed in section 4) were selected for testing from the four designed eLearning modules. The modules included the following information:

- **Module 1**

  Money, banking products, income, expenses and payments, be in control of your finances and budgeting.

- **Module 4**

  Consumer rights, responsibilities and protection, financial safeguards and insurance products, importance of having a will, eexpenses and payments, financial resilience, financial security and related terminologies.

5.2.2 Sampling test participants

A total of 41 participants, which were judgementally sampled from a range of backgrounds and internet usage levels, participated in three interactive user testing sessions during November 2024. The demographic details and the sample sizes for each test group are presented in table 5.1.

Table 5.1: Test participants by gender, age and population group

Gender	Test Group 1	Test Group 2	Test Group 3	Total
✓ Male	5	5	6	16
✓ Female	7	10	8	25
Total	**12**	**15**	**14**	**41**
Age Groups				
✓ 20-29	3	5	5	13
✓ 30-39	5	5	5	15
✓ 40-49	3	3	4	10
✓ 50-59	1	2	-	3
Total	**12**	**15**	**14**	**41**
Population Group				
✓ Black African	12	12	10	34
✓ Indian	-	2	3	5
✓ White	-	-	1	1
✓ Coloured	-	1	-	1
Total	**12**	**15**	**14**	**41**
Level of Internet Access and Use				
✓ Low	12	-	-	12
✓ Medium	-	15	-	15
✓ High	-	-	14	14
Total	**12**	**15**	**14**	**41**

5.2.3 Facilitation

After gaining approval from the FSCA, the facilitator followed a structured guide to gather information (see Annexure D) from test participants. During the interactive user testing sessions, the participants shared their experience regarding the two e-learning modules with the facilitator. In addition to the interactive user testing sessions, test participants were given the opportunity to evaluate the financial literacy eLearning platform's user interface, user experience and level of satisfaction by completing an onsite close-out self-administered online survey at the conclusion of

each session. The close-out questionnaire was developed with an emphasis on the prototype e-Learning platform's user interface (UI) and user experience (UX). The questionnaire included 28 questions to determine how users experience the platform's main features and how it shaped their eLearning experience.

The following were important dimensions which were measured in the close-out survey:

- Overall satisfaction.
- Digital literacy.
- General learning experience.
- Colour scheme (light vs. dark interfaces).
- Navigation and progress tracking.
- Interactive learning elements.
- Video and voice-over content.
- Gamification elements: Financial Genie and scoring system.
- Quizzes and interactive tools.
- Exit and help features.

A total of 31 test participants completed the onsite close-out self-administered online survey.

Two mobile phones were used to download the prototype application to evaluate test participants' happiness, user interface (UI) and user experience (UX). To engage with the prototype app and exchange opinions, participants were split into two smaller groups.

With the permission of all participants, each interactive user testing session (focus group discussion) was recorded and transcribed.

5.2.4 **Thematic and data analysis**

Thematic analysis was used to identify, analyse and interpret patterns and themes within the transcripts related to a specific research question or topic. Thematic analysis supported an in-depth understanding of test participants experiences and perspectives.

After downloading the data collected from the onsite close-out self-administered online survey, the data was cleaned, stored and analysed using SPSS.

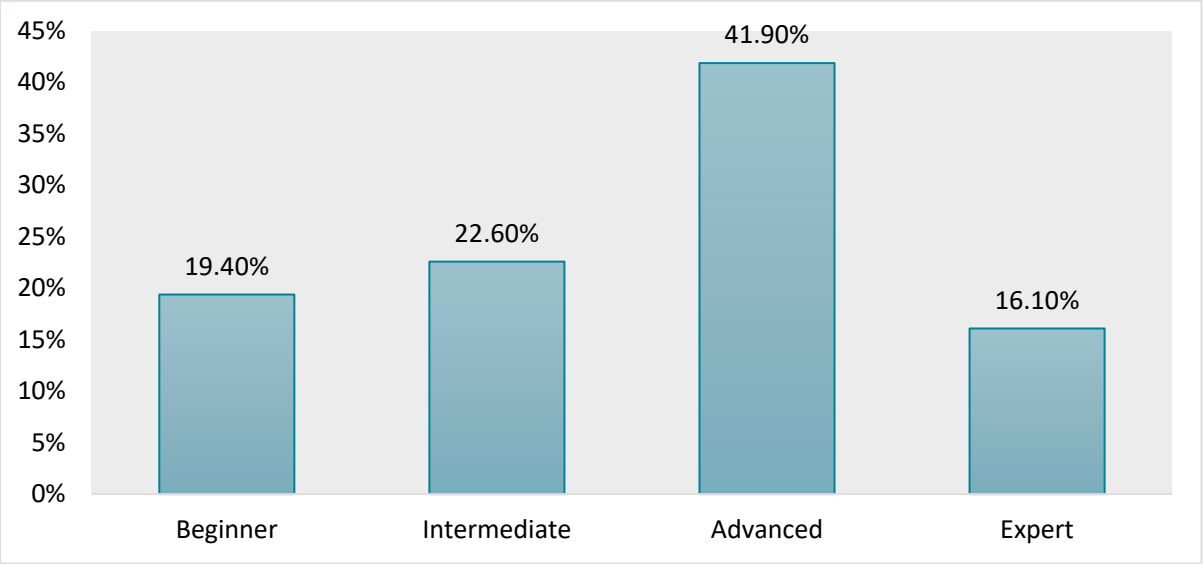
5.3 **INTERACTIVE USER TESTING FINDINGS**

5.3.1 **Digital literacy**

Being digitally literate is crucial when using an eLearning platform because it enables individuals to effectively access, navigate and utilise the platform's features, tools and resources. As shown in figure 5.1 approximately 58.0% participants rated their level of digital literacy[175] at expert (16.10%) or advanced (41.90%) levels. This confirmed that participants had the necessary digital skills to access the eLearning platform and to constructively participate in the online learning activities included in the eLearning platform.

[175] Digital literacy was defined as: *A person's ability to find, assess, and share information via digital media platforms*.

Figure 5.1: Self-rating of level of digital literacy



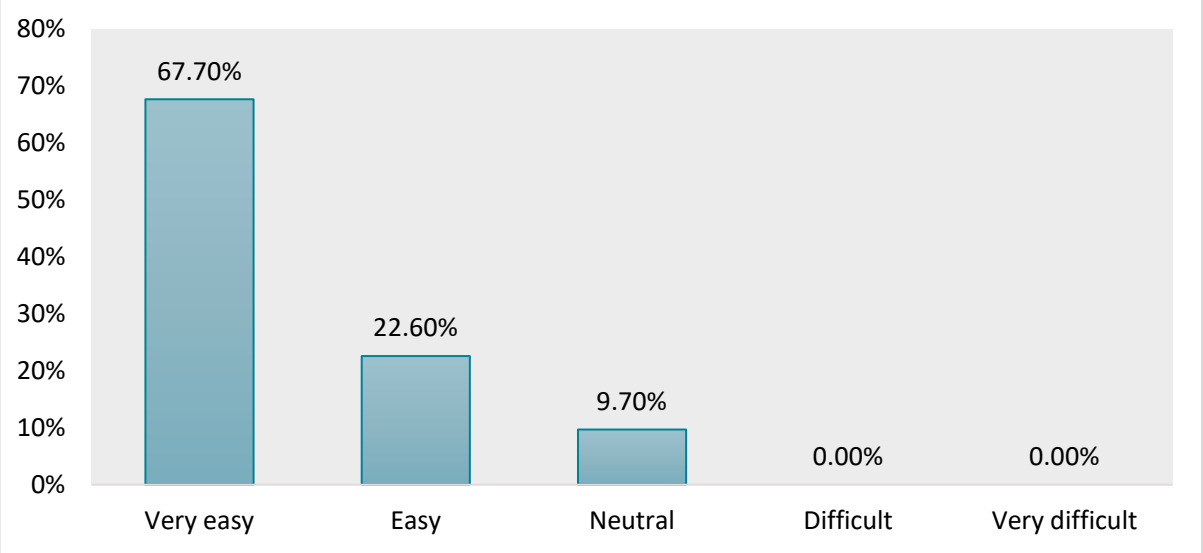
5.3.2 General learning experience

About 90.30% of respondents indicated the learning content was easy to understand, as seen in figure 5.2. The following verbatim responses substantiate this analysis.

"I liked everything, it's easy to understand and won't make me tired." **(Participant, 13 Nov).**

"The content is good and not too difficult to understand." **(Participant,14 Nov).**

Figure 5.2: Ease of understanding the learning content

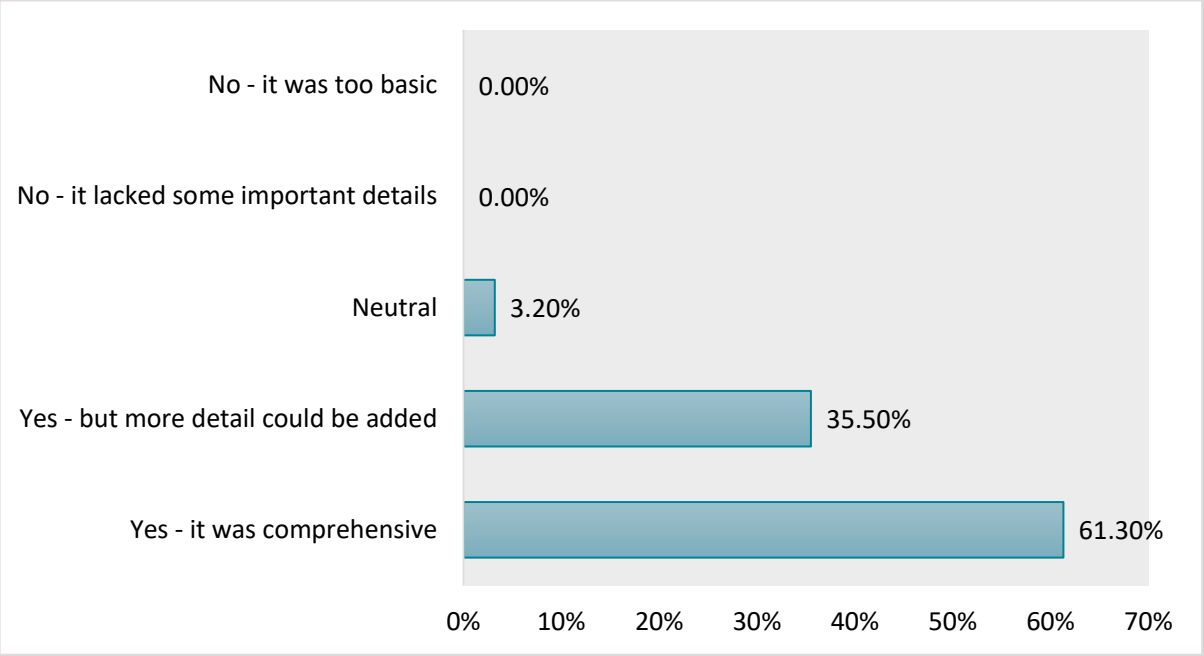


Approximately two-thirds of participants (61.3%) reported that the information on the eLearning platform was comprehensive. However, 35.5% indicated that additional information could be provided. The verbatim comments below captures the suggestion by test participants to include a "learn more" button for users who would like additional information.

"I believe if it is for learning purposes, there could be more, not less. We must not forget what the goal of the platform is – it is for learning purposes." **(Participant, 13 Nov).**

"It was good and informative. It was sufficient. If you perhaps have a 'learn more' button that will be great and helpful." **(Participant, 14 Nov).**

Figure 5.3: Platform provided comprehensive information



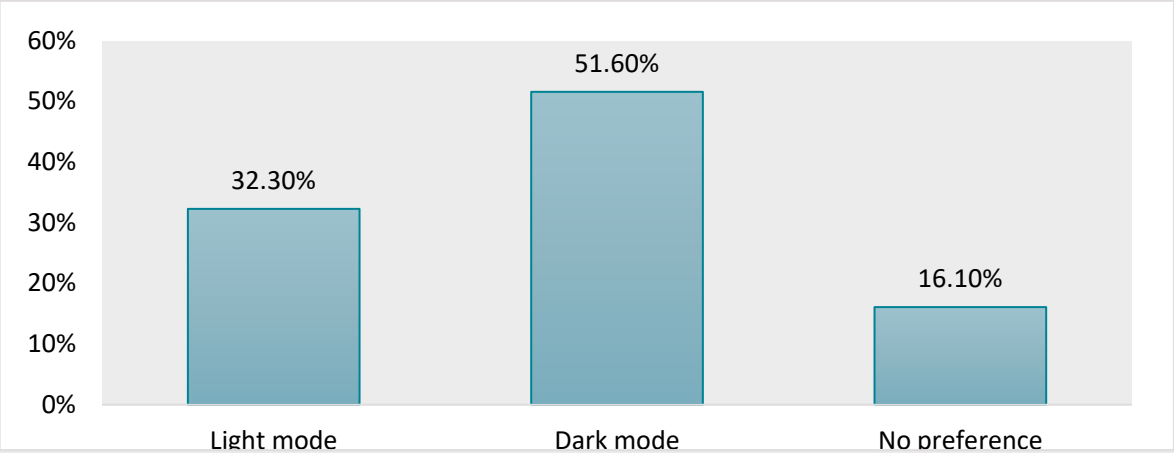
5.3.3 Colour scheme (light versus dark interfaces)

Both light and dark interfaces were included in the eLearning platform to test which option is most preferred. Whereas about a third of participants preferred the light mode, most (51.60%) showed preference for the dark option. It was also suggested by the test participants that a feature to switch between the two interfaces should be included to provide individuals an option to choose the preferred interface. Some verbatim recordings on the colour mode preferences include:

"I would say the dark mode, because I have an eye problem, and it was much easier to use than the light mode."
(Participant, 13 Nov).

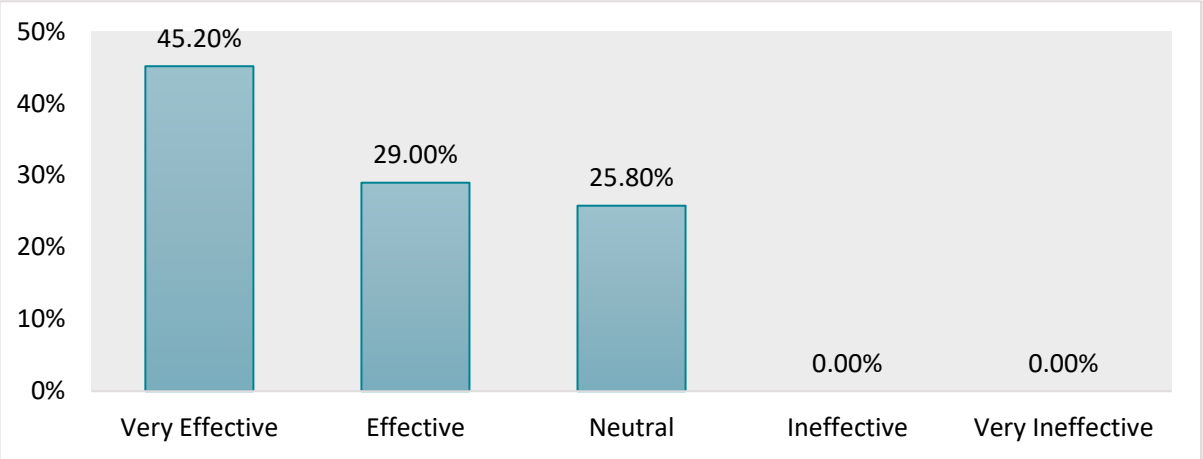
"I liked the light mode, because it was eye catching. The dark mode was not exciting and a little bit boring."
(Participant, 12 Nov).

Figure 5.4: Preferred colour scheme



Nearly half of the participants (45. 20%) indicated that the e-learning platform's use of colour was effective and encourage learning (see figure 5.5).

Figure 5.5: Effectiveness of used colours



From the verbatim recordings below, it was also clear that colours could be toned down.

"For certain people the colours are too much. So, maybe it can be toned down/faded or use more neutral colours." **(Participant, 14 Nov).**

"I like the colours, but sometimes it's too overwhelming. I would suggest that the colours be toned down a little bit so that it is not too busy." **(Participant, 13 Nov).**

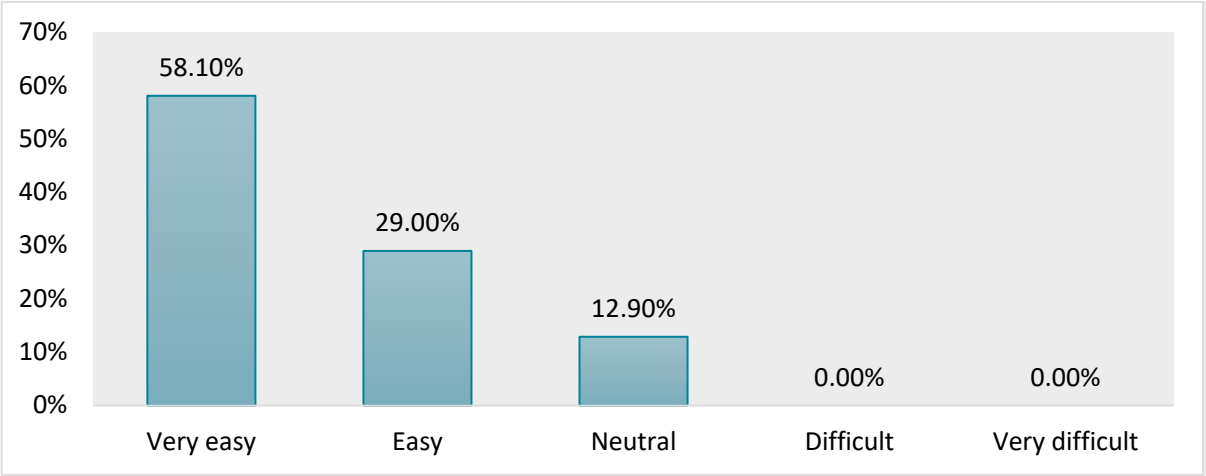
"The colours were fine, because it is dragging you to learn more and know more. It's not boring. " **(Participant, 12 Nov).**

5.3.4 Navigation and progress tracking

While 29.0% of participants found it easy, 58.1% stated it was extremely easy to switch between different learning topics and sessions in the eLearning platform. Focus group participants noted that the sessions flowed smoothly and retrieving information was easy. These views are evident from the verbatim recordings below:

> ***"It was easy to navigate, and the flow was good."*** **(Participant, 13 Nov).**
>
> ***"When you look at moving around the platform – it is so easy. If you look for certain information, it is easy to access. You don't have to click too much to move around."*** **(Participant, 14 Nov).**

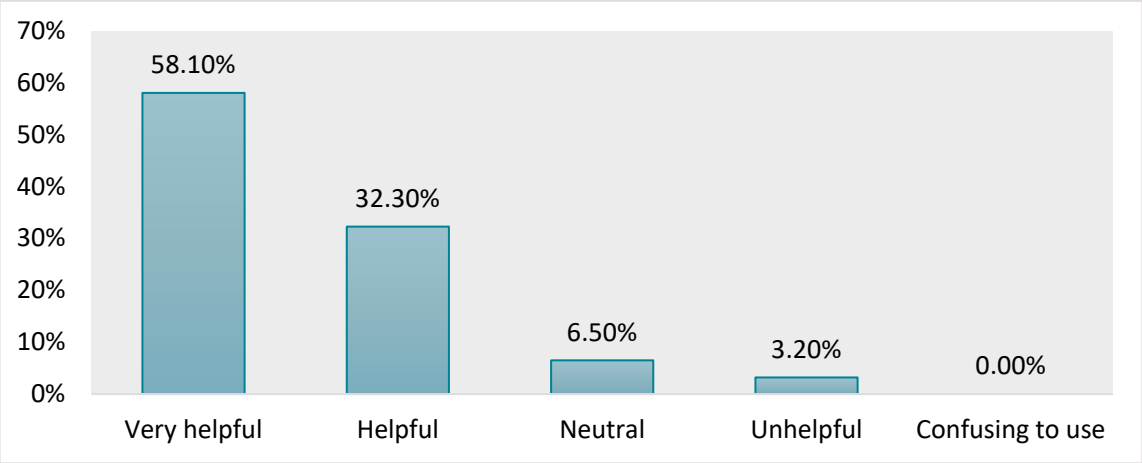
Figure 5.6: Ease to navigate between different learning topics or sessions



More than half (58. 10%) of participants rated the horizontal scrollers and navigation buttons as extremely helpful (see figure 5.7), while 32. 30% rated them helpful. Only 3. 20% thought they were unnecessary. The verbatim quote below confirms the preference towards vertical scrolling:

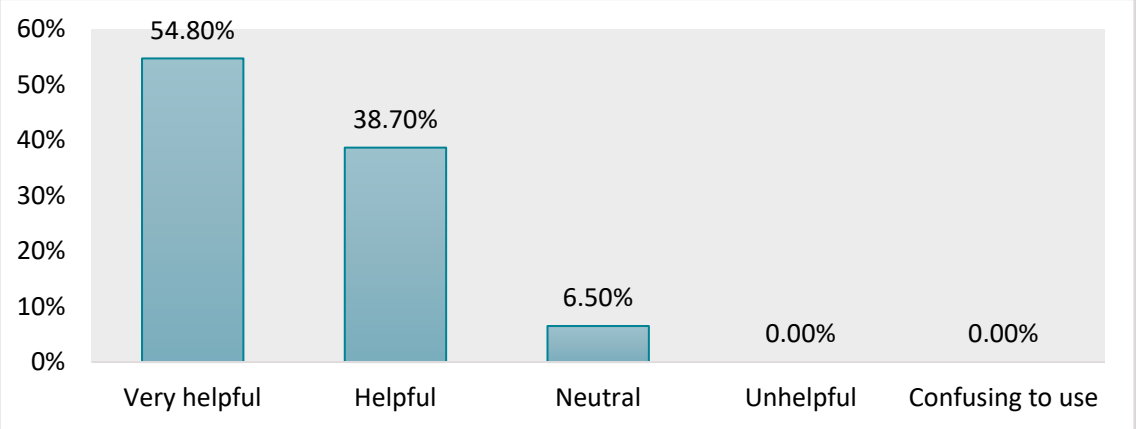
> ***"In terms of scrolling, I prefer the vertical one instead of the horizontal one."*** **(Participant, 14 Nov).**

Figure 5.7: Helpfulness of scrollers and navigation buttons



Of the participants, 54.8% regarded the progress tracker as very helpful and 38.7% rated it as helpful (see figure 5.8).

