JODIGBI: Journal of Digital Business and Global Economy
Vol.2, No.3, June 2026
https://journal.atdbi.or.id/index.php/jodigbi/

EXPLAINING THE ADOPTION GAP IN DIGITAL LEARNING PLATFORMS: THE ROLE OF TASK-TECHNOLOGY FIT, PERFORMANCE EXPECTANCY, AND TRUST

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Article Info

Article history:
Received: 03 June 2026;
Accepted: 16 June 2026;
Published: 30 June 2026.

Keyword:
Adoption Gap, Digital Learning Platform, Task-Technology Fit, Trust, UTAUT2.

Abstract

Tempo Institute is a digital learning platform in Indonesia that is facing the challenge that most registered users do not convert into active users. The gap between registered users and active users in this study is referred to as the adoption gap. This study aims to analyze the adoption gap at Tempo Institute by testing an integrated model that combines UTAUT2, Task-Technology Fit (TTF), and Trust. Data were collected from 400 registered users using PLS-SEM techniques to interpret and analyze the data assisted by SmartPLS 4 software. Based on the analysis of this study, Performance Expectancy is the strongest driver of user registration intention, followed by Trust and Task-Technology Fit. But, these three factors have limitations in maintaining long-term active users. Habits and Enabling Conditions are factors that determine whether users remain active on the platform. The main theoretical contribution of this study is the TTF-UTAUT2 Trust Acquisition-Retention Duality Framework, which proposes that the factors that motivate someone to register on a digital learning platform are fundamentally different from the factors that keep them actively using the platform. The differences are important to understand and close the adoption gap in digital learning platforms, especially at Tempo Institute.

1. INTRODUCTION

The data at Statista by Rakuten Insight 2025 show in a report that digital learning platforms are getting really popular fast. The EdTech market, which is about learning platforms is expected to grow really big. It will be than $400 billion by 2026. In Indonesia many people have started using online learning platforms, this changes happened after the COVID-19 pandemic. Now digital learning is a part of life for them like what Dewanda et al. said in 2025.

In Indonesia, many people have registered on online learning platforms since the COVID-19 pandemic. Digital learning is now a part of life for many people in Indonesia as researchers like Dewanda et al. said in the year 2025. Despite this rapid growth in online learning, a serious challenge remains that most platforms have not yet resolve. This challenge is the users churn at the registration stage without becoming active users. This study researches the gap between registered and active users, known as the adoption gap.

Previous research on technology adoption has focused on factors that influence users to initiate use of a technology. Models such as TAM (Davis et al., 1989), UTAUT (Venkatesh et al., 2003), UTAUT2 (Venkatesh et al., 2012), and Task-Technology Fit theory (Goodhue & Thompson, 1995) effectively predict initial enrollment intentions. However, these models do not specifically identify the factors that determine the users discontinue using a technology. The role of these frameworks is crucial for further analysis.

The model used in this study analyzes gap adoption factors with tests the TTF-UTAUT2-Trust Acquisition-Retention Duality Framework. This framework will examine in depth the differences between the factors that motivate someone to register on a platform and the factors that keep them actively using the platform. The role of

this framework is significant for further analysis. It provides a structural explanation for why the adoption gap exists and will persist if platforms do not address both sides separately. This represents a more substantive academic contribution than simply enumerating which factors affect adoption.

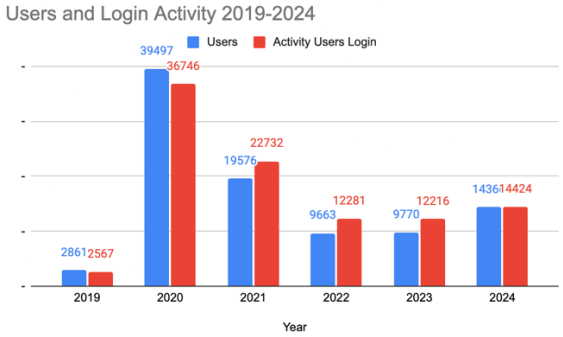


Figure 1. Trends in Registered Users and Active Users of the Tempo Institute Platform

Source: Authors (2025)

This framework tests at Tempo Institute , the digital learning platform of Tempo Media Group as Indonesia's most well-known journalism institution, established in 1971. Despite the platform having over 14.000 registered user accounts, platform data shows a clear and persistent adoption gap that active users defined as those who logged in at least once peaked at nearly 37.000 sessions in 2020, yet by 2024, active engagement had fallen to below 50% of that peak level and remained both low and unstable at Figure 1. Interviews with the platform management showed that many users stop buying after they reach the checkout stage. They do not complete the transaction. This behavior shows a gap, between what users plan to buy and what they actually buy. The platform management found out that a lot of users do not finish the purchasing process. They get to the checkout stage, then they stop. This happens even though they had intended to make a purchase.

