



The Use of Financial Quiz Websites on Controlling Impulsive Shopping Behavior

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Abstract

This study aims to develop a financial quiz website designed to help control impulsive buying behavior, particularly among women aged 18-24 in Batam City. The Design Thinking approach was applied in the development process, following five stages: Empathize, Define, Ideate, Prototype, and Testing. The results show that the "Common Cents" website successfully increased users' awareness of their impulsive buying behavior and helped them make more prudent financial decisions. User trials demonstrated improved financial awareness, better financial management, and positive feedback regarding the website's usefulness. In conclusion, the "Common Cents" website provides an effective and relevant solution to address impulsive buying behavior through interactive educational approaches.

Introduction

The rapid development of digital technology has significantly changed the landscape of consumer behavior. One obvious manifestation of this change is the rise of online shopping. Excessive consumptive behavior, including impulse buying, contributes to increased waste production and exploitation of natural resources. This has a negative impact on the environment and the sustainability of the planet (Sheth, 2014). The rise of social media has changed the way consumers make purchasing decisions, with platforms such as TikTok playing a particularly influential role in driving impulse buying behavior (Meng et al., 2024). E-commerce platforms, such as TikTok Shop, have successfully leveraged the potential of social media to stimulate consumer interest and encourage impulse buying behavior.

The term "TikTok poison" popularly used to describe this phenomenon reflects how engaging and persuasive content on the platform can trigger consumers' desire to immediately own a product without careful consideration. The integration of social commerce features, such as TikTok Shop, has made it very easy for consumers to make purchases directly from the platform, triggering impulse buying behavior (Ubaedilah et al., 2023). TikTok, with its short and engaging video format, has successfully created an environment conducive to impulse buying. The content produced by influencers, such as product reviews, unboxing, and tutorials, is often packaged so attractively that it is able to evoke consumer emotions and desires (Xiao et al., 2023). Influencer marketing on TikTok has become a powerful tool for brands to reach consumers and drive sales, as influencers can create a sense of urgency and scarcity that encourages impulse purchases (Evanita et al., 2023). Fear of missing out (FOMO) is a key driver of impulse buying behavior, especially among young consumers who are highly active on social media platforms (Rachman et al., 2024).

In addition, the TikTok Shop feature that is directly integrated with the platform allows users to make transactions very easily and quickly. The combination of engaging content, ease of

transactions, and the social influence of influencers has created a "vicious circle" that consumers find difficult to escape (Riska et al., 2023). Although impulse buying can provide short-term satisfaction, it can also have negative consequences for consumers, such as financial distress and buyer's remorse (Ainie, 2019). It can be seen that trust and perceived value mediate between influencer marketing and consumer purchase intentions, a finding relevant to the TikTok context (Kanwar & Huang, 2022; Azzahra et al., 2024).

Factors that influence impulse buying can be divided into two main categories. Internal factors include consumer characteristics such as age, gender, and personality. Meanwhile, external factors include product characteristics, situational factors, and store characteristics. Attractive product design, limited offers, consumer mood, and attractive store design are some examples of external factors that can trigger impulse purchases (Chavosh et al., 2011; Lo et al., 2016). Although many studies have examined the phenomenon of impulse buying, more research is needed to deeply understand the mechanisms underlying this behavior, especially in the context of e-commerce platforms such as TikTok. Future research needs to consider new factors such as the influence of artificial intelligence in personalizing product recommendations, as well as the long-term impact of impulse buying on consumer well-being.

Although financial literacy is increasingly in the spotlight in Indonesia, the utilization of quizzes as an educational tool is still not optimal. Several factors are to blame. First, the focus of relevant institutions is often more on regulation and supervision than on developing innovative educational products such as quizzes. Secondly, the challenge of creating quizzes that are interesting and easy to understand, as well as limited resources, both financial and human resources, are obstacles. Third, the lack of data and research on the effectiveness of quizzes in improving the financial literacy of Indonesians is also an inhibiting factor. Finally, people's preferences that may be more inclined to other learning methods also need to be considered. This research proposes the development of a financial quiz website as an innovative solution to overcome the problem of impulsive consumptive behavior. Hopefully, this platform can be an effective educational tool in increasing public awareness of the importance of good financial management.