Figure 5.8: Helpfulness of progress tracker in keeping users motivated



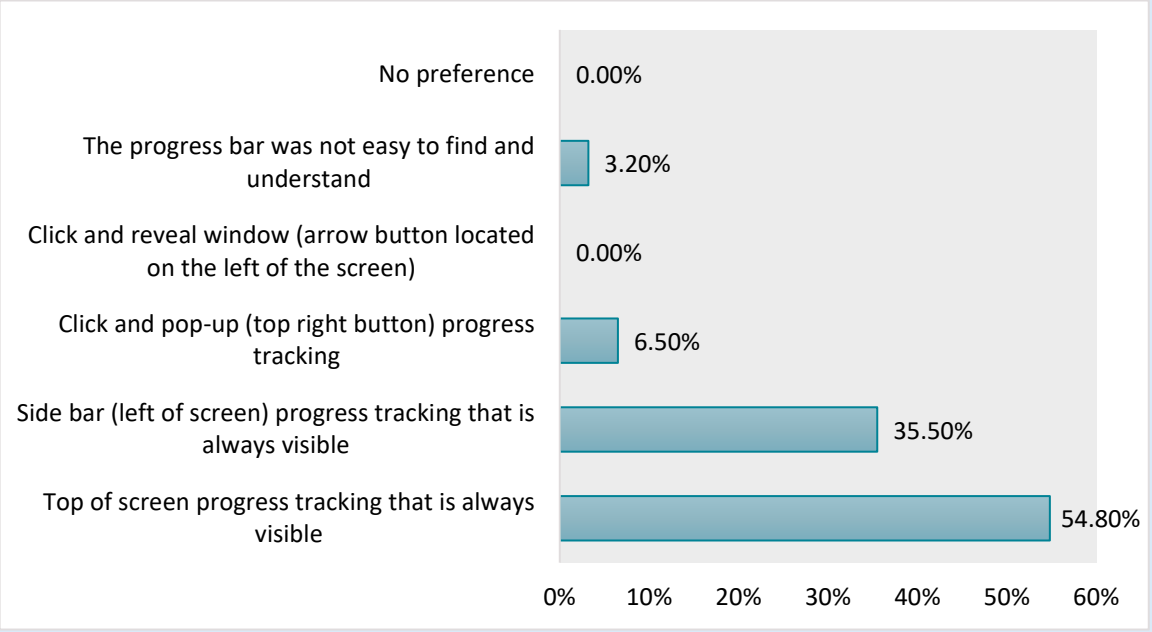
Overall, test participants indicated the importance of tracking progress. Additionally, it was recommended that a time tracker be included in every module (see verbatim quotes below).

"For me it was useful, because I could keep track of my progress and see how far I am." **(Participant, 12 Nov).**

"It will definitely help to add a time tracker, it will show you how much time you have left." **(Participant, 12 Nov).**

Participants were also exposed to four distinct progress tracking options during the interactive user testing sessions. Most participants (54.8%) indicated that they preferred the location for progress monitoring at the top of the screen, while 35.0% indicated that they preferred the location of the progress tracking in the side bar (left of the screen), which is always visible.

Figure 5.9: Ease of progress tracking use and e-Learning module preference



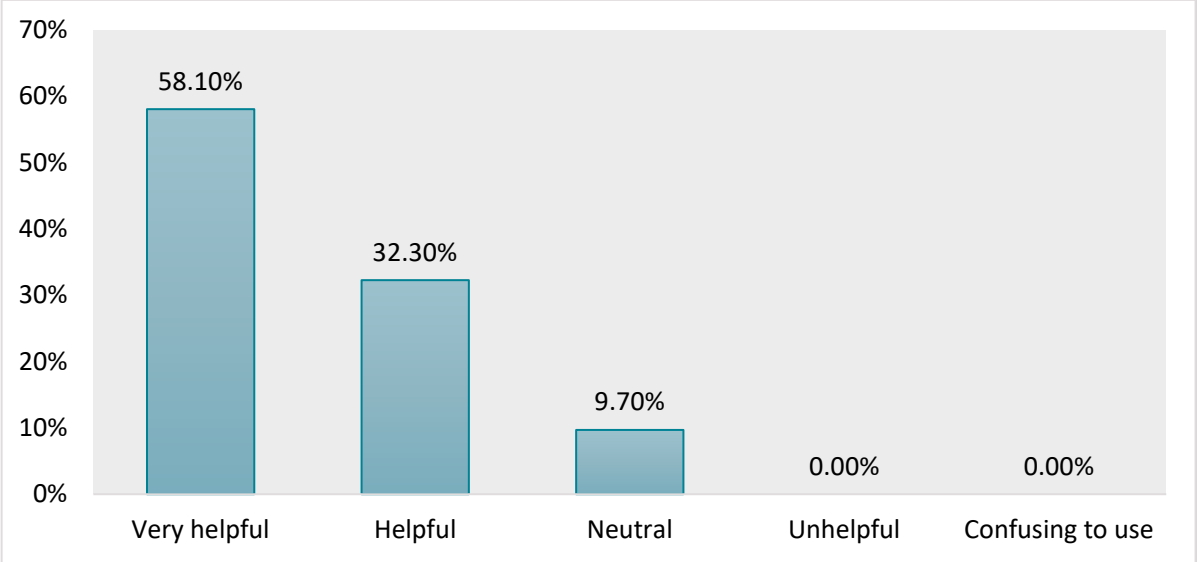
5.3.5 Interactive learning elements

About a third of participants agreed that the interactive learning aspects (including videos and quizzes) were beneficial and more than half (58. 1%) indicated that they were extremely helpful (see figure 5.10). The significance of striking a balance between interactive and static learning components was also emphasised during the focus group discussions. Some verbatim quotes related to the interactive learning aspects included:

"I like the videos, the quizzes, the interactive components." **(Participant, 13 Nov).**

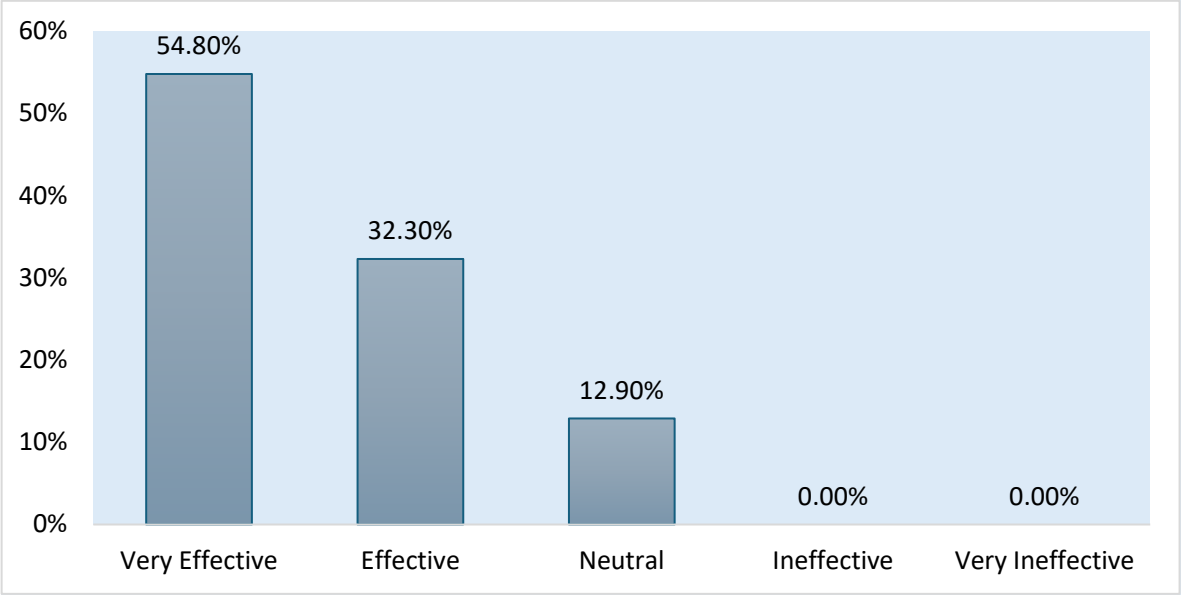
"Not too much static information, rather clicking and getting a dropdown with more information." **(Participant, 14 Nov).**

Figure 5.10: Helpfulness of interactive learning elements in understanding of the content



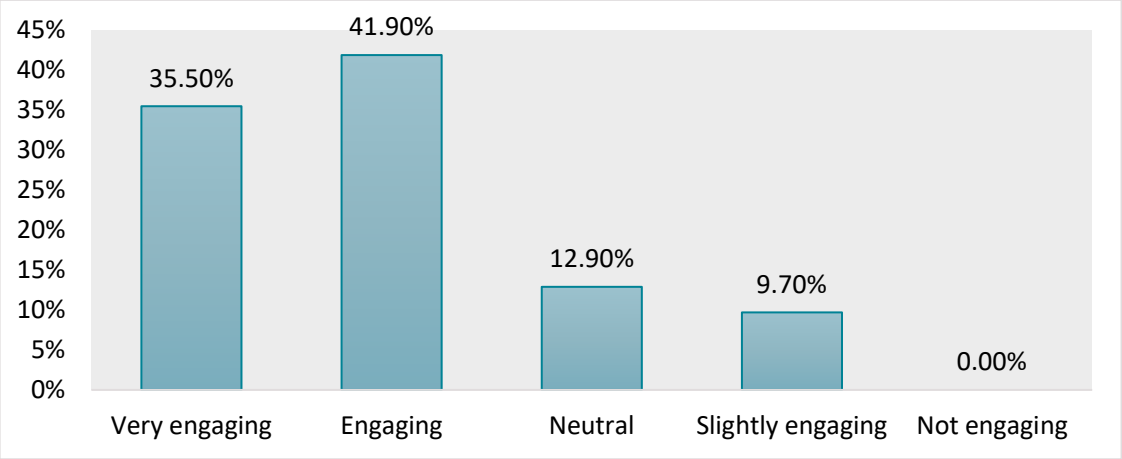
The "did you know" buttons were rated as extremely effective by 54.8% of the participants and as effective by 32.3%.

Figure 5.11: Effectiveness of the ''did you know'' buttons in providing additional content



Just more than a third (35.5%) of the test participants indicated that the "hover actions" were very engaging, while 41.9% rated the hover function as engaging (see figure 5.12). Overall, the "hover action" did not grab sufficient attention, when compared to other interactive elements.

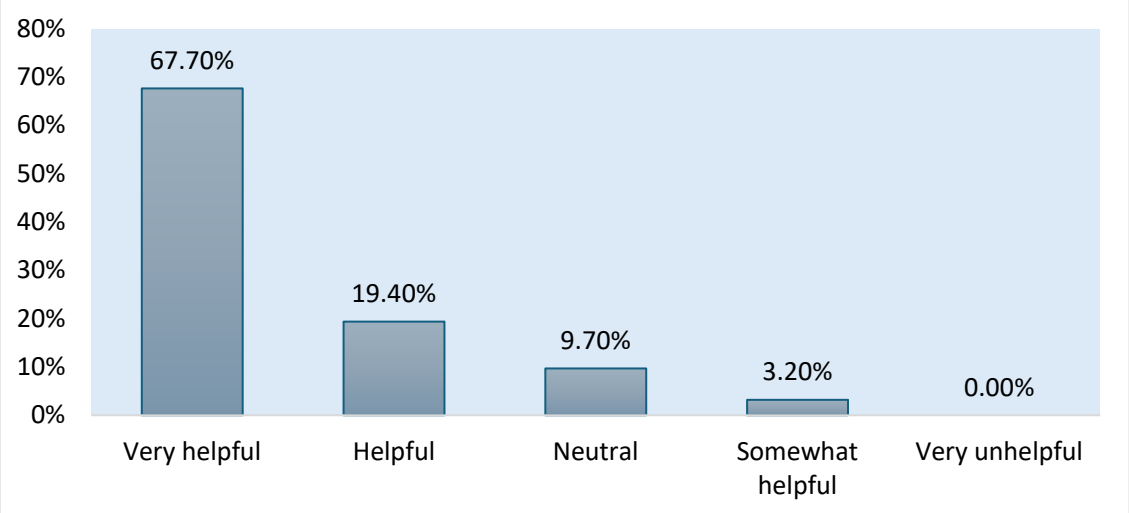
Figure 5.12: Attractiveness of hover actions to revealed hidden icons and text



5.3.6 Video and voice-over content

Over two-thirds of the participants found the videos and voice-over instructions very helpful (67. 7%) and helpful (19. 4%) for learning (see figure 5.13).

Figure 5.13: Helpfulness of videos and voice-over instructions in aiding user learning



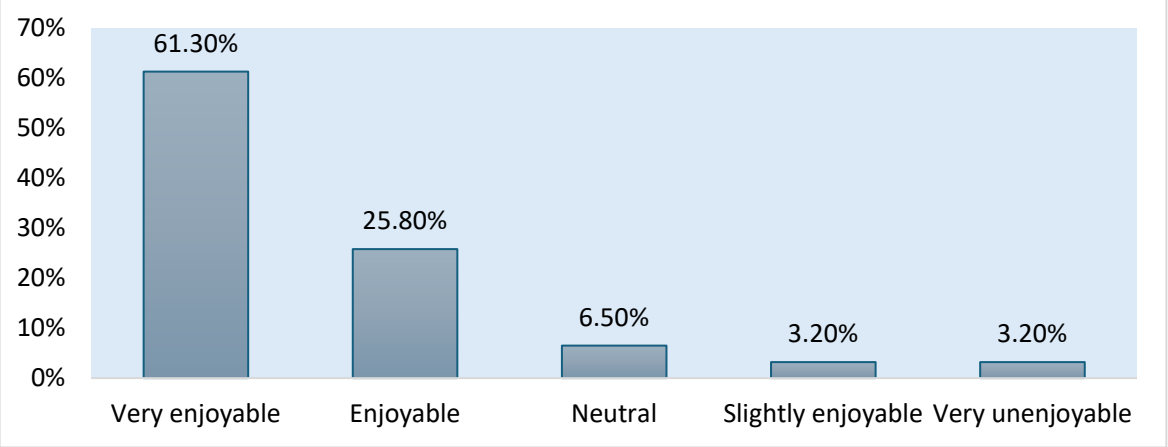
The focus group discussions revealed that the test participants enjoyed learning through videos. However, test participant stressed the importance of the voice-over matching the content. For instance, a serious tone may be required for complex ad more serious financial topics. Verbatim recordings supporting the above analysis included:

> ***"I enjoyed the videos. I would rather watch a video and listen compared to actually reading the content. It allows me to do something else while I am listening."*** **(Participant, 12 Nov).**
>
> ***"I like the videos and quizzes – a combination of both."*** **(Participant, 13 Nov).**
>
> ***"I like videos more. For me personally, when I see too much text it is overwhelming, but if I am watching it, I learn more."*** **(Participant, 14 Nov).**
>
> ***"Rather use a professional voice for the Genie. The voice in the video was fine and more professional, it had a serious tone."*** **(Participant, 14 Nov).**

5.3.7 Gamification elements: Financial Genie and scoring system

Six in every 10 of the test participants (61.3%) indicated that they really enjoyed using the Financial Genie for quizzes and tips (see figure 5.14). Approximately 6.4% of the test participants indicated that the Financial Genie for quizzes and tips was slightly or very unenjoyable.

Figure 5.14: Enjoyability to find the use of the Financial Genie in quizzes and tips



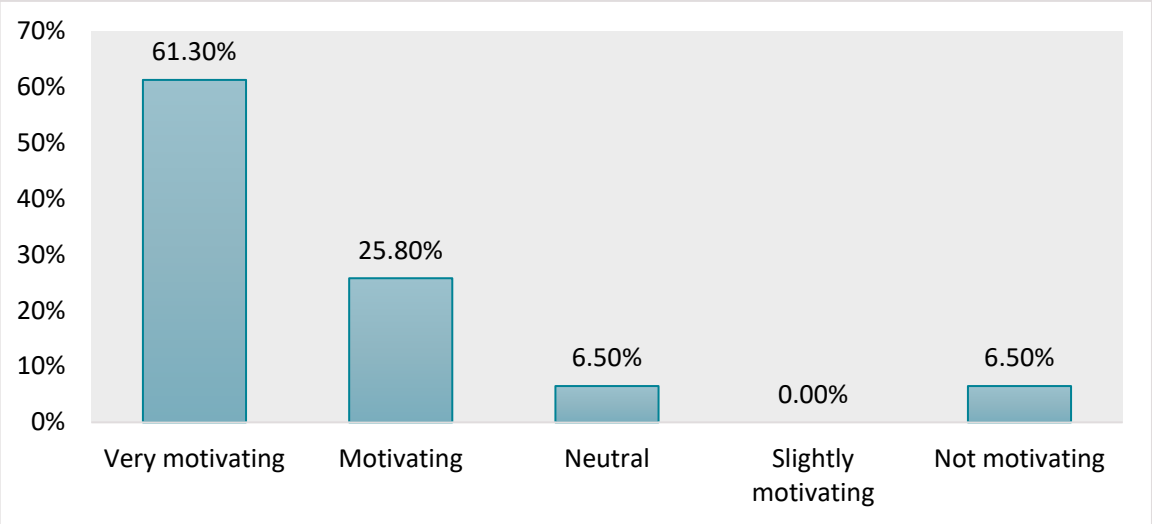
Selected verbatim recordings supporting the above analysis included:

"I also like the Genie, the way he talks, you can understand him." **(Participant, 13 Nov).**

"Rather use a professional voice for the Genie. The voice in the video was fine and more professional, it had a serious tone." **(Participant, 14 Nov).**

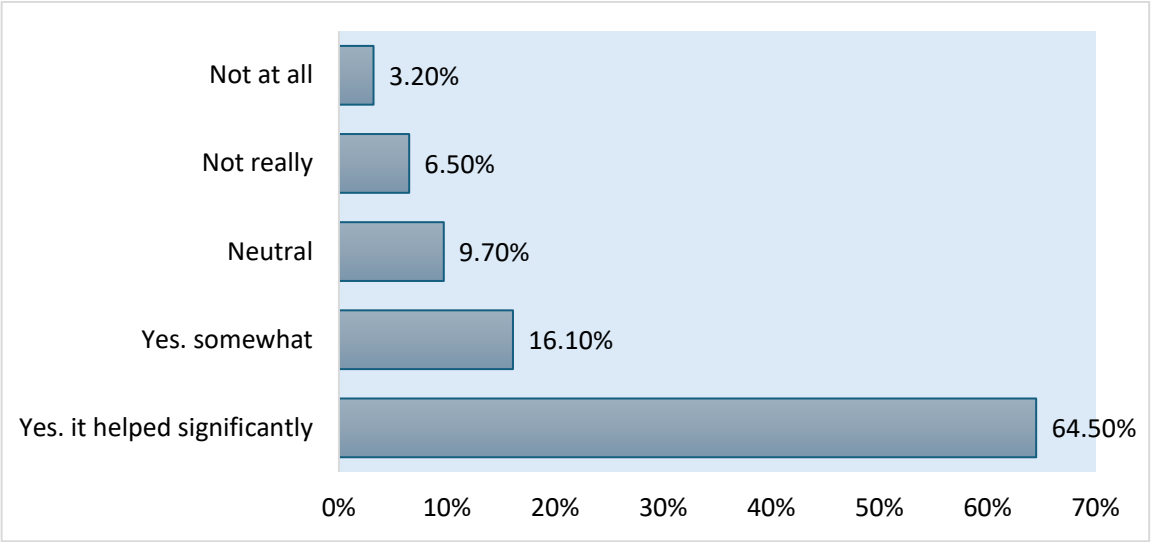
Six in every 10 participants found the Financial Genie very motivating (61.3%), while a quarter (25.8%) found it motivating. Only 6.5% said it was not motivating (see figure 5.15).

Figure 5.15: Find the use of the Financial Genie motivating



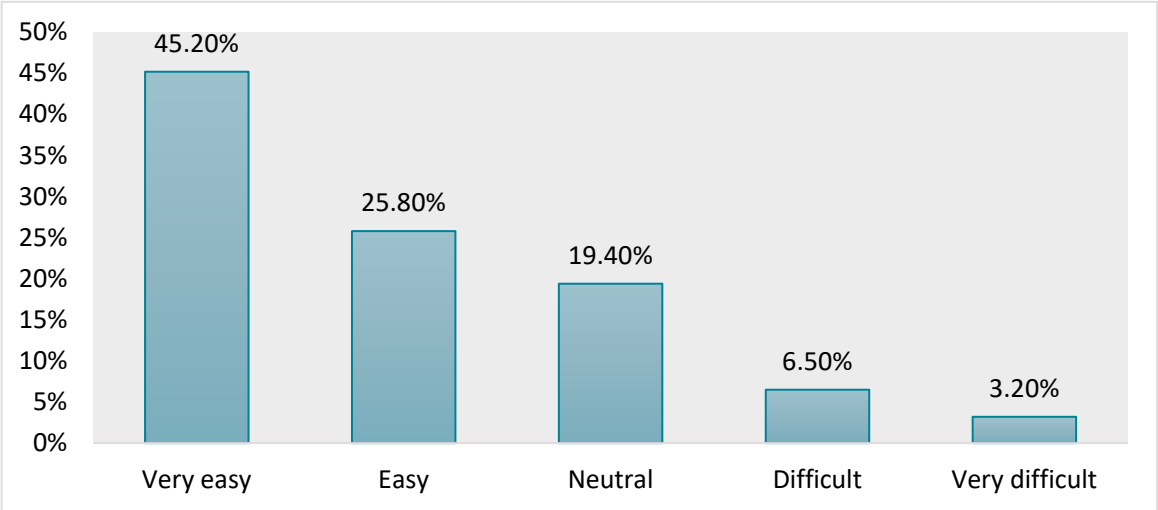
Furthermore, nearly two-thirds (64. 5%) of the test participants indicated that the Financial Genie character significantly improved their understanding of the content. About one in ten (9.7%) felt it did not (see figure 5.16).