2. LITERATURE REVIEW

2.1 Conceptualizing the Adoption Gap: The Roles of TTF, PE, and Trust

The adoption gap refers to the difference between platform acquisition and retention. User registration is commonly driven by high performance expectations and trust in the platform brand. However, remaining active over an extended period requires to develop habits and have a good facilitation conditions. Existing technology adoption models such as TAM (Davis et al., 1989), UTAUT (Venkatesh et al., 2003), and UTAUT2 (Venkatesh et al., 2012) treat adoption as a single-stage process, where the goal is to explain Behavioral Intention or Use Behavior as one unified outcome. The Task-Technology Fit theory by Goodhue & Thompson from 1995 is similar because it looks at whether technology fits the tasks that the user does. However it does not make a difference between what makes people sign up at first and what keeps them using it for a time. Some studies have also looked at trust (Al-Okaily et al., 2023; Apau et al., 2025). They have not really thought about how trust works at different stages of using the Task-Technology Fit theory and technology. The Task-Technology Fit theory is still important because it is about how technology fits the tasks that the user does and that is what the Task-Technology Fit theory is all, about. None of these models formally separate the drivers of acquisition from the drivers of retention. This is the theoretical gap this research addresses. This research proposes that Task-Technology Fit, Performance Expectancy, and Trust are the three principal drivers on the acquisition side, while Habit and Facilitating Conditions are the main drivers on the retention side. Performance expectations are a key factor influencing user registration. The expectation of skill improvement is the main driven for many users to register. At the same time, a credible and secure platform can reduce users' hesitation to invest their time and financial resources in using a platform. Task-technology fit strengthens the intention to register, once users perceive a platform's features as well suited to their learning needs, they will have a stronger intention to use it. However, these three factors do not guarantee users active using the platform. The adoption gap between registered and active users occurs precisely in this space, where users have high intent but low usage.

2.2 Task-Technology Fit as Aligning Tools with User Needs

The Task-Technology Fit (TTF) theory states that technology works best when its features align with what users actually need to do. This model has two independent variables that is Task Characteristics, which measure user needs, and Technology Characteristics, which measure the technology available on the platform. A strong fit between the two leads users to perceive a high level of Task-Technology Fit, which positively grow their intention to use the platform. Users who perceive platform features as compatible with their learning needs will have stronger intentions, a key factor in encouraging users to enroll in the platform. Previous studies have confirmed a positive relationship between TTF and e-learning adoption intentions (Abdekhoda et al., 2022; Deng et al., 2024). At Tempo Institute, the platform's have alot of course and diverse features make it a perfect fit for testing this theory. Technology Characteristics factor, deserves special attention here because it reflects how users assess the quality and capabilities

of the platform's technological infrastructure. This assessment has an important role in determining the use of the platform in a professional learning environment.

2.3 Performance Expectancy as The Primary Driver to Register

Performance Expectancy is the degree to which users expect that using technology will help them improve their skills in the workplace in their studies (Al-Okaily et al., 2023; Apau et al., 2025). The performance expectancy variable shows the strongest predictor of behavioral intentions consistently across various studies. Its role in the adoption gap is crucial, as it is the primary reason users decide to enroll in a learning platform. For Tempo Institute, a predominantly professional and student user base seeking career-relevant skills, Performance Expectancy is their trust in the platform's ability to truly improve their skills. The decision to enroll is an investment of time and money, driven almost entirely by Performance Expectancy. Therefore, high Performance Expectancy is simultaneously a requirement for the platform to meet. When it meets these standards, users will remain active. However, if it does not, users tend to churn. Because of that Performance Expectancy is the single most important factor in user acquisition, but also a quality control challenge that providers must meet.