Literature Review

The phenomenon of impulse purchases triggered by engaging content on social media platforms, especially TikTok, has become a major concern in consumer behavior research. Previous research has shown that social media, particularly platforms like TikTok, with their sophisticated algorithms and strong communities, are able to influence consumer perceptions and trigger impulse purchases (Kulnadee & Pankham, 2024; Ringborg & Ohlsson, 2024). Personalized content, relatable micro-influencers, and the scarcity effect created by these platforms further amplify this influence. Nonetheless, there is still a research gap regarding the specific role of financial quizzes in addressing this consumptive behavior (Zia, 2023). This research aims to fill this gap by exploring how the design and implementation of financial quizzes can be designed to reduce impulse purchases triggered by social media content (Aslam et al., 2021). By understanding the factors that influence impulse purchases on TikTok and the potential of financial quizzes as an intervention tool, this research is expected to make a significant contribution to the development of more responsible marketing strategies, consumer protection, as well as improved financial literacy. Understanding the root causes of these consumptive behaviors, such as the anxiety and stress often experienced by impulsive consumers (Faber & O'Guinn, 2008), is critical to designing effective solutions. Empathy, the ability to understand and feel what others are going through, can be key in developing financial products or services that are relevant and meaningful to consumers. By providing a financial

understanding on the basis of empathizing with impulse shopping issues, it will be easier to understand the needs of the target market. Creating products that consumers not only want, but also truly need. This will provide a competitive advantage for Common Cents (Coppola, 2017),

Methods

This research adopted a Design Thinking approach to develop an innovative and user-centered financial quiz website. Qualitative research allows researchers to dig deeper into the meanings and experiences that underlie consumer behavior. By deeply understanding the user's perspective, designers can create more relevant and meaningful products or services (Hertanto, 2016).

By conducting in-depth qualitative research with 18-24 year old women in Batam City, we aim to understand the factors that influence their impulse shopping behavior (Yani, 2017). This in-depth understanding will be the basis for designing relevant and engaging website features and content. The Design Thinking process will involve stages such as empathy, problem definition, ideation, prototyping, and testing to ensure that the resulting solution is effective and in line with user needs (Brown, 2008).

The Design thinking steps above play a major role in producing solutions that meet the needs of users and the surrounding environment (Hussein, 2018):

Empathize

This initial stage aims to build empathy with users. That way, we can design solutions that match what they want and need.

Define

This stage focuses on identifying the most important problems to solve. In other words, we find out what the real obstacles are for users.

Ideate

This stage is the process of generating new and innovative ideas. We will try to find different ways to solve the problem in a creative way.

Prototype

Once we have a lot of ideas, we'll pick a few of the best ones and create simple models or examples. The goal is to see if the ideas can work well.

Testing

The prototype that has been created will then be tested by users. The goal is to get direct feedback from them so that we can make improvements if needed

Result and Discussion

By applying the Design Thinking methodology, the results showed that a specially designed financial quiz can be effective in improving financial literacy, especially among the younger generation who actively use social media platforms such as TikTok. Most of the study participants experienced a significant increase in their knowledge of basic financial concepts after taking the quiz. In addition, the results also indicated a correlation between the frequency of quiz use and a decrease in the tendency to make impulse purchases. The interactive and life-relevant design of the quiz, as well as the personalized feedback, proved to be key factors in enhancing learning motivation and knowledge retention. These findings are in line with previous research highlighting the importance of fun and relevant learning experiences to drive

behavior change. The development process involved five key stages that are typical of Design Thinking, so that we could ensure that the solution we offered truly fit the needs of the users.

Empathize

Person People aged 18 - 25 years (female and male), residing in Indonesia. Often spend money on online shopping under the guise of self-reward.	
Say <ul style="list-style-type: none"> • "this inspo is really good, I want it" - fashion/decor/etc • "suka scrolling shopping app" • "I want to buy this product" - to all interesting products 	Think <ul style="list-style-type: none"> • Apart from this product, are there any other products? • Really tired from work, want a self-reward • Is my room well decorated?
Do <ul style="list-style-type: none"> • Keep up or follow influencers or brands on social media • Sharing products that you think are interesting • Check-out enthusiasm when payday comes 	Feel <ul style="list-style-type: none"> • Happy when you get a good promo • Happy when you get paid • Sad when the target product is sold out
Pain <ul style="list-style-type: none"> • Feeling regretful about the product purchased because it was not suitable or was not very useful • Overspending so that savings run low 	Gain <ul style="list-style-type: none"> • Successfully purchase the desired item as a self-reward • Wear clothes according to fashion trends

Figure 1. Empathy Map

Source: Research 2024

An in-depth analysis of the empathy map of consumers aged 18-25 who frequently make online purchases as a form of self-reward revealed some interesting findings. Consumers in this segment are highly influenced by trends and recommendations from influencers on social media. Their main motivation for shopping is to gain personal satisfaction and fulfill their need for social recognition. However, on the other hand, they also often experience a dilemma between the desire to own and financial constraints. Fear of missing out on exciting opportunities (FOMO) and difficulty in controlling spending are common challenges. These findings indicate that there is a great opportunity to develop products and services that are more personalized, relevant, and meet consumers' emotional needs.