Figure 5.16: Ability of Financial Genie character to improve understanding of material



Approximately 70% of test participants (45.2% very easy and 25.8% easy) indicated that it was easy to "spot" and interact with the "hidden" Financial Genie (see figure 5.17). Almost 10% (6.5% difficult and 3.2% very difficult) found it difficult to spot and interact with the Genie. It was suggested in focus group discussions that the Genie could also appear through a "pop-up" action to attract attention.

Figure 5.17: Ease to spot and interact with the Financial Genie when it appeared even where hidden in the various sections of the platform.

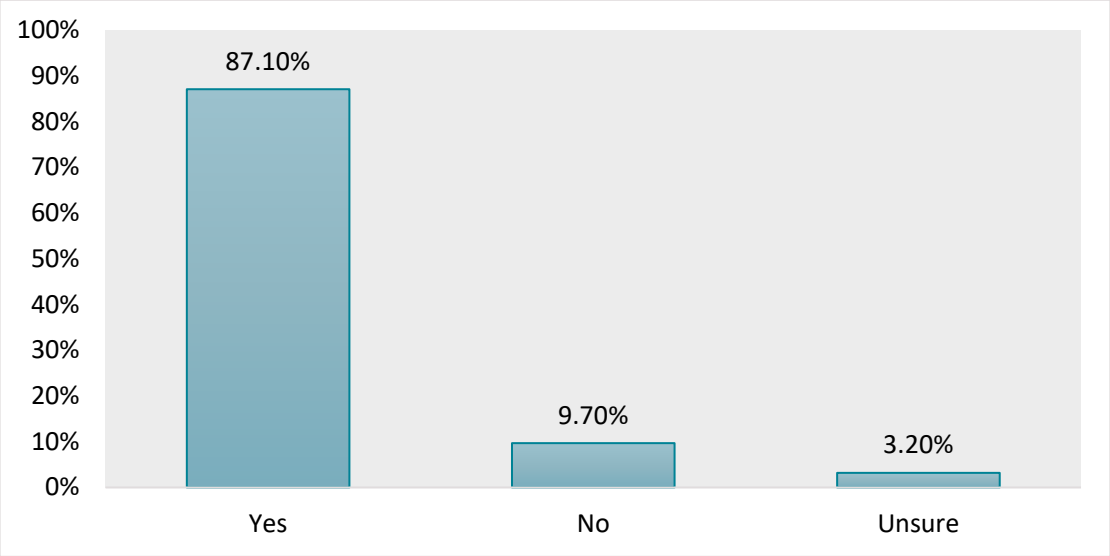


Verbatim quotes supporting the above analysis includes the following:

> ***"The Genie is easy to miss since you are focused on the reading, you tend to miss the Genie which has more information and quizzes that could make everything else interesting. Maybe if it would pop-up and show that you can click on it and get more information, that would help."*** **(Participant, 12 Nov).**

The majority (87.1%) of the test participants experienced the Financial Genie appropriate as a guiding character throughout the two eLearning modules included in the interactive user testing sessions (see figure 5.18). It was suggested, although, that depending on the kind of content, it would be worthwhile to consider alternative characters that match with the scope of the content.

Figure 5.18: Appropriateness of the Financial Genie as guiding character throughout the modules

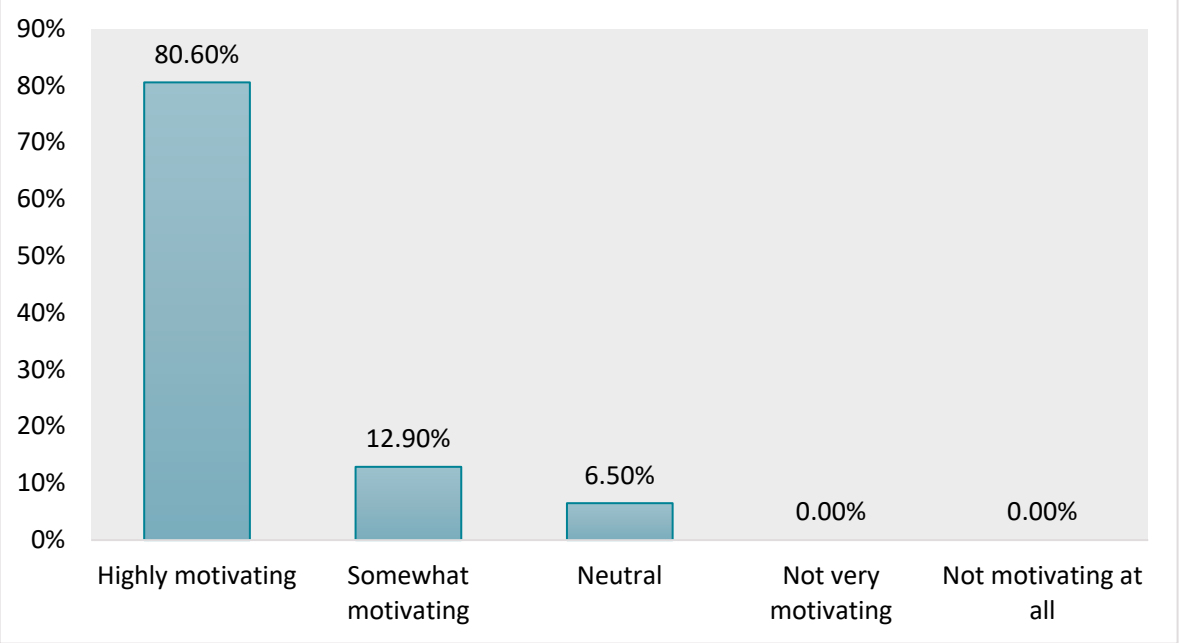


Verbatim quotes supporting the above analysis includes the following:

> ***"I liked it, I was actually impressed with it. It makes me excited because I want to find out what he is telling me. The voice of the Genie is fine."*** **(Participant, 12 Nov).**
>
> ***"Create a character that is relatable to the content – create a character around specific information."*** **(Participant, 14 Nov).**

Most (80. 6%) of the test participants agreed that the scoring system was very motivating for completing quizzes and learning (see figure 5.19). The focus group discussions also revealed that participants enjoyed quizzes as they encouraged interaction with the material.

Figure 5.19: Scoring system (awarding points, bonus points) motivate users to complete the quizzes and learn.



Verbatim quotes supporting the above analysis includes the following:

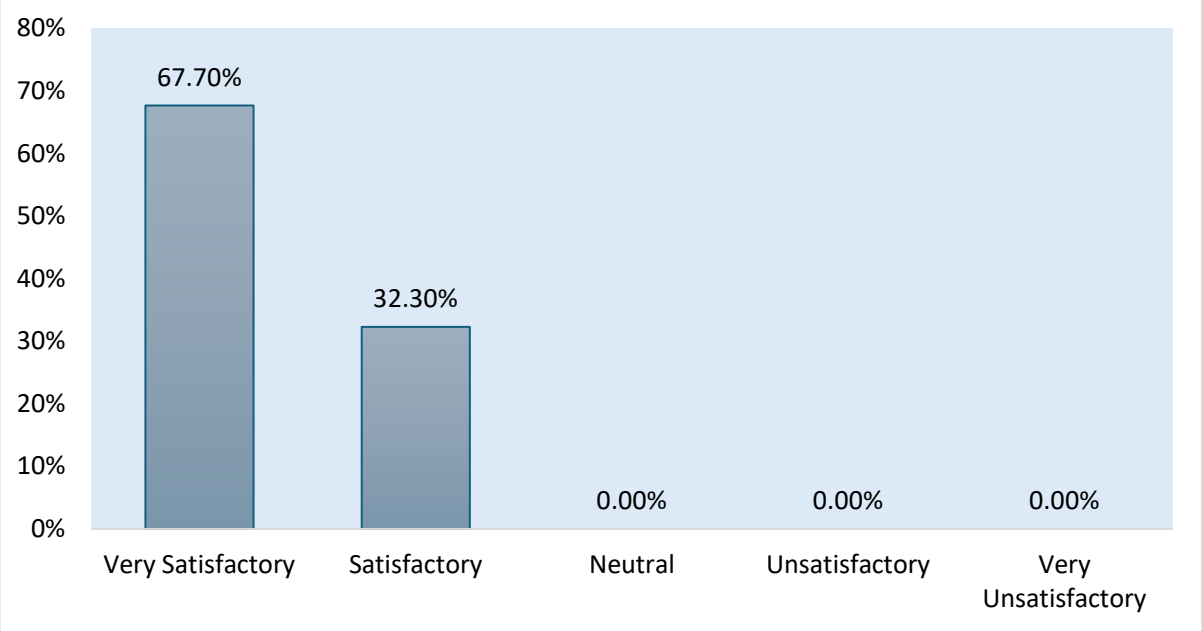
"I liked it, it keeps you engaged, motivated and keep you going". **(Participant, 12 Nov).**

"I like the certificate and the bonus points as well". **(Participant, 14 Nov).**

5.3.8 Quizzes and interactive tools

Just over two-thirds of the test participants (67.7%) rated the variety of quiz formats very satisfactory and 32.2% satisfactory (see figure 5.20). Test participants also indicated that quizzes help in learning and retaining information.

Figure 5.20: Rating of overall variety of quiz formats

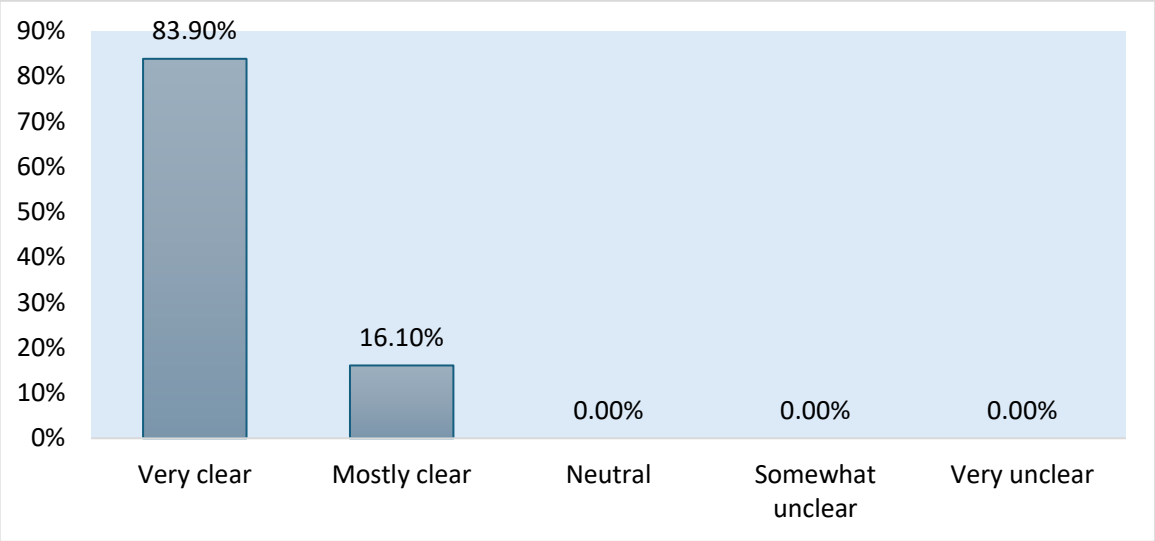


Verbatim quotes supporting the above analysis includes the following:

> ***"I would give it an 8 out of 10, because what really stood out for me was the quizzes, it makes it interesting to learn more." (Participant, 13 Nov).***
>
> ***"The quizzes help you to remember important information." (Participant, 14 Nov).***

Most (83.9%) of the test participants agreed that the instructions for the quizzes and learning tasks were very clear and easy to follow allowing them to interact with the eLearning platform (see figure 5.21).

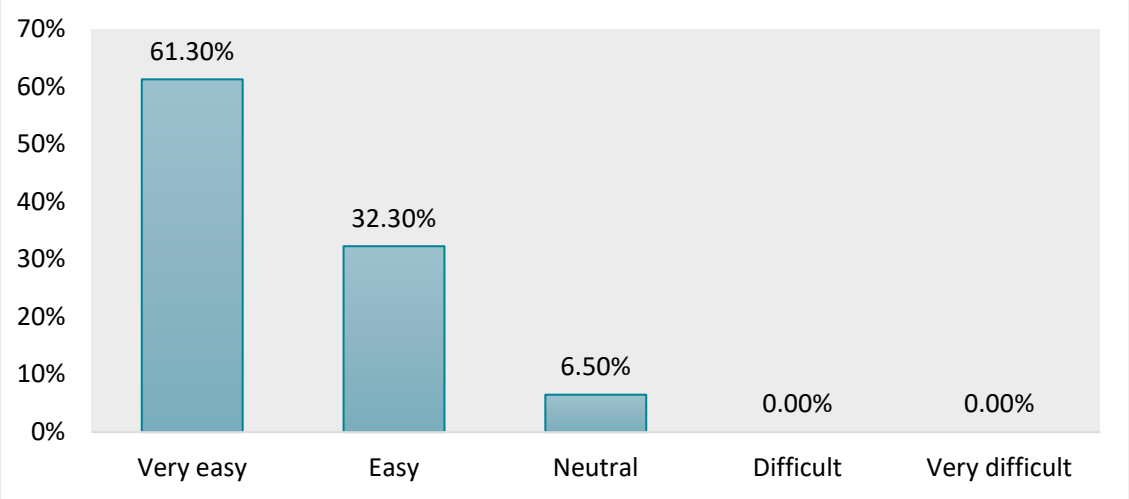
Figure 5.21: Clarity regarding instructions for the quizzes



5.3.9 Exit and help buttons

About six in every 10 test participants (61.3%) found it very easy to locate the "exit" button on the eLearning platform (see figure 5.22). Using distinct colours to differentiate the varied buttons was suggested during the focus group discussions. Additionally, adding a shareable button was recommended to encourage people to share content on social media sites and raise awareness of the platform.

Figure 5.22: Easy to find the exit button during the learning sessions

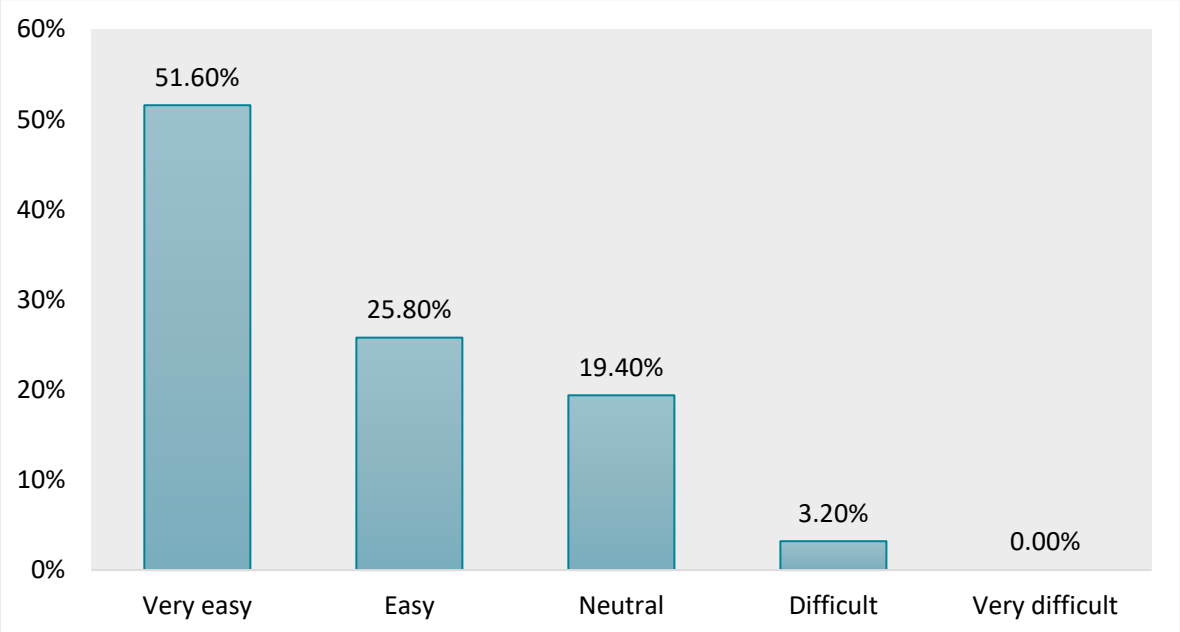


Verbatim quotes supporting the above analysis includes the following:

> ***"When it comes to the buttons, it can be kept simple." (Participant, 14 Nov).***
>
> ***"Maybe use different colours for "Next" and "Previous" just to distinguish between the two."***
> **(Participant, 14 Nov).**
>
> ***"If there is a sharable button, you can share it to your social media platforms. When you share it, people will see it and would like to do it as well."***
> **(Participant, 14 Nov).**

About half (51.6%) of the test participants confirmed that it was very easy and 25.8% easy to find the "Help" button during the learning sessions (see figure 5.23).

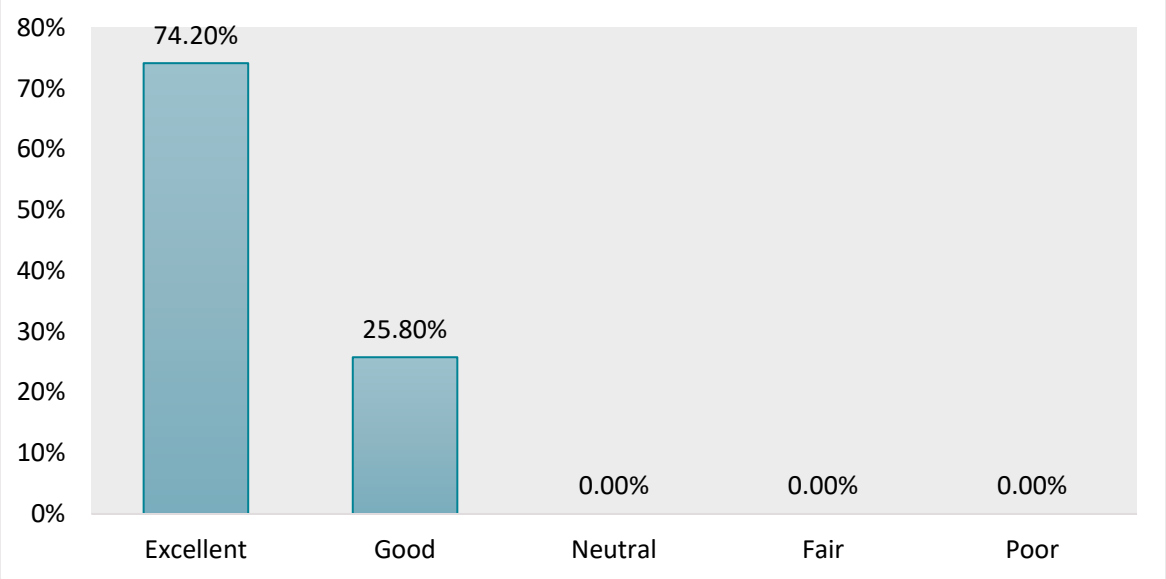
Figure 5.23: Easy to find the Help button during the learning sessions



5.3.10 Overall satisfaction

The eLearning platform received a good rating from 25.8% of test participants and an excellent rating from 74.2% test participants. Test participants acknowledge that the eLearning platform is still a prototype with some room for improvement.