2.4 Trust Brand Credibility as an Entry Pass

When it comes to course payments, three considerations typically arise from the user's perspective: institutional credibility, transaction security, and data protection (Apau et al., 2025). These considerations form the basis of trust. In paid e-learning, trust is crucial to resolve the user concerns. Users need trust before they will spend their money or time (Al-Okaily et al., 2023). The difference between trust and performance expectations and task-technology fit is in their function, not their strength. Performance expectations attract users by promising skill enhancement. Task-technology fit assures them that the platform's features are appropriate for the job. Trust does neither of these things, it simply removes the doubts that prevent users from signing up. Tempo Institute is in an unusual position here because decades of journalism under the Tempo Media Group brand have generated a level of institutional credibility that no competitor can replicate through marketing alone. Tempo Institute platform is an appropriate case study in research the influence of Trust, not because Trust on the Tempo Institute platform is weak, but because Trust there is very strong, making it much easier to identify. Based on previous research, this study predicts that Trust will emerge as a significant predictor of Behavioral Intention but will not have a direct effect on Usage Behavior. The reason is trusting a brand is enough to make someone interested, but it is not enough to make them actually behave in using the platform.

2.5 Conceptual Research Model The TTF-UTAUT2-Trust Acquisition-Retention Duality Framework

Based on the literature and hypotheses developed above, this study proposes the TTF-UTAUT2 Trust Acquisition-Retention Duality Framework as a conceptual model. This is not simply a model that tests hypotheses but it is a novel framework that explains the causal factors and structure of the adoption gap. The difference between this framework and previous technology adoption models is not the constructs included, but the structural differences it proposes. UTAUT2 and TTF both predict adoption outcomes, but previous studies did so without distinguishing between the acquisition and retention stages. This framework mapping the adoption process into two stages, with distinct theoretical mechanisms governing each stage. The model provides a more detailed explanation of the factors that lead users to become registered users but not active users. Performance Expectancy, Trust, and Task-Technology Fit are the three primary factors that drive users to register and form an intention to use the platform. Meanwhile, Habits and Enabling Conditions are the driving factors that determine users' continued active use of the platform. The conceptual model (Figure 2) illustrates the mechanisms of this dual adoption process. By research these two stages, this study contributes academically beyond simply identifying which factors are statistically significant. It provides a structural explanation for one of the operational challenges faced by many online learning providers. This study provides a structural explanation for the adoption gap between registered and active users.

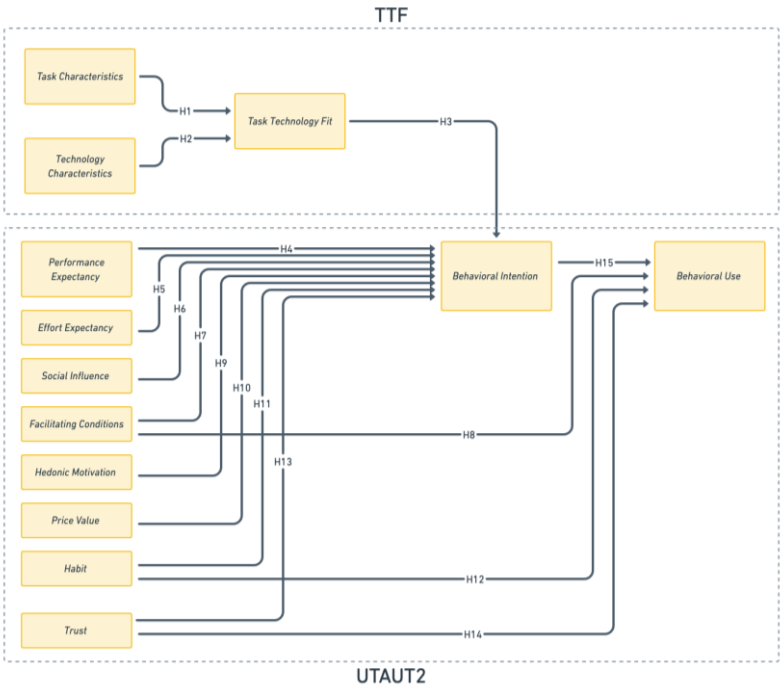


Figure 2. Conceptual Model of the Study
Source: Authors (2026)

3. RESEARCH METHODOLOGY

The population in this study refers to registered users of the Tempo Institute platform, operated by PT Tempo Inti Media Tbk. This platform provides courses with many topic like journalism, public speaking, and related subjects for both individual learners and corporate clients. By the end of 2025 the platform had than 14.000 people who signed up for an account. Not many of these users were really using the platform. This research looked at all the people who completed at least one course the platform. The required sample size was determined using an established sample size calculation formula (Krejcie & Morgan, 1970). This formula says that if you have than 10.000 people you need to talk to at least 384 of them. The questionnaire made by using some questions based in the indicator of the model. When people answered the questions they could choose from four options. The options were numbered from 1 which meant they strongly disagreed, to 4 which meant they strongly agreed.