Define

The define stage is a bridge between the empathize stage (understanding users) and the ideate stage (generating ideas). The results of the defined stage will be the main input to the ideate stage. The better the problem formulation, the more relevant and innovative the ideas that will be generated in the next stage. An in-depth analysis of the empathy map of 18-25 year old consumers has provided a comprehensive understanding of the needs, wants and challenges faced by this market segment. At the Define stage of the Design Thinking process, these findings can be interpreted as user needs, pain points, and opportunities. On user needs, young consumers are looking for products and services that not only fulfill functional needs, but also provide emotional and social satisfaction. They want a shopping experience that is personalized, relevant, and fun. In addition, they need support to better manage their finances and avoid impulse purchases.

At pain points, the main challenges faced by consumers are FOMO, difficulty controlling spending, and feelings of regret after making a purchase. In addition, the lack of relevant and personalized information is also an obstacle in the decision-making process. In opportunities, there is a great chance to create products and services that can address consumers' pain points and fulfill their needs. For example, by offering highly personalized product recommendations

based on consumers' interests and behaviors, or by providing features that help consumers manage their budgets and avoid impulse purchases.

Ideate

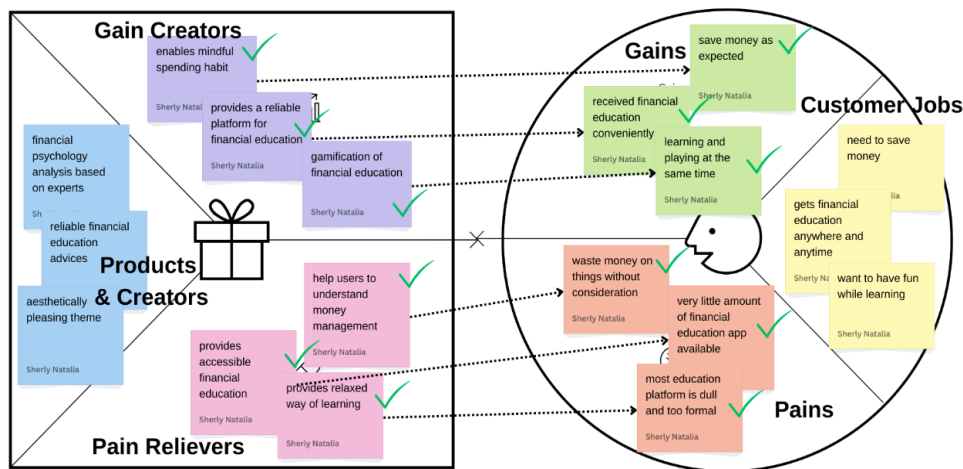


Figure 2. Value Proposition Canvas

Source: Research 2024

Through the value proposition above, it can be seen that there is an individual's desire to improve the quality of life but is distracted by the reason for the lack of motivation within themselves and the lack of facilities that support these changes. So by using financial science as a tool in realizing wasteful behavior and a fun quiz system to attract user attention.

Prototype

A prototype can be understood as an initial model that provides a visual and functional description of how a system will operate. This prototyping process is known as prototyping. This prototype is flexible, can be modified as needed before final implementation, thus allowing cost savings in the development stage (Raymond McLeod, 2007).

Testing

A pilot test of the financial quiz was conducted on 3 students from a university in Batam City, Indonesia. Most of the participants were between 18-22 years old, female, and actively using TikTok as their main social media platform. The sample was drawn purposely by prioritizing students who have an interest in finance.

This financial quiz is run through a specially designed website platform. Participants are invited to access the quiz through a link sent via email. The average duration of quiz completion is 15 minutes. Participants' answers and feedback were automatically collected by the system and stored in Google Docs.

The analysis showed that most participants found the quiz interesting and informative. However, some participants complained that some questions were too difficult, especially those related to more complex financial concepts. In addition, some participants also provided feedback on the interface of the quiz that needed to be improved.

Based on the results of the pilot test, it is recommended to make some improvements to the quiz. First, it is necessary to simplify some questions that are considered too difficult. Second, it is necessary to add more visualizations to facilitate understanding of concepts. Third, it is

necessary to develop a feature that allows participants to receive immediate quiz results and be able to retake the quiz.

The following test results are attached to the Common Cents financial quiz website, there is a Common Cents social media account on Instagram.