Figure 5.24: Overall experience with the eLearning platform

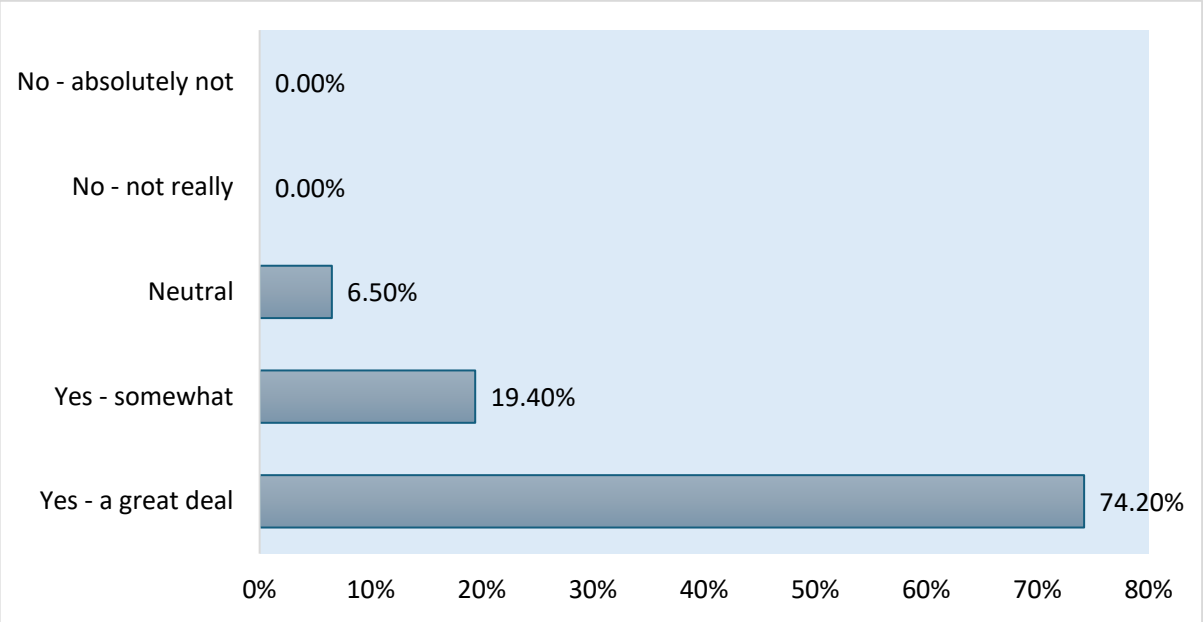


Verbatim quotes supporting the high ratings of the eLearning platform includes the following:

> ***"I would give it a 10 out of 10. Everything was understandable, the platform is working, and it is user friendly."*** **(Participant, 12 Nov).**
>
> ***"I would give it an 8 out of 10 – it is easy to understand."*** **(Participant, 13 Nov).**
>
> ***"I would give it a 9 out of 10. I love everything about it – the content, the information, you can learn a lot and it's not boring."*** **(Participant, 14 Nov).**

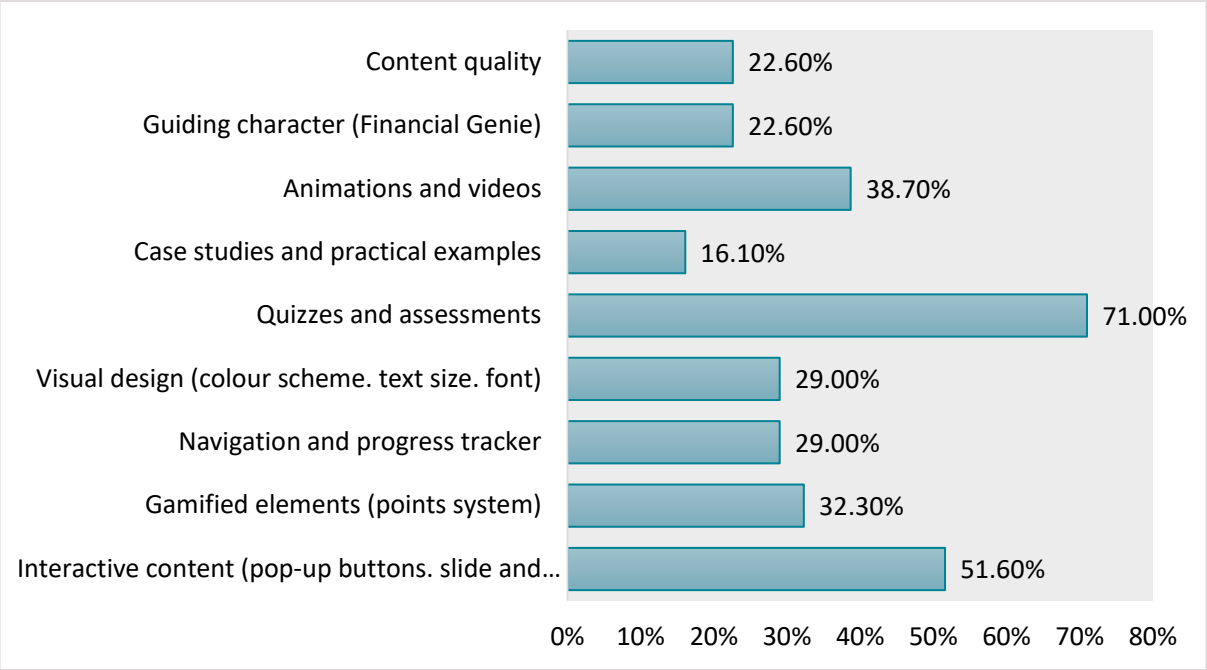
Almost three-quarters of test participants (74.2%) agreed that the learning experience contributed a great deal to their understanding of financial matters (see figure 5.25).

Figure 5.25: Learning experience increases user understanding of financial matters



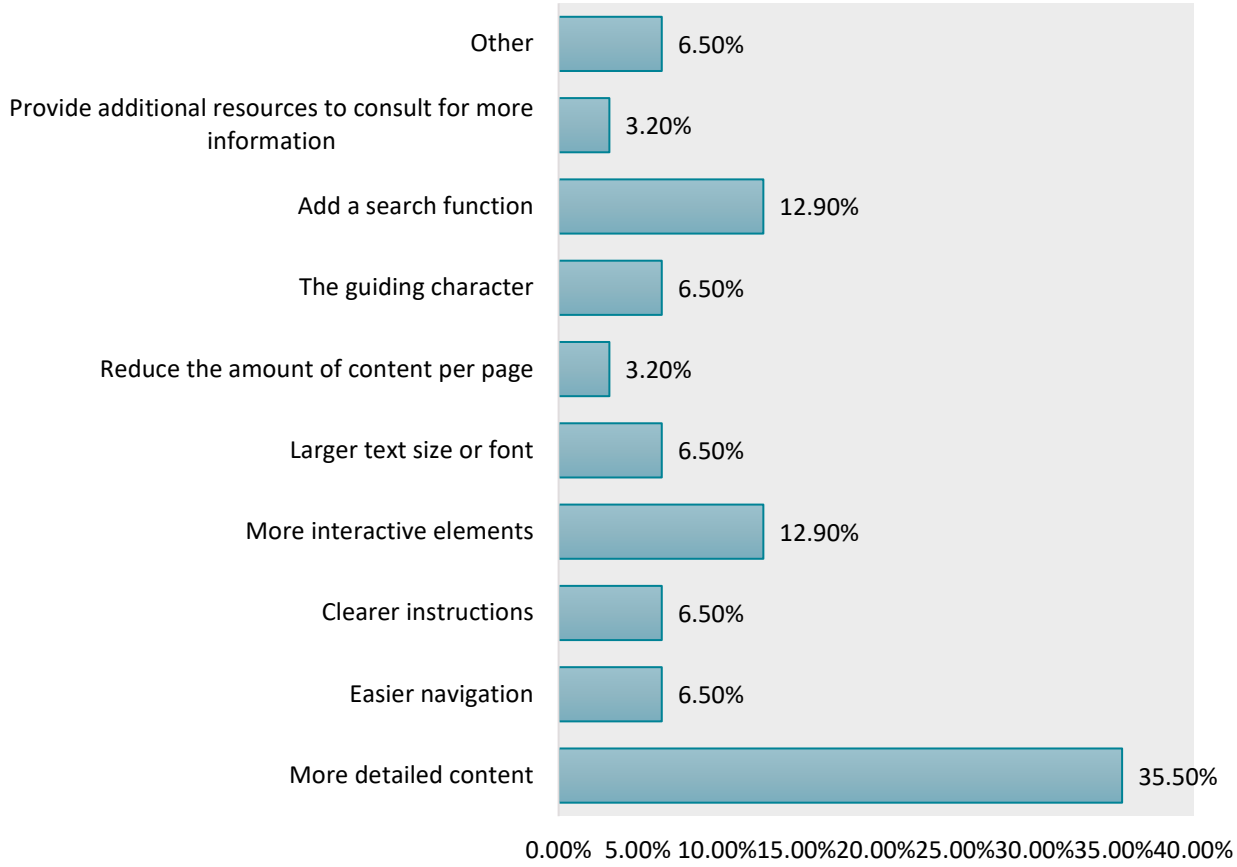
The top 3 most desired features of the platform include, quizzes and assessments (71.0%), interactive content (51.6%) and animations and videos (38.7%) (see figure 5.26).

Figure 5.26: Favourite aspect of the Platform



About a third of the test participants (35.5%) indicated that more detailed content can be added to the platform, while one in 10 of the respondents indicated that more interactive elements (12.9%) and a search function (12.9%) may be necessary. Given that the eLearning platform's goal is to increase financial literacy and education, test participants emphasised that content is crucial for the development of the platform.

Figure 5.27: What would you like to improve or change in the platform



5.3.11 Promotion and marketing of the eLearning platform

The test participants agreed that social media platforms such as TikTok, Instagram and Facebook would be the most effective means of marketing and promoting the eLearning platform. It was also emphasised that the success of the eLearning platform will largely depend on the success of the promotion and marketing of the platform.

Verbatim quotes supporting the above analysis includes the following:

> ***"It can be promoted on TikTok or any other social media platforms such as Instagram, Facebook."*** **(Participant, 12 Nov).**
>
> ***"A person said to me once – 'If your business is not online, then you are not in business'."*** **(Participant, 13 Nov).**
>
> ***"I think it is very important to market this platform efficiently, especially in the rural areas. It will only be successful if the marketing is successful."*** **(Participant, 13 Nov).**

5.3.12 Certificate of completion

Participants agreed that a "certificate of completion" will motivate them to complete the eLearning platform. In addition to a certificate of completion, discount vouchers might be considered as a form of motivation. Verbatim quotes supporting this view were as follows:

> ***"I like the certificate, because it's going to inspire you to learn more and when you see that you are progressing and know that you will get a certificate, you will be inspired to learn more."*** **(Participant, 12 Nov).**
>
> ***"Maybe discount vouchers. Maybe something added to my banking App to show that I have completed this and you get something for it. It makes it more interesting if you know that you are getting something from it."*** **(Participant, 12 Nov).**

5.4 MOBILE APPLICATION

This section of the report provides a summary of the user experience with the prototype mobile application which was tested during the interactive user testing sessions. During the interactive user testing sessions, test participants were divided into two smaller groups to interact with the prototype app and exchange ideas and perspectives. Observations showed that participants were used to mobile applications, had no issues accessing the platform and engaging with the

content. Participants were enthusiastic and comfortable sharing their views during group discussions.

5.4.1 Overall satisfaction

The financial literacy mobile application received positive feedback from users. Participants found it convenient since they can access it anytime on their phones. They indicated that using the app to gather more information helps in making informed financial decisions. When exploring preferences between the eLearning platform and the app, it was noted that both are necessary, but there was a slight preference for the mobile app due to its convenience and simplicity.

> ***"When you need to make financial decisions, it is easy to go onto the App and find out more information so that any decisions you make are based on proper financial literacy."*** **(Participant, 12 Nov).**
>
> ***"It is convenient to use, because you always have your phone with you."*** **(Participant, 13 Nov).**
>
> ***"It was amazing, it was interesting, it challenges you."*** **(Participant, 14 Nov).**

5.4.2 Ease of Use

Test participants agreed that the application is user-friendly and well-structured, allowing easy interaction due to clear instructions. They also confirmed that the platform is suitable for users of different backgrounds and digital skills. They agreed that the app is easy to understand in English but suggested that it should be available in all South African languages, specifically isiZulu and Afrikaans, in the future.

> ***"Yes, it is very easy to use for any generation."*** **(Participant, 13 Nov).**
>
> ***"For me it was easier to use, and I also think if the banks introduce it to their platforms and introduce it to their clients so that it is easier for them to engage with it and also feel more comfortable using it without being scammed."*** **(Participant, 12 Nov).**

5.4.3 Content

The app's content was regarded by the test participants as sufficient. They suggested improvements for more detailed interactions and specific information. The educational content matched participants' needs, but they believe it is important to update the data regularly as these needs change.

> ***"It wasn't too much. It was educational and just enough information." (Participant, 12 Nov).***
>
> ***"It was good and informative. It was sufficient. If you perhaps have a "learn more" button that will be great and helpful." (Participant, 14 Nov).***

5.4.4 Interactive Components

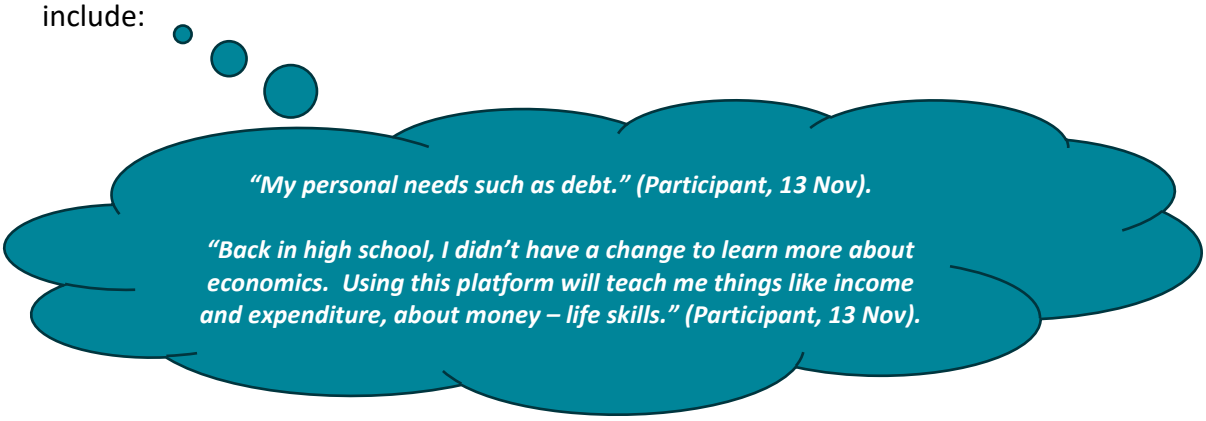
The quizzes proved to be popular among participants, making studying fun and inspiring friendly competition. Test participants valued the badges and levels that tracked their progress. Although balance was important, the test participants indicated that they liked the interactive features. However, they expressed their concern that heavy use may consume mobile data. To reduce data usage, they recommended fewer videos and more quizzes. Additionally, participants suggested allowing consumers to download content for offline viewing. Verbatim quotes which support the analysis include:

> ***"The images were a bit too small, but the balance between the videos and the images was fine."* (Participant, 12 Nov).**
>
> ***"Maybe more quizzes than videos to save on data usage."* (Participant, 14 Nov).**

5.4.5 Motivation to Download

During the focus group discussions, participants indicated that they would be motivated to download the mobile application based on their individual financial needs and experience. They also wanted to download it for more financial information

to make informed decisions. Further probing showed that they had never downloaded a financial literacy application before. Verbatim quotes which support the analysis include:



5.4.6 Promotion and marketing

Test participants in the focus discussions agreed that the mobile financial literacy and education platform could be successful if supported by an effective marketing and promotion. They suggested that social media would be the best way to reach diverse groups, emphasising that the app should be easy to share with contacts. Word-of-mouth was also being considered as a valuable channel to distribute information. Test participants indicated that it will also be important to use both "new" and "traditional" media, including radio, to reach as many people as possible. Collaborating with banks and other financial institutions were also mentioned as ideal vehicles to help promote the app. This view was largely supported due to that fact that participants regard banks as trustworthy sources for financial information. Verbatim quotes which support the analysis include:

"Word-of-mouth. Like when I am in a taxi and just scrolling through the app, other passengers will wonder what I am busy doing and then I can tell them about the app and encourage them to use it." **(Participant, 13 Nov).**

"Make the app sharable via Bluetooth instead of downloading it from Play Store.'' **(Participant, 12 Nov).**

"This can also be advertised on radio for the older people who listen to the radio." **(Participant 13 Nov)**

"Partnerships with financial institutions like banks." **(Participant, 14 Nov).**

5.4.7 Sustainability and Longevity

Test participants agreed that if the mobile application stays current with technology and information is updated regularly, it will be sustainable over the long-term. They also agreed to recommend the app to friends and family for informed financial decisions. Verbatim quotes which support the analysis include:

> ***"I think it will last long but must keep up with technology and be updated regularly with the latest financial information. There can also be incentives or motivations to access such an application."*** **(Participant, 12 Nov).**
>
> ***"I feel like this is the future of financial learning."*** **(Participant, 13 Nov).**
>
> ***"The application teaches me to make good financial decisions, and I will tell my friends and family about it so that they can use it as well."*** **(Participant, 12 Nov).**

5.4.8 Privacy and data protection (safeguarding important private and important information)

Test participants' willingness to share personal information on the application was also explored in focus group discussions. In general, participants agreed to share email addresses and mobile numbers, but were uneasy sharing more personal information or banking details.

5.5 RECOMMENDATIONS FOR FURTHER ENHANCEMENTS

During the interactive focus group discussions, participants made recommendations to further enhance the digital eLearning platforms. The recommendations are listed in table 5.2 below. By considering these dynamic forces, the likelihood increases for the prototype to evolve into a robust, user-friendly and financially sustainable eLearning platform that continually attracts and retains users while scaling effectively.

Table 5.2: Recommendations for further enhancement of digital eLearning platforms

eLearning Platform	Mobile Application
✓ **Storytelling:** Enhances engagement. ✓ **Gamification:** Boosts user retention. ✓ **Interactive Video Integration:** Adds an interactive learning experience. ✓ **Simplified Pages:** Avoids unnecessary complexity. ✓ **Micro-learning modules**: For easy and quick consumption. ✓ **LMS integration**: Centralises learning.	✓ **Voucher system:** Users can redeem points for rewards. ✓ **Bank integration:** Rewards based financial benefits, such as better saving interest. ✓ **Social sharing:** Users can share achievements on social media. ✓ **Competitive Features:** • Leaderboards for individuals and groups. • User created groups that can compete. ✓ **Content Expansion:** • Regular updates and new modules. • New sub-categories to keep users engage. • Micro-Learning modules for easy and quick consumption

5.6 CONCLUSION

Both the prototype digital eLearning platform and the mobile application received valuable and very positive feedback from test participants who participated in the interactive user testing sessions. The research show that these platforms provide essential digital financial information and are effective for easy access to relevant details.

The mobile application was found to be user-friendly and allows quick access to basic financial information, while the eLearning platform is suitable for desktop, laptop, or tablet use and offers more comprehensive financial knowledge. Participants appreciated the design and content of both platforms and provided suggestions for improvements since they are still prototypes.

During the sessions, participants highlighted the need for a balance between content, images and interactive elements. They suggested exploring ways to interact with the information without using data and emphasised that the data needed to access the platforms should allow as many people as possible to benefit.

The guiding character, the Financial Genie, added an enjoyable feature to learning and was well received. It was noted that while the platforms' aim is education on essential financial matters, the character must fit the content's sophistication. The Financial Genie worked well for the first learning module on basic concepts, while a more serious character, like a financial advisor, were regarded as more suitable for the fourth module, which contained more complex financial concepts.

Considering the outcome of the research results, the FSCA can confidently develop and implement the tested digital financial literacy platforms in South Africa. However, success will largely depend on effective promotion and marketing, including social media. It is also suggested to release each of the four modules independently and establish a monitoring and assessment process before launching a fully functional platform.

SECTION F: STRATEGIC INSIGHTS AND RECOMMENDATIONS

6.1 INTRODUCTION

The BMR was commissioned by the Financial Sector Conduct Authority (FSCA) to conduct a Digital Financial Literacy and Education Feasibility Study among current and potential financial customers who are at least eighteen years of age. The primary objective of this study was the design, development and testing of digital financial literacy platforms including an eLearning platform and mobile application. By providing everyone equitable access to pertinent financial information, these digital solutions are anticipated to increase South Africa's levels of digital financial literacy and education and, eventually, advance financial inclusion. Based on the positive outcome of the study, it is being recommended that the FSCA proceed with the full-scale implementation of the digital financial literacy platforms, by following a suggested framework which is informed by the research outcome. In addition to the framework, it is also important for the FSCA to take into consideration other important implementation considerations which are discussed in this final section of the report.

To ensure a comprehensive and forward-looking approach, the BMR has broadened the scope of the feasibility study beyond the immediate requirements of developing a prototype digital financial literacy eLearning platform and application. This expansion was guided by a structured roadmap for introducing an innovative Digital Financial Literacy eLearning solution, as outlined in exhibit 6.1.

The roadmap encompasses multiple strategic phases, ranging from conceptualisation to securing policymaker support for financial inclusion in South Africa. While the first four stages (stages 1 to 4) focus on conducting the feasibility study, the subsequent stages (stages 5 to 8) address critical implementation and sustainability factors necessary for the platform’s long-term success.

More specifically, these additional stages include:

- Strategic partnerships and funding models to ensure financial sustainability.
- Policy advocacy and government buy-in to drive regulatory support.
- Full-scale deployment and awareness campaigns to maximizes user adoption.
- Monitoring, evaluation and continuous improvement to enhance impact and adaptability.

By incorporating all roadmap stages, this feasibility study ensures that the recommended Digital Financial Literacy eLearning Platform and Application remains sustainable, scalable and impactful in promoting financial awareness, knowledge and inclusion for all South Africans. Additionally, this structured approach aligns with the broader research objectives posed by the FSCA, which extend beyond the immediate feasibility study deliverables to support long-term financial wellness and empowerment.

Exhibit 6.1: Roadmap for Digital Financial Literacy eLearning Platform and Application

Stage	Key Activities	Outcomes
1. Understanding the Digital Financial Ecosystem	• Analyse South Africa's financial literacy landscape. • Identify key players (banks, fintechs, regulators, NGOs). • Assess digital access challenges (costs, infrastructure, literacy gaps).	Comprehensive ecosystem insights to shape platform strategy. ***[This outcome is reported in Sections A and B of the report (secondary research.]***
2. Problem Definition and Market Research	• Conduct surveys and focus groups on financial literacy gaps. • Study global best practices in digital financial literacy. • Define the core problem statement.	Data-driven insights into user needs and pain points. ***[This outcome is reported in Sections A and C of the report (primary research.]***
3. Concept Development and Design	• Define platform/app features (e.g., gamification, AI-driven learning). • Wireframe and prototype user journey (used Figma for UI/UX). • Ensure accessibility (mobile-first, low-data use).	Initial prototype and user flow blueprint. ***[This outcome is reported in Section D of the report (primary research.]***
4. Pilot Development and Testing	• Build MVP (Minimum Viable Product) with core learning modules. • Conduct small-scale pilot with select user groups. • Gather user feedback and iterate.	Validated prototype ready for scaling. ***[This outcome is reported in Section E of the report (usability testing research.]***

continue…

Exhibit 6.1 (continued): Roadmap for Digital Financial Literacy eLearning Platform and Application

Stage	Key Activities	Outcomes
5. Strategic partnerships and funding	• Engage financial institutions and FinTech's for funding. • Seek government and NGO support for outreach. • Secure corporate partnerships for sustainability.	Secured funding and key implementation partners. ***[This outcome is reported in Sections A and F of the report]***
6. Policy advocacy and government buy-in	• Develop a policy recommendation report. • Engage SARB, FSCA and policymakers on financial literacy needs. • Present platform as a **public-private partnership** solution.	Government and regulatory backing for national rollout. ***[This outcome is reported in Sections A and F of the report]***
7. Full-scale deployment and awareness campaign	• Launch the platform nationally via web and mobile app. • Implement marketing strategies (social media, SMS campaigns, community workshops). • Partner with schools, banks and FinTech's for wider adoption.	Nationwide rollout with high engagement and adoption rates. ***[This outcome is reported in Sections A and F of the report]***
8. Monitoring, evaluation and continuous improvement	• Track KPIs: user engagement, learning completion rates, financial behaviour change. • Optimise platform based on data-driven insights. • Scale features (AI-driven insights, multilingual support, more gamification).	Sustained user growth and impact on financial literacy levels. ***[This outcome is reported in Sections A and F of the report]***

Building on the findings of the feasibility study, this concluding section commences with an overview of the **Digital Financial Literacy Framework**, which emerged as a key outcome of the research. This framework identifies essential elements that enhance the sustainability and longevity of a full-scale Digital Financial Literacy eLearning Platform and Application, ensuring its effectiveness in five critical areas:

- Reach (awareness and adoption).
- Engagement (user interaction and experience).
- Learning Outcomes (knowledge and skills development).
- Behavioural Change (application and financial habits).
- Impact (long-term financial well-being).