To minimize the potential for measurement bias, a pilot test was conducted with 30 respondents who matched the profile of the target population prior to the main data collection. The pilot test results were analyzed using SmartPLS to assess the convergent validity, discriminant validity, and composite reliability of each construct. Only after all indicators met the required validity and reliability thresholds was the questionnaire distributed to the full sample. Here is a summary of where the questions came from:

Table 1 Measurement Instrument

Construct	Items (n)	Source Scale
Task Characteristics (TACHA)	3	(Dishaw & Strong, 1999; Goodhue & Thompson, 1995)
Technology Characteristics (TECHA)	3	(Dishaw & Strong, 1999; Goodhue & Thompson, 1995)
Task-Technology Fit (TTF)	3	Goodhue & Thompson (1995)
Performance Expectancy (PE)	4	Venkatesh et al. (2012)
Effort Expectancy (EE)	3	Venkatesh et al. (2012)
Social Influence (SI)	3	Venkatesh et al. (2012)
Facilitating Conditions (FC)	3	Venkatesh et al. (2012)
Hedonic Motivation (HM)	3	Venkatesh et al. (2012)
Price Value (PV)	3	Venkatesh et al. (2012)
Habit (HA)	3	Venkatesh et al. (2012)
Trust (TR)	4	(Al-Okaily et al., 2023; Apau et al., 2025)

Behavioral Intention (BI)	3	Venkatesh et al. (2012)
Use Behavior (UB)	3	Venkatesh et al. (2012)

Data was obtained by distributing emails and WhatsApp messages to 1,300 Tempo Institute users who had made transactions in the past three months. This limitation was implemented to ensure that all respondents had a comprehensive experience on the platform. This is a crucial requirement for collecting meaningful data on the survey questions. From 1,300 users who received the survey, more than 400 responded, or approximately 30.8%. In this case, the researchers took data from the first 400 responses.

To conduct and analyze the data, researchers used SEM-PLS techniques with the help of the SmartPLS 4 application. Because the researchers aimed to know and understand user behavior, so decided to use this method. This research is quite complex because it has 13 variables studied in the model, resulting in 15 hypotheses. Other studies about technology adoption have also used this method (Al-Okaily et al., 2023; Dewanda et al., 2025). The bootstrapping algorithm is used to test if the results are statistically significant. This algorithm uses 5.000 subsamples. The results are considered significant when the T-value is greater than 1.96 and the p-value is than 0.05.

4. RESULT AND DISCUSSION

4.1 Result

The Tempo Institute platform has a lot of users who are working professionals 65% of all the people who answered the survey. Then there are university students, around 35% of all the people who answered. The Tempo Institute platform users are mostly adults, between 22 and 35 years old around 70% of them. This shows that the Tempo Institute platform users are people who are comfortable with digital technology. People who use the Tempo Institute platform really like it. They gave the Tempo Institute platform high ratings. The Tempo Institute platform users trust the platform. Think it works well which is great for the Tempo Institute. However people do not often decide to use the Tempo Institute platform because their friends tell them to. They usually decide to use the Tempo Institute platform because they want to not because someone else told them to.

The survey was checked to make sure it was good. All the questions were good. People answered them in a way that made sense. The survey was also checked to make sure it was measuring what it was supposed to be measuring. The results showed that the survey was good and that the Tempo Institute platform is a platform. The results of the survey were then used to see how well the Tempo Institute platform works. The results were very good. The Tempo Institute platform is very good at getting people to want to use it with a score of 0.834. The Tempo Institute platform is also good at helping people use the technology with a score of 0.420. People who use the Tempo Institute platform actually use it a lot with a score of 0.609. The survey results were very good. Showed that the Tempo Institute platform is a good platform.