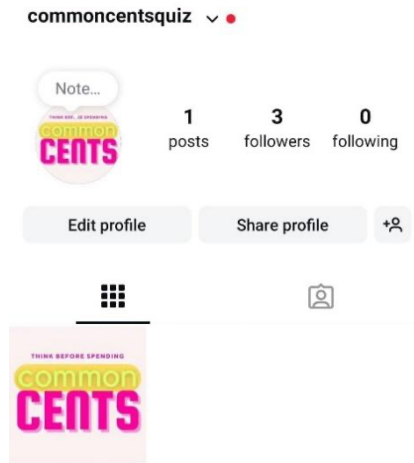


Figure 3. Common Cents Instagram

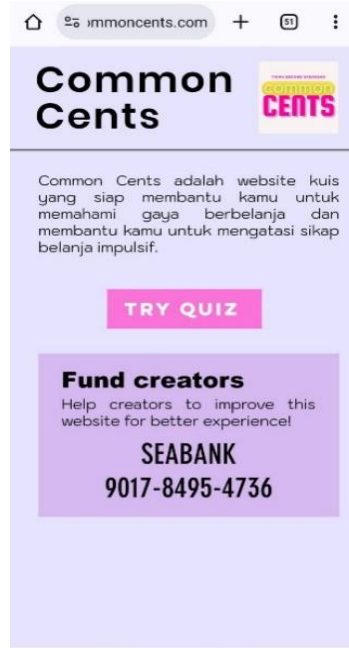


Figure 4. Common Cents website

After the implementation, there were several significant changes that occurred, namely:

Awareness Raising

Users who used the "Common Cents" website showed increased awareness of their impulse shopping behavior.

Better Financial Management

Some users reported that they started making wiser shopping decisions after using the financial quiz.

Positive Feedback

Feedback from users indicates that the website is very helpful in understanding and managing their personal finances.

Thus, the results and outcomes of this activity show that the financial quiz website "Common Cents" can provide real benefits for users in understanding and managing their impulsive shopping behavior. Evaluation and feedback from users will be the basis for further development in the future.

Conclusion

This research successfully developed the financial quiz website "Common Cents" using the Design Thinking methodology which involves five main stages: Empathize, Define, Ideate, Prototype, and Testing. The main objective is to help users, especially women aged 18-24 years old in Batam City, in managing their impulsive spending habits that are often influenced by e-commerce platforms and social media such as TikTok. The website is designed to educate and provide easy-to-use tools in controlling impulsive shopping behavior through an interactive and fun approach.

At the Empathize stage, the research team delved into understanding how impulse buying happens to the target audience and the impacts faced, such as financial anxiety, stress, and purchase regret. These results became an important basis for designing website features that focus on controlling impulse buying. Next, the Define stage helped formulate the main problem faced by users, which is the inability to control unplanned shopping urges. After defining the problem, the Ideate stage produced several creative solutions that were realized in the form of a financial quiz website as a means of financial education and reflection of shopping behavior. In the Prototype process, the team designed an initial version of the "Common Cents" website that allows users to access an interactive quiz that evaluates their spending behavior and provides advice related to financial management. The prototype was then tested in the Testing stage involving users from the target demographics. The results of the trial showed that users felt an increased awareness of the impact of impulsive shopping behavior and showed a change in behavior towards a more positive direction in managing personal finances.

The results of this study provide strong evidence of the effectiveness of "Common Cents" in helping users improve their financial awareness and management skills. Most participants reported an improved ability to control spending and a better understanding of their financial behavior. This suggests that the platform successfully meets users' needs for a reliable tool to manage personal finances. The research also underscores the importance of an empathy-based approach in the development of digital solutions. By understanding the needs and emotional experiences of users, "Common Cents" managed to create a product that is not only functional, but also emotionally relevant to its users.

However, as with any research, this study has some limitations. The limited sample size, relatively short duration of the study, and focus on a specific age group are factors that need to be considered in interpreting the results. In addition, the lack of comparison with similar platforms and the influence of external factors are also limitations that need to be addressed in future research. Based on the results of this study, several suggestions can be made for further research development. First, it is necessary to conduct a longitudinal study with a longer period of time to measure the long-term impact of using "Common Cents". Second, it is necessary to conduct research with a larger scale and involving a more diverse population. Third, a comparison with similar platforms should be conducted to identify the competitive advantage of "Common Cents". In addition, analysis of moderating and mediating factors, such as age,

education level, and personality, should also be conducted to better understand how these factors affect the effectiveness of the platform. Overall, "Common Cents" proved to be a promising innovation in improving people's financial literacy. However, further research is still needed to optimize the platform and ensure its long-term sustainability. With continuous improvement and development, "Common Cents" has the potential to be an effective solution in addressing the financial problems faced by many people.

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