This structured approach provides the foundation for the subsequent discussion on the key dimensions required to measure the success of digital financial literacy platforms. These insights are crucial when considering the final stages of the roadmap for developing a sustainable and impactful Digital Financial Literacy eLearning Platform and Application (see exhibit 6.1).

Before delving into the framework model and success measurement, exhibit 6.2 outlines the stakeholders, proposed timeframe and engagement strategies for stages 5 to 8 of the roadmap. These elements should be assessed alongside the key activities and expected outcomes of each stage, as detailed in exhibit 6.1. Notably, some of the stakeholders identified in exhibit 6.2 were profiled during the secondary research phase, while certain proposed engagement strategies stem directly from both secondary and primary research findings.

Exhibit 6.2: Post-feasibility stakeholders, timeframes and engagement strategies

Stage	Stakeholders	Timeframe	Proposed Engagement Strategies
5. Strategic partnerships and funding	Banks, Fintechs, Corporate Sponsors, Donors	3-6 Months (Parallel with Pilot)	Public-private partnership (PPP) presentations.
6. Policy advocacy and government buy-in	Regulators, Lawmakers, Financial Inclusion Bodies	6-9 Months	Whitepapers, government briefings and advisory board formation.
7. Full-scale deployment and awareness campaign	Marketing Teams, Media, Schools, Banks	6-12 Months	Multi-channel marketing: TV, radio, social media, influencers.
8. Monitoring, evaluation and continuous improvement	Data Analysts, Educators, Developers	Ongoing	Monthly progress reports, feedback loops, AI-driven personalisation.

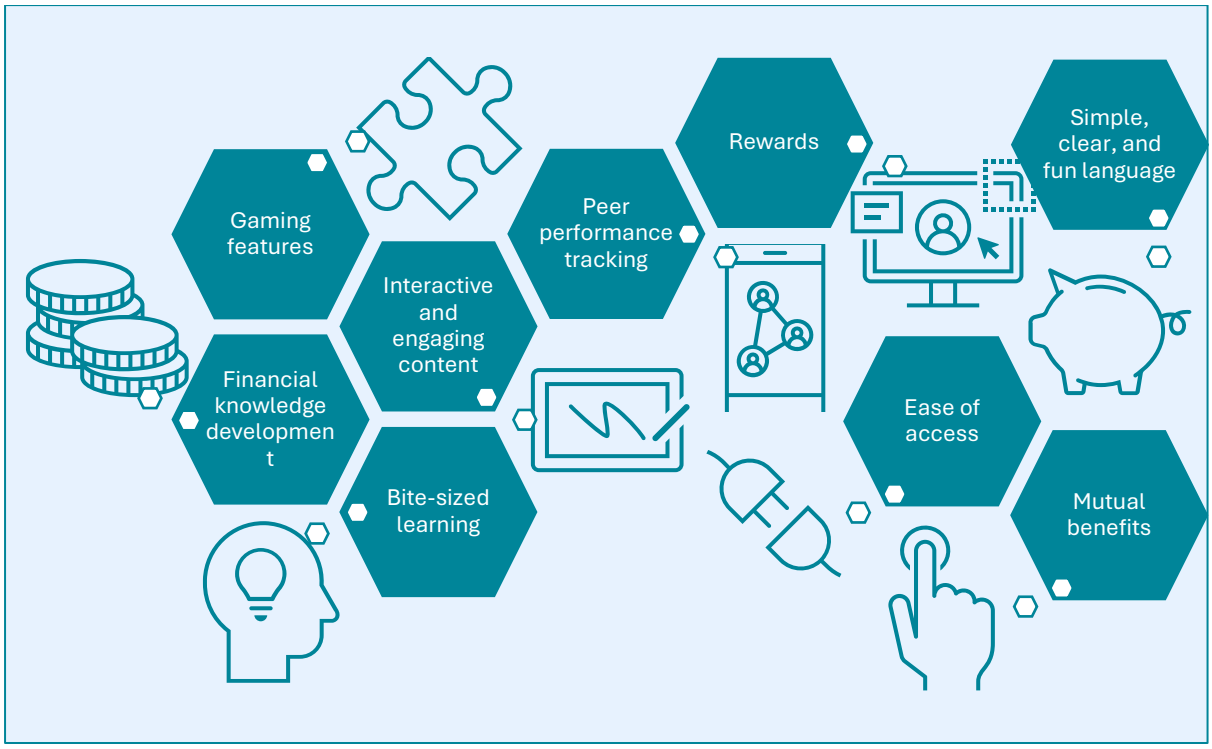
As previously discussed, stages 5 to 8 build upon the Digital Financial Literacy Framework, which emerged from the feasibility research study conducted in stages 1 to 4. This framework serves as the foundation for the development of a full-scale digital financial literacy platform. When consolidating the findings of the feasibility study, several critical elements were identified to support the platform's large-scale deployment, awareness initiatives and continuous improvement efforts. These elements are essential to ensuring the platform's long-term sustainability and effectiveness in enhancing digital financial literacy.

6.2 DIGITAL FINANCIAL LITERACY FRAMEWORK FOR THE DEVELOPMENT OF FULL-SCALE DIGITAL FINANCIAL LITERACY PLATFORMS

Based on the research outcome, a digital financial literacy framework has been crafted. The framework contains the essential ingredients to develop the full-scale digital financial literacy platforms. The configuration aligns with sustainability and longevity goals aimed at improving digital financial literacy and financial inclusion. By incorporating interactive features, gaming aspects, rewards, flexibility and simplicity, the framework a solid platform is presented to the FSCA in support of the development of full-scale of the digital financial literacy platforms. The essential elements required to create full-scale digital financial literacy platforms are displayed

in figure 6.1. The objectives and key features of each element, which were deduced from the research outcomes, are also discussed in more detail. The objectives outlined serve as guiding principles for the FSCA in developing the full-scale digital financial literacy platforms. The discussion finally outline the value proposition for both users and the FSCA, which further motivates the support for the development of full-scale digital financial literacy platforms.

Figure 6.1: Essential elements required to create full-scale digital financial literacy platforms



❑ Interactive and engaging content

- ***Objective**:* Promote active engagement with financial literacy content, ensuring users can interact with and learn financial concepts through practical application.

- ***Key features**:*
  - Interactive quizzes, polls and feedback loops integrated into each learning module to reinforce understanding.
  - Scenarios that mimic real-life financial situations to encourage users to apply concepts.
  - Instant feedback for correct and incorrect responses to guide learning progress.

❑ Incorporation of gaming features

- ***Objective**:* Make learning fun, competitive and immersive, driving continued use of the digital financial literacy platforms and reinforcing the financial principles learnt.

- ***Key features**:*
  - Gamification techniques, such as point scoring, levels and achievement badges.
  - Missions or challenges that users must complete to advance through the platform (e.g., saving challenges, budgeting simulations).
  - A friendly competition element where users can compete against themselves (progress tracking) or others (leaderboards).

❑ Competition element

- ***Objective***: Encourage motivation through friendly competition and foster a sense of achievement and community.

- ***Key features***:
  - Leaderboards for tracking user progress and achievements.
  - Opportunities for users to compete in challenges with peers (or anonymous users) and see how they rank in terms of financial knowledge and decision-making.

❑ Rewards system

- ***Objective***: Provide intrinsic and extrinsic motivation for users to continuously engage with the platform and apply learned financial concepts.

- ***Key features***:
  - Users earn rewards (points, badges, certificates) when they complete modules, financial challenges, or financial goal achievements.
  - These rewards can be redeemed for tangible incentives such as discounts on financial products, exclusive content, or small monetary prizes.

❑ Flexibility in access

- ***Objective***: Ensure a user-friendly experience that allows users to integrate learning into their daily routine without pressure or time constraints.

- ***Key features***:
  - The digital financial literacy platforms should support a flexible learning experience, allowing users to enter and exit at their convenience.
  - Users can pause learning at any point and the digital financial literacy platforms should have an automatic "save and resume" feature for easy access to the content at a later time.
  - Short learning modules (5-10 minutes) in eLearning ensure that users can easily fit learning into their schedule without overwhelming them.

❑ Simple, clear and fun language

- ***Objective***: Ensure that financial concepts are easily understood by users with varying levels of financial literacy.

- ***Key features***:
  - Use of simple, jargon-free language to explain complex financial concepts.
  - Fun language and tone that aligns with the gaming elements but retains a level of professionalism to maintain trust in financial information.
  - Interactive animations and short videos to explain difficult topics in a fun and visual way.

❑ Bite-size learning

- ***Objective***: Prevent information overload and allow users to complete financial literacy content in short, manageable segments.

- ***Key features***:
  - Content of eLearning modules need to be broken down into short, digestible segments (e.g., 5-10 minutes per segment).
  - Each segment should focus on a specific financial concept or decision-making skill (e.g., budgeting, saving, investing, risk management).
  - Progress is tracked and users can review previous lessons to reinforce learning.

❑ Financial knowledge development in the digital space

- ***Objective***: Equip users with both financial knowledge and the digital skills needed to engage safely and productively with online financial tools.

- ***Key features***:
    - Digital literacy elements are integrated into the content to help users navigate online financial tools such as mobile banking, budgeting apps and investment platforms.
    - Teach users how to assess and mitigate digital risks (e.g., identifying phishing and securing online transactions).
    - Provide examples of real-world digital financial tools and demonstrate how to use them effectively.

❑ Mutual benefits for users and FSCA

- ***Objective***: Ensure that the platform provides value to both the users (financial knowledge, tools, rewards) and the FSCA (financial literacy improvements, consumer protection, regulatory insights).

- ***For users***:

    - Improved financial literacy leads to better financial decision-making, increasing their ability to manage personal finances, build savings and plan for the future.
    - Access to personalised financial advice and recommendations based on progress within the platform.
    - Recognition (through certificates, rewards) for completion of eLearning modules help build a sense of accomplishment and empowerment.
    - Increasing the financial freedom prospects of end-users by enhancing their financial capabilities.

- ***For FSCA***:

    - The digital financial literacy platforms support the FSCA's goals of improving financial literacy and inclusion, thereby contributing to a more financially literate population.
    - Enhanced consumer protection through educated decision making, reducing the risk of financial harm from unwise financial choices.
    - The FSCA can leverage user data (while respecting privacy) to assess financial literacy trends and identify areas for policy intervention or additional resources.

By adhering to the above development framework, the digital financial literacy platforms (eLearning platform and mobile application) will give users an enjoyable, interesting and productive learning experience that is accessible and adaptable. The FSCA's strategic goal of enhancing financial literacy and inclusion is also supported, which will eventually empower South Africa's population by improving financial capability.

6.2.1 Implementation considerations

Several key implementation considerations have been identified from the feasibility study, which is important for the FSCA to consider for the successful implementation of a digital financial literacy platform within the South African context.

- **Platform accessibility**: Ensure the mobile application is accessible on smartphones and tablets and the eLearning modules on mobile devices and desktops to cater to various user preferences and increase accessibility.

- **Data efficiency**: Minimise data usage while interacting with the digital financial literacy tool, considering the limitations of mobile data costs in South Africa. This could include offline access to certain content and low-data versions of interactive elements.

- **User feedback**: Incorporate regular feedback mechanisms to fine-tune the digital financial literacy tool features based on user experience and preferences, ensuring the tool evolves to meet the needs of its audience.

- **Promotion strategy**: A strong marketing plan that includes partnerships with financial institutions, social media campaigns and collaborations with influencers to increase user engagement and adoption.

To complement the full-scale implementation framework, the remainder of the report presents key guiding principles for maintaining, sustaining and continuously updating the Digital Financial Literacy eLearning platform and mobile application. These strategic insights support a holistic approach to long-term sustainability, particularly in the final stages of the roadmap for the Digital Financial Literacy eLearning Platform and App. The following key auxiliary dimensions were explored (also see annexure E for the varied sources consulted for the post-implementations strategy considerations):

- A framework for measuring the success of digital financial literacy platforms.
- Recommended cycles to sustain engagement and user interest.
- Essential skills required to maintain and optimize the digital financial literacy platform.
- Mobile application longevity projections.
- Strategies for reaching mass audiences and justifying investment in digital financial literacy initiatives.
- Alternative digital channels beyond e-learning platforms and mobile applications that the FSCA can consider.
- Complementary strategies including a mix of digital tools or a multi-channel approach for accessibility, engagement and effectiveness in digital financial literacy.
- Potential risks of implementing viable digital financial literacy platforms.

By addressing these dimensions, the report aims to provide a comprehensive roadmap for the long-term success and impact of digital financial literacy initiatives in South Africa.

6.3 FRAMEWORK FOR MEASURING THE SUCCESS OF DIGITAL FINANCIAL LITERACY PLATFORMS

Evaluating the effectiveness of digital financial literacy platforms is crucial for informed user engagement and targeted interventions. By measuring the success of the digital financial literacy frameworks, the FSCA can ensure their platform is making a meaningful impact, driving positive change and ultimately improving users' financial well-being. In addition, it can also help to secure support and possible funding and foster collaboration across the financial industry. Key dimensions to measure the success of digital financial literacy platforms are displayed in exhibit 6.3.

Exhibit 6.3: Key dimensions to measure the success of digital financial literacy platforms

Key dimensions to measure the success of digital financial literacy platforms



- ✓ Reach (awareness and adoption)
- ✓ Engagement (user interaction and experience)
- ✓ Learning outcomes (knowledge and skills development)
- ✓ Behaviour change (application and financial habits)
- ✓ Impact (long-term financial well-being)

Each of the key dimensions of success are discussed in more detail below. For each dimension, examples of dashboard templates are shared which highlights the key performance indicators (KPIs) to measure the success of the FSCA's digital financial literacy platforms. The dashboards include key dimensions, metrics and data sources to ensure comprehensive monitoring of platform impact. The dashboard templates are suitable for Google Data Studio, Power BI, or Excel, but can also be adapted for Tableau or custom-built platforms.

6.3.1 Key dimensions to measure success of digital financial literacy platforms

❑ *Key Dimension 1: Reach (awareness and adoption)*

- **What it measures:**
  - How many people access the platform?
  - Who is being reached (demographics, location, income levels)?
- **Key indicators:**
  - Unique visitors and active users – Number of unique users accessing the platform (daily, weekly, monthly).
  - Downloads (for apps) – Number of app installs and active devices.
  - Registrations and sign-ups – Number of users who create accounts or subscribe to updates.
  - Referral traffic – How many users join via word-of-mouth, social media, or partner organisations?
  - Demographic coverage – Are key target groups (e.g., youth, low-income individuals, women) being reached?
- **Tools for measurement:**
  - Google Analytics (for websites).
  - App Store and Google Play Analytics (for apps).
  - Social media analytics (Facebook, Twitter, Instagram insights).
- **Dashboard**

Objective: *Measure the number of people accessing and engaging with the platform.*

Metric	Description	Data Source
Unique visitors	Total number of individuals who visit the platform	Google Analytics
New versus returning users	% of new users vs. those who return	Google Analytics
App downloads	Total downloads of the mobile application	App Store and Google Play Analytics
Registrations	Number of users who sign up for an account or newsletter	Platform Database
Demographic reach	Age, gender, location of users	Google Analytics, Surveys

❑ *Key Dimension 2:* Engagement (user interaction and experience)

- **What it Measures:**
  - Are users interacting with the content?
  - How long do they stay on the platform?
  - Do they return for more learning?

- **Key Indicators:**

  - Time spent on platform: Average session duration (higher engagement means better learning retention).
  - Click-Through Rates (CTR): % of users clicking on learning materials, quizzes, or financial tools.
  - Course completion rates: % of users who finish an e-learning module or simulation.
  - Repeat visits (Retention rate): % of users returning after the first visit (e.g., weekly/monthly retention).
  - Social shares and comments: Are users discussing or sharing the content?
  - Drop-off points: Where do users lose interest (e.g., after a quiz, during registration)?

- **Tools for Measurement:**

  - Heatmaps and session recordings (Hotjar, Crazy Egg).
  - Engagement tracking via Learning Management System (LMS).
  - Social media listening tools (Brandwatch, Hootsuite).

- **Dashboard**

Objective: Measure how users interact with the platform's content.

Metric	Description	Data Source
Time spent per session	Average duration of each visit	Google Analytics
Click-Through Rate (CTR)	% of users clicking on key content (quizzes, courses)	Google Tag Manager
Course completion rate	% of users who finish an e-learning module	LMS Analytics
Repeat visit rate	% of users returning after first visit	Google Analytics
Social shares and comments	User engagement on social media	Facebook/Twitter Insights

❑ *Key Dimension 3: Learning Outcomes (knowledge and skills development)*

- **What it Measures:**

  - Are users gaining financial knowledge?
  - Can they apply what they learned?

- **Key Indicators:**

  - Pre- and post-assessment scores: Compare user knowledge before versus after using the platform.

- Quiz and test performance: % of correct answers in financial literacy quizzes.
- Self-reported confidence. Surveys asking if users feel more confident about financial decisions.
- Certificate completion rates. How many users complete learning modules and receive certificates?

- **Tools for Measurement:**

  - Online surveys (Google Forms, Typeform).
  - LMS data reports (Moodle, TalentLMS).

- **Dashboard**

Objective: Assess knowledge improvement and skills development.

Metric	Description	Data Source
Pre- versus post-assessment scores	Change in financial knowledge before and after training	Platform LMS
Quiz completion rate	% of users completing financial literacy quizzes	LMS Analytics
Certification rate	% of users who receive course completion certificates	LMS Analytics
Self-reported confidence	% of users who feel more financially capable after learning	Surveys

❑ *Key Dimension 4: Behaviour Change (application and financial habits)*

- **What it Measures:**

  - Are users **applying** what they learn?
  - Has their financial behaviour improved?

- **Key Indicators:**

  - Budgeting and savings behaviour: % of users who start saving or budgeting after learning.
  - Debt reduction actions: % of users taking steps to reduce debt.
  - Use of financial products: % of users opening bank accounts, investing, or applying for financial services.
  - Fraud prevention actions: % of users who identify and report financial scams.

- **Tools for Measurement:**

  - Longitudinal surveys (Follow-up surveys 3-6 months later).
  - Partnerships with banks and financial institutions to track behavior shifts.

- **Dashboard**

Objective: Track whether users apply financial knowledge in real life.

Metric	Description	Data Source
Budgeting and savings behaviour	% of users who start budgeting or saving after training	Follow-up Surveys
Debt reduction actions	% of users taking steps to reduce debt	Partner Financial Institutions
Financial product usage	% of users opening bank accounts, applying for loans, or investing	Partner Banks
Fraud awareness and reporting	% of users identifying and reporting financial frauds	FSCA Reports

❑ *Key Dimension 5: Impact (Long-Term Financial Well-Being)*

- **What it Measures:**
  - Has the platform contributed to financial inclusion and empowerment?
  - Has financial literacy improved on a national scale?

- **Key Indicators:**
  - Increase in national financial literacy scores: Compare literacy levels before vs. after implementation (FSCA or external surveys).
  - Economic participation: % of financially excluded users who gain access to financial services.
  - Reduction in over-indebtedness: % of users who improve credit scores or reduce loan defaults.
  - Testimonies and case studies: User success stories showing positive financial behavior changes.

- **Tools for Measurement:**
  - National financial literacy surveys.
  - Collaboration with banks, microfinance institutions and credit bureaus for impact tracking.
  - Qualitative research (focus groups, testimonials).

- **Dashboard**

Objective: Evaluate long-term improvements in financial inclusion and literacy.

Metric	Description	Data Source
National financial literacy score change	Improvement in literacy levels before vs. after implementation	National Surveys
Economic participation increase	% of financially excluded users gaining access to services	Government and Banking Reports
Reduction in loan defaults	% decrease in users defaulting on loans	Partner Banks
Case studies and testimonials	Success stories of users who improved financial well-being	Qualitative Research

Exhibit 6.4 presents a summary of the dimensions and key indicators.

Exhibit 6.4: Dimensions and key indicators to measure success of digital financial literacy platforms

Dimension	Key Indicators
Reach	Unique visitors, app downloads, registrations, sign-ups, demographics
Engagement	Time spent, completion rates, repeat visits, social shares
Learning Outcomes	Pre/post-test scores, quiz performance, certification rates
Behaviour Change	Budgeting habits/actions, debt reduction, financial product adoption
Impact	National financial literacy score improvements, economic participation

With reference to the dimensions and key indicators shown in exhibit 6.1 and discussed above, the following recommendations suffice:

- ✓ **Short term:** The FSCA should focus on increasing reach and engagement (improve UI/UX, optimise for mobile, run awareness campaigns).
- ✓ **Medium term:** Collect behavioural data to understand how learning translates into real-world financial actions.
- ✓ **Long Term:** Measure national financial inclusion impact, refine based on trends and explore scaling partnerships (banks, fintech, telcos).
- ✓ **Set Up Automated Reporting:** Configure real-time dashboards.

For continuous improvement strategies and to maximise impact, the FSCA should iterate and refine the platform based on feedback and performance. In this regard, some options, which also emerged from the feasibility research, include:

- **A/B Testing and UX optimization**
    - Test different learning formats (videos, quizzes, gamification) to see what engages users most.
    - Experiment with different content types (videos, quizzes, articles) to optimise engagement.
    - Optimise platform navigation based on user feedback and heatmap analysis.

- **Personalisation and AI-driven recommendations**
    - Use AI to suggest personalized learning paths based on user behavior.
    - Adaptive learning: Users get progressive difficulty levels based on performance.

- **Community and Peer Learning Features**
    - Introduce a forum and/or discussion board for users to share financial tips.
    - Encourage user-generated content (budgeting tips, saving hacks).