The person who did the survey then tested some ideas to see if they were true. They used a method to test 15 ideas and found that 9 of them were true based on the results in Table 2. The Tempo Institute platform is a platform and people like using it. The survey results show that the Tempo Institute platform is a platform and that people trust it and use it a lot. The Tempo Institute platform users, like the Tempo Institute platform and think it is a platform.

Table 2 Hypothesis Testing Results

H	Path	β	T-Stat	p-value	Decision
H1	TACHA → TTF	0.282	3.778	0.000	Supported
H2	TECHA → TTF	0.416	5.714	0.000	Supported
H3	TTF → BI	0.117	2.531	0.012	Supported
H4	PE → BI	0.464	6.138	0.000	Supported
H5	EE → BI	0.052	0.680	0.497	Rejected
H6	SI → BI	0.005	0.211	0.833	Rejected
H7	FC → BI	0.129	2.765	0.006	Supported
H8	FC → UB	0.253	3.829	0.000	Supported
H9	HM → BI	0.015	0.172	0.863	Rejected
H10	PV → BI	0.051	1.142	0.254	Rejected
H11	HA → BI	0.072	1.133	0.258	Rejected
H12	HA → UB	0.317	5.474	0.000	Supported
H13	TR → BI	0.160	2.880	0.004	Supported
H14	TR → UB	0.069	0.988	0.324	Rejected

H15	BI → UB	0.265	2.824	0.005	Supported

4.2 Discussion

Based on the analysis of this research, the results confirm the TTF-UTAUT2-Trust Acquisition–Retention Duality. The data reveals two clearly distinct groups of drivers operating on two separate sides of the adoption gap.

From acquisition side Performance Expectancy is the strongest driver users join because they believe the platform will improve their professional skills. Trust is the second strongest users feel safe to register because Tempo's brand is highly credible. When users perceive the platform's features as aligned with their learning tasks, the Task-Technology Fit factor provides additional motivation. However, in terms of user retention, Habit is the strongest factor, subconsciously encouraging users to actively use the platform. Facilitating Conditions ranked second in user retention because reliable internet access and appropriate devices are undeniably crucial for smooth platform use in online learning.

The difference between the factors influencing user acquisition and retention is interesting finding in this model. The model explains that of the 83.4% of users who intend to learn, only 60.9% are actually actively learning. This gap 22.5% represents users who have the intention but don't actually use the platform. This gap is crucial for the Tempo Institute to pay closer attention to in order to convert them into active users.

1. **The Role of Performance Expectancy as Dominant Acquisition Driver and Quality Imperative**

   Particularly in the journalism and communications fields, prospective users registering on the Tempo Institute platform are influenced by expectations of improving their professional skills. These expectations of improving skills demand that Tempo Institute continuously maintain content quality. If the platform's content is no longer high-quality, meaning it no longer enhances skills, potential users will lose interest in registering on the Tempo Institute platform. Therefore, content quality is crucial for Tempo Institute in ensuring it meets users' expectations of improving their professional skills.

2. **The Role of Task-Technology Fit as Full Validation and Its Implications**

   Overall, the Task-Technology Fit factor had an impact, although not a significant one. Technology characteristics had a stronger influence than task characteristics, meaning that in professional online training, the quality of the technology used has a greater influence on users' intention to use the platform. Features such as stable video streaming, interactive quizzes, and a robust certification system are important factors that make users feel the platform meets their needs.

3. **The Role of Trust as Powerful Acquisition Enabler, Bounded Retention Mechanism**

   Trust is the second strongest factor influencing potential user intention, but it doesn't significantly impact actual usage behavior. This is an interesting finding. Tempo Media Group's credible reputation generates a high level of trust among potential users, which contributes to their willingness to register. However, once they're on the platform, trust alone isn't enough to drive active users. Converting registered users into consistent active users requires more than just trust in the institution.

4. **Discussion of Non-Supported Hypotheses**

   Six hypotheses were rejected in this study. Each of them tells something important about how the Tempo Institute platform works and who its users are. Effort Expectancy does not really matter when it comes to Behavioral Intention. The results show that how easy something is to use does not really matter to people when they make decisions. This means that other things are more important and have an effect on what people plan to do with the product. The results tell us that people consider factors more, than how easy the product is to use when they think about what they want to do with it. Users do not think about how easy or hard a platform's to use when they decide if they want to sign up for the platform. The platform being easy to use is not something that people consider when they are thinking about registering for the platform. This makes sense given the user profile. People who use Tempo Institute are usually professionals. They use computers and other digital tools at their job every day. So when they have to learn a system it is not a big deal for Tempo Institute users. Tempo Institute users are just fine, with learning something because they are used to using digital tools. Venkatesh et al. (2012) also noted that Effort Expectancy becomes less relevant when users are already intrinsically motivated. In this case, the strong pull of Performance Expectancy appears to override any concerns about usability.

   Social Influence have not significant impact on this model. The coefficient value is 0.005, which is approaching to zero. Users of Tempo Institute decide to register on their own, based on their personal career

goals. People who take part in professional learning are not really bothered about what their friends, colleagues or family think. Previous research shows the thing. Social Influence is more important when someone has to do something like at work not when they are learning on their own. This is what some researchers found out they all say that Social Influence matters more when it is mandatory (Dewanda et al., 2025; Venkatesh et al., 2012), like in a company not in professional learning, where Social Influence does not play a big role, in what people decide to do with their own learning.

Hedonic Motivation also has no significant effect. Tempo Institute is not a platform people use for fun. Users come to learn journalism, communication, and professional skills these are goal-driven activities. So that enjoyment and entertainment are not what motivates them to register. This is different from recreational or gamified apps where hedonic factors do play a stronger role (Liu et al., 2025). In learning where the majority of users are professionals, the benefits of the platform outweigh the fun it offers.

The results for Price Value also had no significant impact. Although the platform is paid platform, but considering the profile of Tempo Institute's users who are predominantly professionals, this suggests that users are confident in the course material, making price a less significant factor when they receive materials that can improve their skills. The decision to purchase a class is already in the user's plan even before seeing the price, as their primary priority is skill improvement. This also means that if Tempo Institute lowers prices or runs a discount period, it won't necessarily attract registered users if the content or material isn't commensurate with skill improvement. Habits don't significantly influence user intention to use the platform, but they are a strong factor in actual platform usage. Therefore, this difference suggests that habits work differently than other variables. Users who have established learning routines don't need to consciously decide to use the platform, they do so automatically or subconsciously. Habits encourage users to directly use the platform without going through the intention phase, which means doing it unconsciously. Trust doesn't directly influence usage behavior. Trust is crucial when someone signs up because it provides confidence in their registration, which then translates into actual usage of the platform.

5. CONCLUSION

This study analyzes the gap between registered and active users at Tempo Institute using the TTF-UTAUT2 Trust Acquisition-Retention Duality Framework. The main finding of this study is that the factors that encourage users to register on a digital learning platform are different from the factors that encourage users to actively use it. These two stages of acquisition and retention are governed by different processes and factors. The acquisition process is driven by Performance Expectations, Trust, and Task-Technology Fit. These three factors encourage potential users to become registered users. Meanwhile, retention is driven by Habits and Enabling Conditions to encourage users to remain active on the platform. Without considering these two retention drivers, users will register but not become active users.

Theoretically, the main contribution of this study goes beyond confirming and rejecting the hypotheses. The main contribution lies in the TTF-UTAUT2 Trust Acquisition-Retention Duality Framework, a new conceptual framework that formally separates the drivers of user acquisition and retention. This framework provides important findings for a broader understanding of how to balance user acquisition and retention on any digital learning platform. This demonstrates that acquisition and retention are two distinct problems that require distinct theories and solutions.

From a practical perspective, digital learning platform institutions must recognize that acquiring registered users and retaining active users require different strategies. Established trust and a carefully designed habit-building system are well-suited for long-term user retention. Tempo Institute, in particular, has implemented its current strategy by directing investment toward habit-building features such as daily learning targets, series achievements, and reminders, as well as strengthening the platform's infrastructure, without compromising the institution's reputation.

While this study has several important findings, it also has several limitations. Among them, the data was collected at a single point in time, meaning researchers were unable to observe how user habits changed over time. Furthermore, this survey was only conducted on one platform in Indonesia, which may mean the results may differ on other platforms with different characteristics. In the future, it may be more beneficial to conduct user research over time and test the Acquisition-Retention Duality Framework on other digital learning platforms in Indonesia and even Southeast Asia. The Acquisition-Retention Duality Framework can be tested across platforms beyond online learning to assess its effectiveness.

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