- **Incentives and gamification**
    - Gamification Features: Implement leaderboards, badges and financial challenges to boost engagement.
    - Offer badges, leaderboards, or rewards for completing financial literacy challenges.
    - Create "Financial Wellness Challenges" where users compete in budgeting and savings exercises.

- **User Feedback Integration**
    - Regular surveys and feedback loops to improve user experience.

- **Partnerships**
    - Work with banks, NGOs and fintech firms to track real-world behavioural changes.
    - Work with financial institutions for better impact measurement.

6.4 SUGGESTED PERIOD FOR CONSTANT UPDATES OF THE DIGITAL FINANCIAL LITERACY PLATFORM TO SUSTAIN AND MAINTAIN INTEREST

A hybrid approach, combining scheduled updates with AI-driven responsive content, will be ideal for maintaining engagement and sustaining user interest in the Digital Financial Literacy Platform.

❑ Regular Scheduled Updates (Every 3–6 Months)

- **Every 3 Months (Quarterly)**
    - Update financial literacy courses based on user feedback.
    - Refresh interactive quizzes and case studies.
    - Improve UI/UX for better navigation and user experience.
    - Introduce new engagement elements (e.g., gamification, challenges).

- **Every 6 Months (Biannually)**
    - Introduce new modules based on financial trends (e.g., inflation impact, fintech updates).
    - Update regulatory and compliance information.
    - Refresh video content and expert insights.

- **Annually**
    - Conduct a comprehensive performance review of content effectiveness.
    - Implement structural improvements based on long-term data analytics.
    - Revamp branding and user interface if necessary.

❑ AI-Driven Responsive Updates (Real-Time or Monthly)

Using AI and Predictive Analytics, updates can be dynamically tailored:

- Personalised learning paths: AI-driven adaptation of course difficulty based on user performance.
- Trending financial topics: Real-time data pulls in news, regulatory changes and market shifts.
- Chatbots and interactive AI: Provide instant answers and suggest learning modules based on user queries.
- User behavior triggers: AI detects when users disengage and recommends relevant content to re-engage them.

6.5 KEY SKILLS TO MAINTAIN/SUSTAIN AN OPTIMAL DIGITAL FINANCIAL LITERACY PLATFORM SOLUTION

Considering a scenario where the Digital Financial Literacy platform will be a plug-in on the FSCA SharePoint website and given limited in-house ICT support, the skills and expertise outlined in exhibit 6.5 will be required from an external service provider or an outsourced team. Based on Figma as a reference, these roles focus on designing, developing and maintaining the solution efficiently.

Exhibit 6.5: Key Skills to maintain/sustain an optimal digital financial literacy platform solution

Role	Key Skills	Why Needed?
UX/UI Designer	UX research, responsive design.	Ensure a user-friendly and engaging interface.
Front-End Developer	HTML, CSS, JavaScript, SharePoint integration.	Build and maintain the front-end experience.
Back-End Developer	SharePoint APIs, Power Automate, Azure, database management.	Manage user data, authentication and reporting.
E-Learning Specialist	SCORM, LMS integration, content development.	Ensure smooth e-learning module functionality.
(Optional) AI Engineer	Chatbots, NLP, adaptive learning AI.	Automate personalization and user engagement.
Marketing Manager	SEO, analytics, digital campaigns.	Increase platform adoption and engagement.

Considering limited in-house ICT support and resources, the best approach would be:

- ✓ Outsource development and maintenance to an experienced SharePoint + eLearning vendor.
- ✓ Use Figma for ongoing UI/UX updates, allowing external teams to collaborate easily.
- ✓ Ensure e-learning content aligns with SCORM/LMS to prevent compatibility issues.
- ✓ Have a digital marketing plan to continuously drive user engagement.

6.6 MOBILE APPLICATION LONGEVITY PREDICTIONS

The longevity of digital tools, whether used locally or internationally, depends on multiple factors, including technological advancements, vendor support, market demand, competition and adaptability to emerging trends. Even with constant updates and improvements, some tools last longer than others due to their foundational architecture, community adoption and business viability. Pertinent longevity factors include:

- Market demand and adoption: Tools with a large, active user base have greater longevity.
- Vendor support and funding: Well-funded tools from established companies have greater longevity.

- Technological compatibility: Tools that adapt to new standards and trends remain relevant.
- Security compliance: Strict data protection laws force some tools to phase out.
- Open source versus proprietary: Open-source tools (e.g., Linux, Moodle) may have greater longevity due to community-driven updates.

Exhibit 6.6 also presents an overview of lifespan estimates of different digital tools

Exhibit 6.6: Lifespan estimates of different digital tools

Tool Category	Average Longevity (Years)	Factors Affecting Longevity
Enterprise Software (ERP, CRM, LMS, HRM, etc.)	10 - 20 years	Large organizations invest in long-term solutions; vendor support and integration flexibility matter.
Operating Systems (Windows, macOS, Linux, Mobile OS)	8 - 15 years	Major OS versions receive support for over a decade, but end-of-life policies apply (e.g., Windows 10 support ends in 2025).
E-Learning Platforms (LMS, MOOC systems, etc.)	5 - 15 years	Open-source LMS (Moodle, Open edX) last longer than proprietary systems; market demand and feature relevance matter.
Website and CMS Platforms (WordPress, SharePoint, Wix, Drupal)	8 - 20 years	Continuous updates extend life; outdated architecture leads to obsolescence.
Cloud-Based Productivity Tools (Microsoft 365, Google Workspace, Zoho, etc.)	10 - 25 years	Frequent updates and cloud hosting extend longevity; tools with poor adoption die (e.g., Google+).
Custom Web and Mobile Apps	5 - 10 years	Requires periodic redesigns and maintenance; depends on tech stack and scalability.
Social Media Platforms (Facebook, Instagram, LinkedIn, TikTok, etc.)	10 - 30 years	Market dominance ensures longevity, but platform relevance can fade due to user behavior changes (e.g., MySpace).
Cybersecurity and Encryption Tools	5 - 15 years	Updates extend life, but quantum computing threats could shorten viability.
Database Management Systems (SQL, NoSQL, Big Data)	15 - 30 years	SQL databases (Oracle, PostgreSQL) remain dominant for decades due to reliability and backward compatibility.
AI and Machine Learning Platforms	3 - 10 years	Rapid evolution in AI demands frequent updates; outdated models become irrelevant quickly.
Programming Languages and Development Frameworks	10 - 30+ years	Legacy languages (COBOL, C, Java) persist for decades, but frameworks (Angular, React, Django) may fade faster.
Payment and Fintech Solutions (Stripe, PayPal, Blockchain, etc.)	5 - 20 years	Compliance regulations, fintech innovation and user adoption affect longevity.
Cloud Infrastructure (AWS, Azure, Google Cloud, etc.)	10 - 30 years	Dominant providers sustain long-term viability through innovation and service diversification.
Collaboration Tools (Slack, Microsoft Teams, Zoom, etc.)	5 - 15 years	Competition and evolving workplace trends influence longevity; niche products can fade quickly.

To build on the analysis, exhibit 6.7 outlines mobile app longevity predictions by type.

Exhibit 6.7: Mobile app longevity predictions by type

App Type	Typical Lifespan	Examples
Social media	10+ years (if evolving)	Facebook, Instagram, TikTok
Productivity	5+ years (if maintained)	Microsoft Office, Notion
E-commerce	7+ years	Amazon, Shopify
Games	1 - 5 years (depends on popularity)	Candy Crush, Among Us
Utility Apps	3 - 7 years	Flashlight apps (obsolete), Google Maps (long-term)
Niche Apps	1 - 3 years	Specialized fitness/diet apps
eLearning Apps (Web-based)	7 - 10+ years (if continuously updated and accredited)	Coursera, Udemy, Duolingo
Mobile eLearning Apps	5 - 8+ years (if regularly updated and engaging)	Khan Academy, Babbel, LinkedIn Learning

The following are regarded as the main reasons why Mobile eLearning Apps last for between 5 and 8+ years:

- On-the-Go Learning: Higher engagement due to accessibility.
- Gamification and AI personalisation: Keeps users engaged and motivated.
- Frequent course updates: Ensures content stays relevant.
- Corporate and institutional adoption: Increases longevity (e.g., LinkedIn Learning).

In turn, several risks for mobile eLearning app longevity are pertinent, such as:

- Lack of Engagement Features: No interactivity leads to higher levels of user drop-off.
- Subscription Fatigue: Users cancel paid plans due to free alternatives.
- Device compatibility issues: Older apps struggle with newer OS updates.
- Insufficient AI and Personalization: Users prefer adaptive learning experiences.

Considering best practices for mobile learning design, the key features and reasons for success are outlined in exhibit 6.8 for a selection of top-performing mobile eLearning apps.

Exhibit 6.8: Best Practices for Mobile Learning Design

App	Key Features	Why It Succeeds
Duolingo	Gamification, AI-driven learning paths, bite-sized lessons	Highly engaging, rewards system, personalized learning
Khan Academy	Free courses, interactive exercises, adaptive learning	Non-profit, strong reputation, supports all levels
Coursera	University-certified courses, career-oriented programs	Partnered with top universities and companies
Udemy	Marketplace for courses, lifetime access	Wide variety of courses, competitive pricing
LinkedIn Learning	Business and professional skills, certification integration	Direct career benefits, corporate partnerships
Babbel	Structured language learning, speech recognition	More comprehensive than Duolingo, focuses on real-life conversations
edX	University-level courses, verified certificates	Strong accreditation, self-paced learning
Skillshare	Creative and business skills, project-based learning	Community-driven, peer engagement

Best practices for mobile learning design, of which some also surfaced during the feasibility study, include the following:

❑ *Engaging User Experience (UX)*

- Microlearning: Short lessons (5–10 minutes) keep users engaged.
- Gamification: Badges, leaderboards, streaks encourage continued learning.
- Adaptive learning: AI-driven personalization ensures users stay challenged but not overwhelmed.

❑ *Content optimization for mobile*

- Bite-Sized Videos: 2 to 5-minute videos work best for mobile consumption.
- Interactive quizzes and exercises: Keeps users engaged beyond passive learning.
- Downloadable content: Offline access increases usage, especially in regions with connectivity issues.

❑ *AI and personalization*

- Adaptive learning paths: Adjusts based on user progress and performance.
- Smart reminders and notifications: Nudges learners to complete courses.
- Voice and speech recognition: Useful for language learning (e.g., Babbel).

❑ *Monetisation and sustainability*

- Freemium model: Free basic content paid for premium features (e.g., Duolingo Plus).
- Corporate and institutional licensing: B2B sales (e.g., LinkedIn Learning).
- Certification and credentialing: Offers value to learners (e.g., Coursera, edX).

❑ *Longevity and future proofing*

- Regular Content Updates: Ensure relevance (e.g., AI in business courses).
- Multi-Platform Access: Sync across mobile, web, tablet.
- Integration with Other Tools: Google Classroom, LMS, or LinkedIn profiles.

Based on the best practice examples, the following recommendations for the development of an eLearning App suffices:

- Use AI-powered adaptive learning for personalized experiences.
- Incorporate gamification to maintain engagement.

- Enable offline access for broader reach.
- Ensure compatibility with SharePoint and enterprise systems for easy integration.
- Offer industry-recognized certifications to increase user motivation.

6.7 REACHING MASS AUDIENCES AND JUSTIFICATION OF SPEND ON DIGITAL FINANCIAL LITERACY PLATFORMS

Online tools can significantly help organisations reach mass audiences, but justifying the investment requires a balance between reach, engagement and measurable impact. The following guidelines are suggested on how the FSCA can assess the return on investment (ROI) for the Digital Financial Literacy Platform and its marketing/incentivization efforts.

- **Can online tools reach masses?**

    - **Scalability**: Once developed, digital tools (e-learning platforms, apps, chatbots) can serve thousands to millions of users at minimal extra cost.
    - **Accessibility**: Mobile-friendly platforms ensure financial education reaches remote areas.
    - **Personalization**: AI-driven learning adapts content to different user needs.
    - **24/7 availability**: Unlike in-person training, online tools are always accessible.
    - **Social and viral potential**: Interactive tools can be promoted through referrals, social media and influencers.

    Example: The success of platforms like Khan Academy, Coursera and Duolingo shows that well-designed online education tools can attract millions of active users.

- **How to justify the spending on tools and marketing?**

    To make a business case for the digital financial literacy platform, the FSCA needs ROI-driven justification:

- **Measuring ROI on the tool**

  - **Cost Per User (CPU)**:

    - Total cost of development and maintenance / total users reached.
    - Lower CPU costs over time contributes to the platform's sustainability.

  - **User Engagement Rate**:

    - % of active users completing courses, quizzes and interacting.

  - **Behavioural Change Metrics**:

    - i.e. % of users who start budgeting, reduce debt, or open bank accounts.

  - **Impact on Financial Inclusion**:

    - Surveys can measure before versus after financial confidence levels.

Also, to justify the marketing/incentivization spend, several metrics could be considered, such as:

- **Cost Per Acquisition (CPA)**:

  - Total Marketing Spend ÷ Number of Users Acquired.
  - Comparing CPA to the value of financial knowledge gained proves marketing efficiency.

- **Engagement-Based Justification**

  - Higher CTR (Click-Through Rate), Retention and Completion Rates indicate effective marketing strategies.

➢ **Strategic Cost-Effective Marketing Tactics**

- Gamification and Referral Incentives (free airtime, discounts on banking fees).
- Partnerships with Banks, NGOs and Fintech Companies to reduce direct marketing spend.
- Targeted Social Media Ads and Influencer Endorsements for better reach.

To justify investment in digital financial literacy platforms, several scenarios are unpacked in exhibit 6.9.

Exhibit 6.9: Decision-making framework: Build versus expand

Scenario	Investment justification
High engagement and positive impact	Expand marketing, add features, personalize learning paths.
Low engagement and high drop-off	Optimize UX, simplify content, add gamification.
High acquisition but low retention	Shift budget to incentivization (rewards for course completion).
Organic growth through word-of-mouth	Scale partnerships and reduce paid marketing.

In summary, online tools are a powerful way to reach the bulk of the population. However, investment must be justified with data-driven ROI. Cost-benefit analysis could be done to ensure spending is directed at the highest impact areas.

6.8 OTHER DIGITAL CHANNELS THE FSCA CAN CONSIDER BESIDES e-LEARNING PLATFORMS AND APPLICATION

Besides eLearning modules and mobile applications, the FSCA could explore the following additional digital channels and implementation strategies to enhance digital financial literacy and education:

- Chatbots and AI assistants.
- Gamification and Financial simulation tools.

- Social media and Influencer collaboration.
- Podcast Series and Webinars.
- USSD and SMS-Based learning.
- Augmented Reality (AR) and Virtual Reality (VR).
- Email-based financial literacy campaigns.
- Online communities and forums.

Additional digital channels and implementation strategies are explored below.

❑ Chatbots and AI assistants

- Interactive AI-driven chatbots (on WhatsApp, Telegram, or FSCA's website) can provide instant financial advice, answer FAQs and guide users through financial concepts in a conversational manner.

✓ **Implementation strategy:**

- Develop a WhatsApp or Telegram chatbot that provides financial tips, quizzes and budget calculators.
- Integrate AI-powered assistants on the FSCA website and mobile app for real-time Q&A and guided learning.
- Ensure chatbot responses are localized and available in multiple South African languages for wider accessibility.

❑ Gamification and Financial Simulation Tools

- Online financial literacy games and simulation platforms can engage users by teaching money management, budgeting and investment strategies in an interactive way.

✓ **Implementation Strategy:**

- Develop an **interactive financial literacy game** (web-based and mobile) where users earn rewards for completing financial challenges.
- Use **simulated financial decision-making exercises** (e.g., virtual stock trading, budgeting scenarios).
- Provide **certificates or incentives** for users who complete learning milestones.

***Example**:* A mobile game where players manage a virtual budget, handle debt and invest to reach financial stability.

❑ Social media and influencer collaboration

- FSCA can leverage YouTube, TikTok, Instagram, Facebook and X (Twitter) for short explainer videos, live Q&A sessions and financial tips. Partnering with financial influencers can help reach younger audiences.

✓ **Implementation Strategy:**

- Partner with **South African financial influencers and content creators** to create **short, engaging videos** on YouTube, TikTok and Instagram Reels.
- Organize **weekly live Q&A sessions** on Facebook, Twitter (X) and LinkedIn to address trending financial questions.
- Run **interactive challenges**, like "Save R500 in 30 Days" or "Debt-Free Journey Stories," encouraging participation.

***Example**:* A TikTok series explaining basic investing strategies in 60-second videos, featuring relatable scenarios.

❑ Podcast series and webinars

- Audio content like podcasts featuring financial experts, success stories and money management advice can be accessible to a wide audience. Live or recorded webinars can also facilitate in-depth learning.

✓ **Implementation Strategy:**

- Launch an FSCA **"Money Talks" Podcast** featuring financial experts, success stories and Q&A episodes.
- Offer **monthly free webinars** with financial educators discussing budgeting, credit management and fraud prevention.
- Partner with **radio stations** to air financial literacy clips, especially in rural areas.

***Example**:* A podcast episode titled *"How to Build Wealth on a Low Income"* featuring financial experts and real-life success stories.

❑ **USSD and SMS-Based Learning**

- Given South Africa's diverse digital access levels**,** USSD (Unstructured Supplementary Service Data) and SMS-based financial literacy programs could reach users without smartphones or internet access.

✓ **Implementation Strategy:**

- Create an **FSCA USSD short code** (*e.g., *120*FSCA#) for quick financial tips and mini courses without internet access.
- Offer an **SMS subscription service** where users receive daily or weekly financial tips, fraud alerts and savings challenges.
- Partner with **mobile networks** to provide **free SMS-based financial lessons** to lower-income groups.

Example*:* A user dials *120*FSCA# and chooses *"Debt Repayment Tips,"* receiving step-by-step guidance via SMS.

❑ **Augmented Reality (AR) and Virtual Reality (VR)**

- These technologies can create immersive financial education experiences, such as virtual financial planning workshops or interactive budgeting exercises.

✓ **Implementation Strategy:**

- Develop an **AR financial planning tool** where users scan a QR code to visualize their financial future (e.g., impact of savings vs. debt).
- Offer **VR financial literacy workshops** in community centers, allowing users to experience financial decision-making in a **virtual environment**.

Example*:* A VR workshop where users make **real-time budgeting choices** in a simulated environment and see their financial impact.

❑ **Email-Based Financial Literacy Campaigns**

- Sending **weekly or monthly financial education newsletters** with tips, case studies and interactive quizzes can engage users effectively.

✓ **Implementation Strategy:**

- Launch an **FSCA Financial Literacy Newsletter**, sending weekly financial tips, case studies and practical guides.
- Offer **personalized email courses**, such as *"Mastering Money in 7 Days"* or *"Avoiding Debt Traps"*.
- Include **downloadable PDFs, interactive quizzes and short videos** in emails for increased engagement.

***Example**:* A subscriber receives a **5-day email series** titled *"How to Save for a House Deposit,"* featuring daily action steps.

❑ **Online Communities and Forums**

- Hosting discussion forums or Facebook Groups where users can share financial experiences and learn from each other under FSCA's guidance.

✓ **Implementation Strategy:**

- Create a **dedicated Facebook Group or Online Forum** where users discuss financial topics and share experiences.
- Offer **expert-moderated discussions** where financial professionals answer member questions.
  Use **polls, challenges and testimonials** to drive community engagement.

***Example**:* A member posts, *"How do I start a budget with an irregular income?"* Experts and peers respond with real-life strategies.

Key takeaways from the insights gained from the analysis of additional digital channels include:

- **Multi-channel approach:** Combining different platforms ensures maximum engagement across diverse audiences.
- **Mobile-first strategy:** Focus on WhatsApp, USSD, SMS and social media to reach low-income and rural users.
- **Interactive and incentive-based learning:** Gamification, quizzes and reward systems boost participation.
- **Localizations and accessibility:** Ensure financial literacy content is available in multiple South African languages.

For maximum impact, FSCA could also consider the use of a mix of these digital tools to ensure broad reach and engagement. An example of such a strategy is contained in exhibit 6.10. A multi-channel approach incorporating these solutions can increase accessibility, engagement and effectiveness in promoting digital financial literacy in South Africa.

Exhibit 6.10: Mixed Digital Tool Strategy

- ❑ Mobile App or e-Learning Platform → Core financial courses.
- ❑ Chatbot or AI Assistant → Answer FAQs and offer financial guidance.
- ❑ Social media and Video Content → Engage younger users with short clips.
- ❑ Podcasts and Webinars → Provide deep-dive financial discussions.
- ❑ SMS and USSD Learning → Reach users with limited internet access.

6.9 RISK MITIGATION STRATEGIES

To ensure **long-term success**, the risks outlined in exhibits 6.11, 6.12 and 6.13 must be managed effectively by the FSCA. To guide the FSCA in this regard, certain risks mitigation strategies are recommended.

Exhibit 6.11: Financial risks and mitigation

Risk	Impact	Mitigation Strategy
Funding Shortfall	Delays in development, limited marketing reach	Diversify funding sources (corporate sponsorships, donor grants, government support).
Slow Revenue Growth	Cash flow challenges in early years	Offer phased monetisation (start with corporate licensing and government partnerships before direct consumer monetisation).
High Customer Acquisition Costs	Low profitability	Use low-cost marketing (partnerships with NGOs, schools and financial institutions).

Exhibit 6.12: Technical risks and mitigation

Risk	Impact	Mitigation Strategy
Platform Downtime and Bugs	Loss of users, reputational damage	Use cloud-based hosting (AWS/Azure) for stability and implement regular testing.
Cybersecurity Threats	Data breaches, legal issues	Implement strict data encryption and compliance with POPIA (Protection of Personal Information Act).
Compatibility Issues	Reduced access for low-end devices	Optimize platform for low-bandwidth areas and mobile-friendly design.

Exhibit 6.13: User engagement risks and mitigation

Risk	Impact	Mitigation Strategy
Low Course Completion Rates	Limited behaviour change impact	Gamification (badges, leaderboards) and AI-driven personalized learning paths
Digital Divide (Limited Access in Rural Areas)	Exclusion of key target groups	Partner with mobile networks to offer zero-rated access (no data costs for users)
Lack of Localized Content	Low engagement and adoption	Translate content into multiple SA languages and use culturally relevant case studies

6.10 RECOMMENDATIONS

To ensure the successful development, implementation and sustainability of a full-scale Digital Financial Literacy eLearning Platform and Application, the following essential elements are recommended to the FSCA:

- ❑ Comprehensive digital financial literacy framework
    - Develop a structured framework that includes key learning components such as financial awareness, knowledge development, behavioral change and long-term financial well-being.
    - Align content with South African financial regulations, consumer needs and global best practices.
- ❑ User-centric platform design
    - Ensure an intuitive, accessible and mobile-friendly interface to maximize reach.
    - Incorporate multilingual support and inclusive design to cater to diverse user demographics.
    - Personalize learning pathways based on users' financial literacy levels.
- ❑ Engaging learning methodologies
    - Use interactive content such as gamification, quizzes, real-life simulations and scenario-based learning.
    - Integrate video tutorials, webinars and expert-led discussions to enhance engagement.
    - Implement AI-driven adaptive learning to provide tailored financial education experiences.

- Strategic partnerships and funding models
    - Collaborate with financial institutions, government agencies, fintech companies and NGOs for resource sharing and funding opportunities.
    - Explore sustainable revenue models (e.g., public-private partnerships, sponsorships and donor funding).

- Policy advocacy and government buy-in
    - Engage policymakers to integrate digital financial literacy into national education and financial inclusion strategies.
    - Align platform objectives with FSCA's regulatory framework and financial consumer protection policies.

- Full-scale deployment and awareness campaigns
    - Launch targeted marketing campaigns to drive platform awareness and adoption, including digital, social media and traditional marketing.
    - Work with community organizations, influencers and educational institutions to promote financial literacy initiatives.

- Continuous monitoring, evaluation and improvement
    - Establish key performance indicators (KPIs) to measure platform effectiveness (e.g., user engagement, learning outcomes, behavioral changes).
    - Conduct regular A/B testing and user feedback assessments to refine and optimize content and features.
    - Implement a long-term sustainability plan, including periodic content updates and feature enhancements.

- Alternative digital channels for outreach

    - Leverage USSD, WhatsApp, SMS-based education and social media for broader accessibility.
    - Develop an offline-accessible version for users with limited internet connectivity.
    - Explore AI-powered chatbots to provide instant financial guidance and support.

By integrating these essential elements, FSCA can create a scalable, impactful and sustainable Digital Financial Literacy eLearning Platform and Application that fosters financial inclusion and consumer empowerment in South Africa.

6.11 CONCLUSION

The findings of the FSCA Digital Financial Literacy Feasibility Study indicate strong potential for the full-scale implementation of a digital financial literacy eLearning platform and mobile application. The research highlights a significant need for accessible, engaging and impactful financial education tools to enhance financial literacy, bridge the digital divide and promote financial inclusion across South Africa.

However, the study also emphasizes that the long-term sustainability and effectiveness of the platform are contingent upon several critical preconditions. These include:

- **Strategic partnerships** with public and private sector stakeholders to ensure financial and operational support.
- **Ongoing content updates** to maintain relevance, engagement and accuracy in an evolving financial landscape.
- **User-centric design** that prioritizes accessibility, usability and diverse learning preferences to maximize reach and impact.

- **Robust engagement strategies** to drive awareness, adoption and sustained user participation.
- **Continuous monitoring and evaluation** to measure effectiveness, track behavioral change and refine strategies based on data-driven insights.

By addressing these key considerations, the FSCA can successfully implement a full-scale digital financial literacy platform that is not only impactful but also sustainable in the long-run. The study reaffirms that with the right framework, resources and strategic commitment, the initiative has the potential to transform digital financial education in South Africa and contribute meaningfully to financial wellness and inclusion for all citizens.

ANNEXURE A: LETTER OF INTRODUCTION

Digital Financial Literacy and Education Feasibility Research Study

April 2024

To whom it may concern

The Financial Sector Conduct Authority (FSCA) is responsible for safeguarding customers by ensuring that they are treated fairly by financial institutions. Additionally, the FSCA aims to provide financial education to both existing and potential customers in South Africa, with the goal of improving financial literacy among all citizens. To achieve this objective, the FSCA commissioned the Bureau of Market Research (Pty) Ltd, also known as BMR, to conduct **the Digital Financial Literacy and Education Feasibility Research Study**. The study aims to inform the development of and test the feasibility of digital financial literacy tools which contain interactive and engaging educational content. The aim of the tools is to enhance financial knowledge and skills, empower individuals to make smarter financial decisions, improve financial well-being and ultimately address financial inclusion in the country.

Your participation will entail completing an online survey that includes questions related to the research topic. You can complete the survey by filling out an online self-administered questionnaire, or by participating in a Computer Aided Telephone Interview (CATI) with an experienced interviewer who will record your answers. The online survey consists of approximately 50 questions, and it should take about 20 minutes to complete.

It is important to note that there are no foreseen risks for you, or your family associated with participating in this study.

The BMR is an associate member of the Southern African Market Research Association (SAMRA) and the survey will be conducted according to the SAMRA code of ethics. As per the Protection of Personal Information Act (POPIA), all information you provide will be kept strictly confidential. Your responses will be anonymised and combined with other participants' views for analysis by the research team. The research outcome will only be used for purposes of the study, which aim to enhance digital financial literacy and education levels across South Africa through targeted digital financial educational content and applications.

Should you have any questions about the research study or your participation, please do not hesitate to contact:

- Ms A Moses (Senior Consumer Education Specialist, FSCA) at: Alicia.Moses@fsca.co.za
- Dr A Basson (Research Director: Bureau of Market Research (Pty) Ltd) at abasson@bmr.co.za

Your willingness to participate in this study is highly appreciated.

Yours sincerely

Mr L Clarke
Head: Consumer Education
Financial Sector Conduct Authority

Prof DH Tustin
Chief Executive Officer
Bureau of Market Research (Pty) Ltd

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ANNEXURE B: RESEARCH INSTRUMENT USED FOR PRIMARY RESEARCH PHASE

DIGITAL FINANCIAL LITERACY AND EDUCATION FEASIBILITY STUDY QUESTIONNAIRE

Introduction

The Bureau of Market Research (Pty) Ltd. (BMR) has been commissioned by the Financial Sector Conduct Authority (FSCA) to conduct a **Digital Financial Literacy and Education Feasibility study** among individuals who are 18 years and older. The study aims to inform the development of; and test the feasibility of digital financial literacy tools which contain interactive and engaging educational content. The aim of the tools is to enhance financial knowledge and skills, empower individuals to make smarter financial decisions, improve financial well-being and ultimately address financial inclusion in the country.

Against this background, you are invited to voluntarily participate in an online survey that includes questions related to the research topic. You can complete the survey by filling out an online self-administered questionnaire, or by participating in a Computer Aided Telephone Interview (CATI) with an experienced interviewer who will record your answers.

Before you participate in this study, please take a moment to familiarise yourself with the following information.

Do I have to take part in the study?

Participation in the research study is completely voluntary. By completing the questionnaire, you give consent for your data to be included in the research findings. You have the freedom to withdraw from participating in the study at any time, without providing a reason.

Are there any potential risks involved?

Your participation in this research study does not present any foreseeable risks to you or your family.

Will my data be kept confidential?

To ensure that the research is conducted in a responsible and ethical manner, the BMR adheres to the guidelines set by the South African Market Research Association (SAMRA) code of ethics. Additionally, the BMR is obliged to comply with the Protection of Personal Information Act no. 4 of 2013 (POPIA) which focuses on safeguarding personal information. Please be assured that your personal details will not be disclosed to anyone outside of the group of researchers involved in the project, nor will they be included in the research report. Furthermore, any information related to the outcome of the study will be kept confidential.

What will happen to the results?

The information gathered will only be used for the purposes of this research study and will not be used for any other project. The research team will analyze the collected information and produce a research report. All information collected will be stored on BMR's secure file system and will be protected from unauthorized access. In compliance with the Southern African Marketing Research

Association (SAMRA) regulations, we will keep the research data on secure systems for a maximum of 5 years.

Who do I contact if I have any questions about the research study and my participation?

If you have any questions about this study, or your role as a research participant, please contact Dr Antoinette Basson (Project Leader, Bureau of Market Research (Pty) Ltd at abasson@bmr.co.za

Before you proceed, you need to give consent. Please read the following statements carefully and indicate that you agree to participate in the research study.

PARTICIPANT CONSENT	AGREE
✓ I have read and understood what the research study is about and what my participation will involve	
✓ I understand that my participation is voluntary	
✓ I understand that I can withdraw at any time without giving any reasons for why I no longer want to take part in the research study	
✓ I understand that my participation is anonymous	
✓ I understand my personal details will not be revealed to people outside the group of researchers	
✓ I understand that the information shared will only be used for research purposes	
✓ I have been given the opportunity to ask questions about the research study	
✓ I hereby agree to participate in the research study	

Section A: Access and Usage of Information and Communication Technology (ICT)

A1. Do you have access to the Internet?

a. Yes
b. No *(Close the interview)*

A2. <u>If yes in A1 continue</u>: Where do you MOSTLY access the Internet?
(One answer only)

a. At home
b. At work
c. At an educational institution
d. At an internet cafe
e. At a mall/shopping centre
f. Other (Specify)

A3. People can use the internet on different devices such as computers, tablets and cellphones. How do you access the internet?
(Select all that apply)

a. A feature phone (a basic phone lacking smartphone capabilities)
b. A smart phone (e.g. Samsung Galaxy, iPhone)
c. A computer (e.g. desktop and/or laptop)
d. A tablet
e. Other (Specify)

A4. Which device do you MAINLY use to access the internet?
(only show those selected in QA3)

a. A feature phone (a basic phone lacking smartphone capabilities)
b. A smart phone (e.g. Samsung Galaxy, iPhone)
c. A computer (e.g. desktop and/or laptop)
d. A tablet
e. Other (Specify)

A5. Do you ever share an internet enabled device with someone else?
(One answer only)

a. Yes
b. No
c. Unsure
d. Other (Specify)

A6. How often do you use the internet?
(One answer only)

a. At least every month
b. At least every week
c. Daily or almost daily
d. Several times each day
e. Almost all the time
f. Unsure
g. Other (Specify)

A7. Which of these activities do you mainly use the internet for?
(Select all that apply)

a. Social media (e.g. Facebook, X, Instagram, TikTok)
b. Communication (e.g. WhatsApp, Zoom, Microsoft Teams, e-mail)
c. Entertainment (e.g. movies, music, gaming)
d. Education and learning activities
e. Banking and other financial services
f. News and general information
g. Commercial activities (e.g. shopping, buying and selling)
h. Work activities (e.g. meetings, documents)
i. Other (Specify)

Section B: Digital Literacy

B1. To what extent do you agree or disagree with the following statements about digital literacy? *(Definition: Digital literacy is an individual's ability to find, evaluate and communicate information using digital media platforms)*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know
1. I can easily use devices like a mobile phone, computer and laptop for personal and work tasks.						
2. I know how to change the settings on my device according to my personal preferences.						
3. I can easily access and find information that I need on the internet.						
4. I can easily communicate socially and professionally using email, messaging, video calls and social media.						
5. I understand how to be safe and responsible online e.g. creating and managing secure passwords or online accounts.						
6. I find it acceptable that companies use the personal data I share with them digitally to improve their service to me.						
7. I trust digital engagements with companies, businesses, or organisations.						

B2. Which of the following online safety measures do you practice?
(Select all that apply)

a. Using strong passwords
b. Enabling two-factor authentication
c. Regularly updating antivirus software
d. Avoiding suspicious links and downloads
e. None
f. Other (Specify)

Section C: Digital Financial Literacy

C1. How would you rate your financial knowledge and skills in the management of personal finances? (e.g. creating a budget, build up savings, debt management and start an investment strategy)
(One answer only)

a. No knowledge and skills
b. Unsatisfactory knowledge and skills
c. Satisfactory knowledge and skills
d. Good knowledge and skills
e. Excellent knowledge and skills
f. I find it difficult to answer this question

C2. **Overall, how confident are you that you are doing a good job of managing your finances?**
(One answer only)

a. Not confident at all
b. Slightly confident
c. Somewhat confident
d. Fairly confident
e. Completely confident

C3. **How often do you use the internet (using websites or mobile applications) to manage your finances (e.g., accessing financial information, handling your financial accounts or online banking)?**
(One answer only)

a. Never
b. Rarely
c. Sometimes
d. Often
e. Very often

C4.1 **<u>(Ask if replied often or very often in C3):</u> What is the MAIN REASON for using the internet for financial activities or to access financial information?**
(One answer only)

a. It is easily accessible
b. It is convenient
c. It is time-saving (improves efficiency)
d. It is safe and secure
e. It is cost-effective (saves money)
f. It provides real-time access to financial information
g. All of the above

C4.2 **<u>(Ask if replied never in C3):</u> Why do you NEVER use the internet for financial activities or to access financial information?**
(Select all that apply)

a. Not aware of the financial platforms or applications
b. Too complicated to use
c. The available online information does not address my financial needs
d. Do not have enough data to access information
e. Poor internet connection
f. Prefer personal contact when seeking financial information
g. Do not trust online financial platforms
h. Concerned about the privacy and confidentiality of my personal information.
i. Other (Specify)

C5. Which of the following financial services and activities have you ever used/done or would like to use/do online (using websites or mobile applications)?

	Currently use	Used before but no longer do	Never used	Would like to use in the future
1. Open a bank account				
2. Make online payments (via bank EFT or credit card)				
3. Transfer money to others				
4. Manage financial products and services (such as savings, investments, insurance)				
5. Conduct budgeting				
6. Taken out a loan				
7. Conduct debt management				
8. Trade in stocks and shares				
9. Trade in crypto assets				
10. Obtain advice or information on financial matters				
11. Completed training about financial matters				
12. Use e-filing for my tax returns				
13. Other (Specify)				

C6. Which of the following digital financial tools are you familiar with?
(Select all that apply)

a. Online banking
b. Mobile banking apps
c. E-wallets
d. Peer-to-peer (P2P) payment services
e. Cryptocurrency
f. Budgeting apps
g. Investment apps
h. None of the above
i. Other (Specify)

C7. Which learning style do you prefer when it comes to financial concepts?
(Select all that apply)

a. Reading text-based articles and guides
b. Reading infographic worksheets
c. Watching explainer videos and animations
d. Completing interactive exercises and simulations
e. Listening to podcasts or audio lessons
f. Other (Specify)

C8. Which of the following digital learning tools would you regard as the most effective for learning about financial concepts?
(Select all that apply)

a. Online courses and learning management systems (LMS) (e.g. Udemy, Coursera, edX, Khan Academy, LinkedIn Learning, Moodle, Canvas, Blackboard, Google Classroom and Schoology).
b. Virtual classroom platforms (e.g. Zoom for Education, Microsoft Teams for Education, Google Meet)
c. Interactive tools and simulations (e.g. Budgeting Apps)
d. Personal finance blogs and websites
e. Financial mobile apps (e.g. 22seven, ClearScore, FinMeUp)
f. Social media platforms and communities (e.g. Facebook, Twitter, LinkedIn, Instagram, YouTube, TikTok)
g. Collaboration platforms (e.g. Google Workspace, Microsoft Office 365)
h. Podcasts and audio content
i. Games
j. News
k. I am not familiar with digital learning tools
l. Other (Specify)

C9. How much time would you spend online searching for and learning about financial concepts per week?

a. Less than 1 hour
b. Between 2 to 3 hours
c. Between 4 to 5 hours
d. More than 5 hours
e. Unsure
f. Other (Specify)

C10. Rank the TOP THREE topics in order of importance that you feel should be included in digital financial literacy e-learning programme aimed to improve your necessary knowledge and skills to make informed financial decisions, manage your finances responsibly and work towards your financial goals.

Topic	1st	2nd	3rd
Introduction to financial literacy			
Budgeting and financial planning			
Banking and financial services			
Credit and debt management			
Investing and wealth-building			
Retirement planning			
Taxes and Tax planning			
Consumer rights and protection			
Financial goal setting and decision making			
Risk management and insurance			
Other (Specify)			

C11. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know
1. I feel confident using digital tools to manage my finances.						
2. I am concerned about the security of my personal information online.						
3. I believe digital financial tools can help me save more money.						
4. I would be likely to try a new digital financial tool if it was recommended to me.						
5. I feel confident that I will be able to recognise a financial scam.						

Section D: Mobile Application and e-Learning

D1. How many applications (apps) do you currently have on your mobile device?
(One answer only)

a. Less than 20
b. Between 21 and 40
c. Between 41 and 60
d. Between 61 and 80
e. More than 80
f. Unsure

D2. What typical applications do you currently have on your mobile device?
(Select all that apply)

a. Lifestyle mobile apps (e.g. fitness, food, music, travel, dating)
b. Social media mobile apps (e.g. Facebook, Instagram, Pinterest, Snapchat)
c. Utility Mobile Apps (e.g. reminders, calculator, weather)
d. Entertainment mobile apps (e.g. gaming, Netflix, YouTube, Spotify)
e. Shopping mobile apps (e.g. Sixty Sixty, Dash, Shein, Temu)
f. Business Mobile Apps (e.g. LinkedIn, Google Drive)
g. News and general information (e.g. Google News)
h. Educational apps (e.g. Udemy)
i. Digital libraries (e.g. Kindle, Everand)
j. Finance apps (e.g. Zapper, SnapScan)
k. Banking apps (e.g. Discovery Bank, FNB, Standard Bank and Capitec)
l. Other (Specify)

D3. What are the TOP THREE ACTIVITIES that you use mobile apps for?
(Top three mentions only)

a. Social media
b. Communication
c. Entertainment
d. Education and learning activities
e. Financial services
f. Banking services
g. News and general information
h. Business activities (shopping, buying and selling)
i. Work activities (meetings, documents etc.)
j. Other (Specify)

D4. How often do you use mobile applications in general?
(One answer only)

a. Daily
b. Several times a week
c. A few times a month
d. Rarely
e. Unsure

D5. Approximately how long after installation do you typically delete a mobile application?
(One answer only)

a. Within the first day
b. Within the first week
c. Within the first month
d. After a few months (2-6 months)
e. After more than six months
f. I rarely delete mobile applications
g. Unsure

D6. Please select the MAIN REASON why you delete or uninstall mobile applications from your device.
(One answer only)

a. The app was not useful or didn't meet my expectations
b. I found a better alternative app
c. The app used too much storage space or data
d. The app had too many ads or was too intrusive with notifications
e. The app frequently crashed or had technical issues
f. Privacy or security concerns
g. I no longer needed the app's features
h. Other (Specify)

D7. **When considering a new mobile app, rank the following factors in order of importance.** *(Rank 1-6, with 1 being most important)*

a. Functionality (Does it meet your needs?)
b. Usability (Is it easy to use?)
c. Performance (Speed, reliability)
d. Design (Appearance and aesthetics)
e. Security and privacy (Data protection)
f. Incentives (Reward system)
g. Popularity
h. Number of downloads
i. Cost of application (Free, costs involved)
j. Other (Specify)

D8. **Which factor(s) will motivate you to continue using a mobile app?** *(Select all that apply)*

a. User-centric design (user-friendly, intuitive and visually appealing)
b. Personalisation (tailor-made content and features based on users' specific needs, experiences, preferences and financial goals).
c. Educational content (high-quality, relevant and engaging educational content on a variety of financial topics)
d. Interactivity and engagement (interactive features such as quizzes, calculators, simulations, games and challenges)
e. Gamification (introducing elements of competition, rewards, badges, levels, scoring and achievements)
f. Timely and relevant communication (notifications, reminders and updates to keep users engaged and informed)
g. Continuous learning and support (ongoing learning opportunities and support resources to help users deepen their financial knowledge and skills over time)
h. Feedback and iteration (feedback from users regularly through surveys, polls, feedback forms and user ratings)
i. Regular updated content to ensure that users have access to accurate and up-to-date information

D9. **Have you used any financial literacy educational mobile applications before?** *(Definition: An application that aims to improve knowledge of how to make smart decisions with money matters.)*

a. Yes
b. No
c. Unsure/Don't know

D9.1 **<u>If Yes in D9</u>: What was the name of the financial literacy educational application you used before?** *(Open ended)*

D9.2 **<u>If Yes in D9</u>: What did you LIKE about the financial literacy educational application you used before?** *(Open ended)*

D9.3 **<u>If Yes in D9</u>: What did you DISLIKE about the financial literacy application you used before?** *(Open ended)*

D9.4 **<u>If Yes in D9</u>: How frequent did you use the financial literacy application?**

a. Often
b. Always
c. Sometimes
d. Rarely
e. Once only

D10. **Thinking of a financial literacy educational application, select a MAXIMUM OF THREE FEATURES that you will find the most helpful if you want to educate yourself on financial matters?**
(Select maximum 3)

a. Articles and blog posts
b. Videos and animations
c. Flashcards
d. Mini challenges and quizzes
e. Market simulator (e.g. Forex or stock market simulator)
f. Interactive tools and calculators
g. Games
h. Assessments
i. Polls
j. Podcasts and audio content
k. Robo-advisors and chatbots
l. Infographics and visualisations
m. Webinars and online workshops
n. Case studies and success stories
o. Glossary of financial terms
p. Community forum or chat for peer-to-peer learning
q. Personalised financial goals and progress tracking

D11. How important is the following to keep you motivated in an app?

	Not at all important	Slightly important	Important	Fairly important	Very important
1. Gamification					
2. Online rewards					
3. Bonus programs					
4. Personalised offerings					
5. Other (Specify)					

D12. Have you completed any online financial literacy and education courses or programmes (e-learning) before?
(One answer only)

a. Yes
b. No
c. Unsure/Can't remember

D13. What features do you find most helpful in an e-learning programme?
(Select all that apply)

a. Clear learning objectives
b. Engaging and varied content (e.g. text, videos, images)
c. Interactive elements (e.g. quizzes, simulations)
d. Downloadable resources (e.g. cheat sheets, templates)
e. Opportunities for self-assessment
f. Discussion forums or collaboration tools

D14. What is your preferred format for information in an e-learning programme?
(Select all that apply)

a. Clear explanations and examples in written text
b. Short and informative video lectures with visuals
c. Animated video with sub-titles
d. Audio notification sounds
e. Background music
f. Artificial intelligence voice overs
g. Interactive exercises and quizzes to test understanding
h. Case studies and real-life scenarios to apply concepts
i. A combination of the above

D15. How important is the following when accessing and using an e-learning programme for you?

	Not at all important	Slightly important	Important	Fairly important	Very important
Pace (engaging in learning activities at your own pace)					
Flexibility (access educational materials at any time, from any location)					
Mobile friendliness (easy to access and engage with)					
Access to resources (download free learning resources for reading)					
Other (Specify)					

D16. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know
The e-learning programmes are ideal when I need detailed information about financial concepts						
It takes more time to complete e-learning programmes						
Applications are dynamic and interactive						
When I need quick information, applications are ideal						
In order to gain financial literacy information, I prefer to use an e-learning programme						
For financial literacy information, I prefer to use an app						

D17. Can you suggest a suitable name for a financial literacy mobile app in South Africa? *(Open Question)*

Section E: Demographic Information

E1. Please indicate with which gender you identify with most.

a. Male
b. Female
c. Prefer not to answer

E2. With which population group do you identify most?

a. African
b. Indian
c. Coloured
d. White
e. Other (Specify)
f. Prefer not to answer

E3. Please indicate your age category

a. 18-19 Years
b. 20-24 Years
c. 25-29 Years
d. 30-34 Years
e. 35-39 Years
f. 40-44 Years
g. 45-49 Years
h. 50-54 Years
i. 55-59 Years
j. 60-64 Years
k. 65+ Years
l. Prefer not to answer

E4. What is your marital status?

a. Single/never married
b. Married
c. Living with a partner
d. Separated / Divorced
e. Widowed
f. Prefer not to answer

E5. How many people form part of your household?

a. One
b. Two
c. Three
d. Four
e. Between five and nine
f. Ten or more

E6. What is your current work status?

a. Full-time work (including self-employed)
b. Part-time / piecework (including self-employed)
c. Unemployed
d. Retired/pensioner
e. Homemaker
f. Student

E7. What is your highest level of education?

a. No formal schooling
b. Some primary schooling (Less than grade 7)
c. Primary completed (Grade 7)
d. Some secondary schooling (Grade 8 to 11)
e. Secondary completed (Grade 12 / Matric)
f. Tertiary Education (Diploma / degree / postgraduate)

E8. Do you have any disability?

a. Yes
b. No
c. Prefer not to answer.

E8.1 If Yes in E8: What type of disability do you have?

a. Hearing impairment
b. Visual impairment
c. Mobility impairment
d. Prefer not to answer
e. Other (specify)

E9. In which province do you reside?

a. Eastern Cape
b. Free State
c. Gauteng
d. Kwa-Zulu Natal
e. Limpopo
f. Mpumalanga
g. Northern Cape
h. North-West
i. Western Cape

E10. How would you classify the area in which you usually live?

a. Metropolitan (City area)
b. Non-metro city or town area
c. Rural area

E11. Which category best describes your PERSONAL TOTAL MONTHLY INCOME before tax and other deductions? Please include all sources of income i.e. salaries, side-hustles, pensions, income from investment, social grants, child or spousal maintenance etc.

a. No income
b. R1 – R1 500
c. R1 501 – R6 000
d. R6 001 – R10 000
e. R10 001 – R15 000
f. R15 001 – R30 000
g. R30 001 – R50 000
h. R50 001 – R100 000
i. More than R100 000

Thank you for participating in the survey for free online financial literacy information please visit the FSCA MyMoney Learning Series at https://www.fscamymoney.co.za/Pages/Default.aspx

ANNEXURE C: PRIMARY RESEARCH DEMOGRAPHIC COHORT ANALYSIS

Additional analysis of the data collected during the primary phase was conducted according to main demographic cohorts, namely gender, age, population group, education level and income group. This annexure provides a summary of the main findings according to the various cohorts. The results are included in this annexure do not include all analysis, as for some questions there were not any significant differences found between the cohorts.

Gender

- Opinions and preferences provided by males and females do not differ to a very large extent.
- Males tend to use the internet for work activities, news and general information and banking and other financial services to a slightly larger extent than females.
- Females tend to have slightly less mobile apps installed on their devices.
- Both genders regard online courses as the most effective platform, though males tend to prefer virtual online classroom platforms to a larger extent than females, while females will look towards social media platforms as well.
- Apart from introduction to financial literacy, females ranked budgeting and financial planning higher than males.

Age group

- The internet is utilised for banking and other financial services and news and general information to a larger extent by older cohorts. Social media tend to be an online activity for the younger cohorts.
- The youth (<34 years) can easily use devices for personal and work tasks to a greater extent than their older counterparts. They also tend to trust digital engagements to a greater extent.
- The frequency to which individuals use the internet for financial matters tend to increase with age.
- Older individuals, especially those above 65, tend to prefer reading text-based articles and guides (and to some extent infographic worksheets) to learn about financial concepts, while podcasts seem to be favoured to a large extent by individuals between 45 and 54 years.
- Virtual classroom platforms are regarded as the most effective for learning about financial concepts by individuals older than 45 years, while online courses and LMS are most effective according to individuals younger than 44 years. The news is also regarded as an effective tool by the older cohorts.

- Retirement planning and financial goal setting are flagged as important for 55–64-year-olds as topics for e-learning programmes.
- Performance (speed and reliability) and ease of use of a mobile app is very important to the younger cohorts.
- Timely, relevant and regularly updated information with a user-centric design is important motivators to individuals above 45 years to continue using an app.
- Interactive exercises and case studies tend to be preferred more by older cohorts (55+), compared to the younger cohorts.

Population group

- Indian and White population groups tend to use the internet more for banking and other financial services, work, commercial, news and education activities, while social media and communication are main activities for African and Coloured population groups.
- African and Coloured population groups tend to trust digital engagements more than Indian and White population groups.
- Indian and White population groups tend to use the internet more frequently to manage their finances.
- Infographic worksheets, paired with explainer videos seem to be popular among the Indian population group when it comes to learning about financial concepts.
- Social media platforms are not a preferred platform for financial education for the White population group.
- African and Coloured population groups are interested in financial literacy introduction content, while Indian and White population groups are interested in financial planning and investment topics to be covered in e-learning programmes.
- Security and privacy (apart from functionality) are the second most important factor when considering a new app for the African population, while usability plays a greater role for the other population groups.
- Interactive tools and calculators in an app are more important for Indian and White population groups than for African and Coloured population groups.
- Online rewards are not important to the White population group.
- Interactive exercises and case studies in e-learning programmes tend to be preferred more by Indian and White population groups.

Education level

- Tertiary level educated individuals tend to make more use of the internet for an array of activities. This is also reflected in the frequency in which they tend to manage their finances using the internet.
- User centric design is more important for tertiary level educated individuals, while secondary level educated individuals consider the educational content as priority in an app.
- Interactive tools and calculators are important to tertiary level educated individuals, while secondary level educated individuals state games and assessments as more likely helpful materials in educating themselves on financial matters.
- Individuals with some secondary schooling indicated that gamification, online rewards and bonus programs are good motivators for app usage.
- Downloadable resources are important to secondary level educated individuals, where engaging and varied content in e-learning programmes are important to tertiary level educated individuals.
- Case studies and short informative videos are, in addition to written text, more preferred by tertiary level educated individuals than secondary level educated individuals.

Income group

- The rate of activities that the internet is used for increases with income level, apart from social media and communication which is high for all income groups.
- Higher income groups tend to make use of the internet to manage their finances on a more frequent basis.
- The popularity of Infographic worksheets and explainer videos as learning medium preferences for financial matters tend to increase with income level.
- Apart from typical learning channels of online courses and virtual classrooms, higher income groups indicate interactive tools and simulations as effective tools to learn about financial concepts, where lower income groups tend to only consider social media as an alternative.
- User-centric design and timely, relevant and updated content tend to be more important motivators for higher income groups than lower income groups to continue using an app.
- The importance of self-assessment in e-leaning programmes increases as income levels increase.

ANNEXURE D: PRIMARY RESEARCH FOCUS GROUP DISCUSSION GUIDE

DIGITAL FINANCIAL LITERACY AND EDUCATION FEASIBILITY STUDY

FOCUS GROUP DISCUSSION GUIDE

INTRODUCTION (5 minutes)

***Note:** The moderator will welcome everyone and give some background information on the study and the goal of the focus group discussion (interactive user testing session).*

- **Explain the purpose of the study and goal of the focus group discussion (interactive user testing session)**
    - The Financial Sector Conduct Authority (FSCA) commissioned Bureau of Market Research (Pty) Ltd. (BMR) to conduct a feasibility study on digital financial literacy and education. The study's purpose is to investigate the feasibility and effectiveness of using a targeted digital platform as a successful learning and dissemination tool for financial literacy and education among South African financial consumers and potential customers.
    - Based on the outcome of a survey, the BMR developed e-learning modules and a demo digital financial literacy application which, will be tested among a variety of audiences representing the South African population. During the focus group discussions (interactive testing sessions), participants will be able to interact with the e-learning modules and demo digital financial literacy application while freely sharing their views and opinions with the moderator.
- **Explain the ethical considerations and obligations of the research team**
    - Participation is anonymous and voluntary and all personal information will be treated with the utmost confidentiality. The identity of the participants will not be revealed to the stakeholder who commissioned the study, nor will it be mentioned in the research report, or any other materials released concerning the study's findings.
    - The BMR is a member of the Southern African Marketing Research Association (SAMRA) and complies with all the research ethics requirements. Also, the confidential treatment of any personal information and the anonymity of a participant's identity are in accordance with the Protection of Personal Information Act (POPIA).
    - A consolidated and thematic analysis of the study will be combined into a research report.
- **Explain the purpose of the recording equipment and note taking during the discussion**
    - Recording the focus group discussion is essential to capturing all the content that might be important and useful to include in the research report.
    - During the discussion, notes will be taken to assist with the preparation of the research report.

***Note:** Before proceeding, the moderator will ask participants if they have any questions about the study or concerns about their participation in the focus group discussion (interactive user testing session) and will request consent to proceed with the recording and participation in the FDG.*

SETTING THE SCENE (10 minutes)

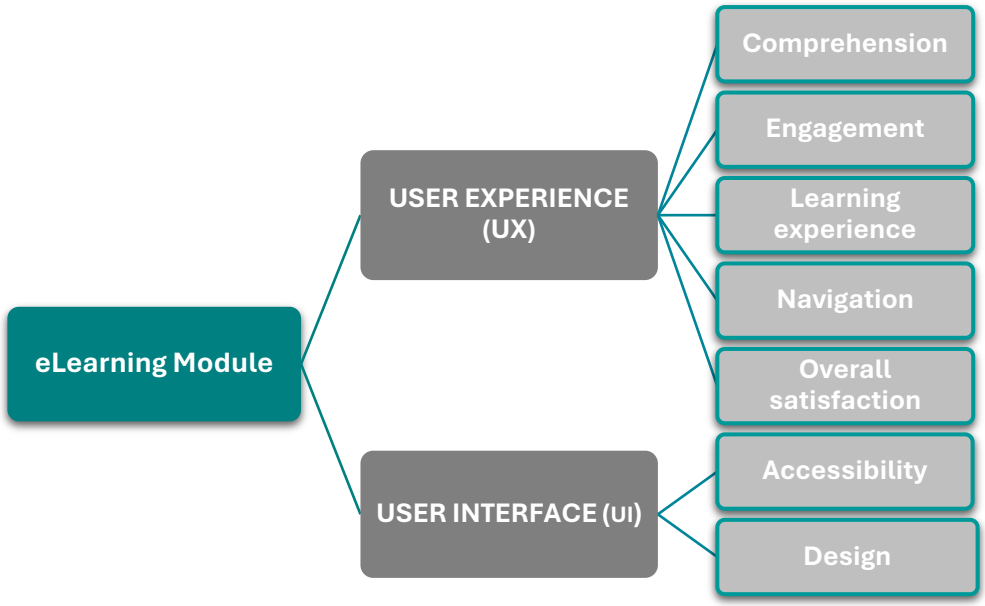
***Note:* The moderator will explain the process of the interactive user testing and ensure a relaxed atmosphere.**

- All participants will be seated in front of computers in the BMR Computer laboratory.
- The moderator will ask the participants to click the first button on the screen.
- This operation will establish the standard for user interactions in the testing environment.
- The moderator will proceed to explain the interactive user testing process.
- After the explanation, the participant will be asked to return to the initial screen and select their assigned module. The testing will now begin.
- Participants will be allowed to work independently on each session of the eLearning module.
- The moderator will use observation techniques to evaluate how users interact with the platform during session(s).
- After the last session, a discussion will follow, allowing participants to reflect on their user experience.
- At the end of the session, participants will fill out a UX (User Experience) /UI (User Interface) survey close-out questionnaire.

SECTION A: eLearning Modules (1 and 4)

***Note:* Participants will have approximately 20 minutes to work through the eLearning module and familiarise themselves with the module's design and content. The moderator will then lead a conversation, guided by the identified areas of exploration.**

The User Experience and User Interface will be explored according to different criteria as graphically illustrated below.



MODULE 1: INCOME & EXPENDITURE (20 MINUTES) OR MODULE 4: PROTECTION AND RESILIENCE (20 MINUTES)

1. USER EXPERIENCE (UX)

The User Experience (UX) objectives are to test for content comprehension, ease of access and user engagement with the module content.

1.1 General Questions

- ✓ **First impression(s):**
  - What was your first impression(s)?
- ✓ **Ease of use:**
  - How easy was it to work through the module?
- ✓ **Task completion:**
  - Were you able to complete task(s) without difficulty?
  - How long did it take you to perform specific tasks(s)?
- ✓ **Navigation and flow:**
  - How did you experience moving from one session to the next?
- ✓ **Speed and performance:**
  - Did you experience any lags or delays?
- ✓ **Overall satisfaction:**
  - How satisfied are you with the overall experience?

1.2 e-Learning Module Content Questions

- ✓ **Content understanding:**
  - Was the content easy to follow?
- ✓ **Engagement and motivation:**
  - Did the content keep you engaged and motivated to continue learning?
- ✓ **Learning experience:**
  - Did you feel that the quizzes/assessments reflected the material you were taught?
  - Did you experience any difficulty completing the quizzes or exercises?
- ✓ **Navigation of learning materials:**
  - Were you able to easily access materials (videos, quizzes)?
- ✓ **Progress tracking:**
  - Could you easily track your progress?

2. USER INTERFACE (UI)

The User Interface (UI) will evaluate the layout, readability of content and ease of navigation through module sessions.

2.1 General questions

- ✓ **First impression(s):**
  - How did the interface look when first opening the module content – Was it visually appealing? Was the layout clear and easy to understand?

- ✓ **Visual design:**
  - Do the colours, fonts and icons used in the interface make the module content easy to use and understand?
- ✓ **Button and element visibility:**
  - Were the buttons and clickable elements easy to find and understand?
- ✓ **Readability and typography:**
  - How easy was it to read the text?
  - Did you experience any issues with the text being too small or too large?
- ✓ **Consistency:**
  - Did the design feel consistent across different pages/sections?
- ✓ **Navigation elements:**
  - Did you find the navigation bar or menu easy to use?
  - Were the menu options clearly labelled or easily recognisable?

2.2 e-Learning module content questions:

- ✓ **Content presentation:**
  - How easy was it to view/interact with the learning materials (text, videos and quizzes)?
- ✓ **Lesson navigations:**
  - Were you able to easily switch between sessions?
- ✓ **Quiz or interactive interface:**
  - How easy was it to complete the quizzes?
  - Did interactive elements (clickable questions) work smoothly?
- ✓ **Progress tracking:**
  - Did the UI make it easy to track your progress?
  - Was the progress bar easy to spot and understand?

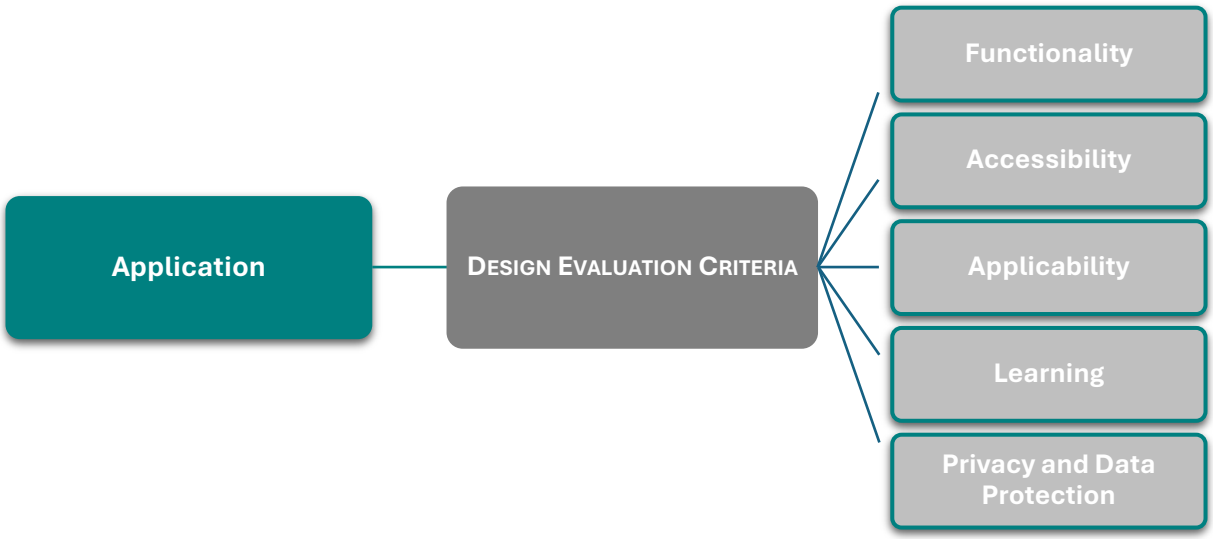
Additional Questions: eLearning Modules (10 Minutes)
✓ Did you find the eLearning platform suitable for financial literacy and education?
✓ What will motivate you to search online and learn about financial concepts? (Probe financial challenges (debt), future financial planning (savings, investments), curiosity etc)
✓ Which method of eLearning —text, audio, video, or real-world scenarios—do you prefer when learning more about financial concepts?
✓ Are there any gaps in the eLearning content provided? What is missing?
✓ How do you determine whether any information provided about financial matters and personal financial management is reliable? (Probe trust of financial institutions such as banks to give enough and consistent information online or through a bank app.)
✓ The marketing and promotion of the eLearning modules will determine their level of success. What will be the best way to market and promote the use of the eLearning modules among South African consumers?
✓ What will motivate you to remain using or return to a digital platform?
✓ What is the longevity (lifetime) of different digital tools (eLearning platforms)?

<u>Note:</u> Participants will take a short break and refreshments will be served before moving on to section B.

SECTION B: DIGITAL FINANCIAL LITERACY APPLICATION (30 minutes)

***Note**: Following the moderator's introduction of the demo digital financial literacy application, the participants will be divided into two smaller groups to interact with the demo digital financial application on pre-loaded mobile phones. The look and feel and functionality of all application screens will be the focus of the discussion. The moderator will then lead a conversation, guided by the identified areas of exploration.*

The design and functionality of the application will be investigated according to a Five-Point Key Evaluation Criteria. The five-point criteria are an exploratory tool to evaluate different aspects of the application.



1. INTRODUCTION OF APPLICATION

The developed demo application will be accessible on internet-enabled devices, including tablets and smartphones. Consumers can easily access and interact with selected financial literacy content within an app environment.

2. EXPLORATION: FIVE-POINT KEY EVALUATION CRITERIA

2.1 Functionality *(The tasks or operations that the application can do)*

- How easy or difficult was it to navigate through the app?
- Do you think that other users, older or younger, would find it easy to navigate through the app?
- What features or content would you like to see added or improved?
- What do you think about the overall design and layout of the app?

2.2 **Accessibility *(The quality of being able to be reached or entered)***

- Is it easy and quick for you to access the application?
- Did you find the user interface user-friendly? Is it a self-explanatory experience or would it require instructions?
- Do you feel the time it takes for the app and other content on the app to load is acceptable?
- How accessible is the app for users with different levels of technical skills or tech-savviness?
- How likely are you to install a financial app if it is free to download?
- If the app has a lot of videos, are you willing to use more data to see it, or would you prefer not to use any data at all and read content that only has static images?

2.3 **Applicability *(The quality of being relevant or appropriate)***

- Does the application address the needs of a wide range of users from various backgrounds?

2.4 **Learning *(The acquisition of knowledge or skills through study).***

- Do you believe the application will enhance your ability to easily access information and learn about financial concepts?
- Do you find the content relevant and useful for improving your financial literacy?
- What are your thoughts on using quizzes to determine your understanding of the content?
- Which do you prefer, drawings, such as 2D characters, images, or videos?
- How effective do you feel is the use of a reward system?

2.5 **Privacy and Data Protection *(Safeguarding important private and important information)***

- What is your opinion about disclosing personal information on the application?
- Do you have any specific security concerns or suggestions for improving the app's security?

Additional Application Questions (10 Minutes)
➢ What is your overall opinion of the demo financial literacy application? ➢ Are digital financial applications effective? (If yes, probe examples, if not probe alternative solutions) ➢ What would motivate you to download a new digital financial application when it becomes available and what would motivate you to continue using it? ➢ What is the longevity (lifetime) of different digital tools (eLearning platform)? ➢ Given the growing accessibility of AI (Artificial Intelligence), which would you prefer: utilising AI platforms or utilising an application like this one to obtain financial information? ➢ How do you think the application should be promoted and marketed among South African consumers? (Probe targeting a broad audience) ➢ Do you think a financial literacy application is an appropriate online tool to reach a large number of individuals? ➢ Can you suggest a suitable name for a financial literacy application in South Africa? ➢ Which digital tools work best in disseminating financial concepts (eLearning platform, application)?

SECTION C: CONCLUSION (5 minutes)

- Do you believe that the availability of eLearning financial modules and digital financial literacy applications may help promote financial inclusion in South Africa?

- Do you have any final comments you would like to share about digital financial literacy and eLearning tools?

<u>Note:</u> The moderator will thank the participants for their participation in the focus group discussion and address any questions before concluding the session.

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