

Knowledge, Attitude, and Practices of E-Banking Transactions

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Abstract

This study investigates the knowledge, attitude, and practices (KAP) of e-banking users in Nepal. The main objectives were to assess consumer attitudes toward e-banking, examine the relationship between KAP components, and compare these aspects among users. Using a quantitative descriptive and comparative design based on the KAP framework, data were collected from 195 participants through an online survey. The questionnaire included sections on demographics, knowledge, attitude, and practice, with responses measured on a 5-point Likert scale. Data analysis was conducted using SPSS, employing descriptive statistics, Kendall's tau-b correlation, and Repeated Measures ANOVA with Greenhouse-Geisser correction. Results showed that users had good knowledge of e-banking and actively practiced its use, but their attitudes were moderately positive and somewhat cautious, particularly about security and trust. Significant positive correlations existed between knowledge, attitude, and practice, indicating these factors influence one another. The ANOVA results highlighted significant differences in average scores, with knowledge and practice higher than attitude, reflecting a nonlinear trend. The sample was balanced in gender and primarily consisted of young adults with higher education. In conclusion, while Nepalese users are knowledgeable and engaged in e-banking, improving their attitudes through enhanced trust and security awareness could encourage safer and more confident use.

Keyword: E-Banking, Knowledge, Attitude, Practice

Introduction

In recent times, the banking sector has experienced a major shift driven by the fast-paced growth of information and communication technologies. One of the most impactful changes has been the rise and increasing popularity of electronic banking (e-banking), which allows users to carry out financial activities like sending money, paying bills, and checking account details without physically visiting a bank. This shift toward digital banking has not only boosted the speed and convenience of banking services but has also changed how customers interact with financial institutions.

Despite these technological advancements and the clear advantages of e-banking, its adoption is still inconsistent, particularly in developing nations such as Nepal. While some people have adapted to digital banking with ease and confidence, others either struggle with its use or remain unaware of its functionalities. This variation in usage can often be explained by examining individuals' knowledge, attitudes, and behaviors commonly analyzed through the Knowledge, Attitude, and Practices (KAP) framework.

This study focuses on investigating how people perceive and use e-banking by exploring the three elements of the KAP model:

- **Knowledge** includes how much people know about e-banking what it is, how it works, its advantages, and potential threats.
- **Attitude** refers to how people feel about e-banking whether they see it as trustworthy, easy to use, or confusing.
- **Practices** involve how often and in what ways individuals actually use e-banking, including how careful they are with security.

Looking at these components together provides a more complete picture of user engagement with digital banking systems. For example, someone might understand e-banking well and think positively about it, but still avoid using it because of concerns about online fraud or limited internet access. On the other hand, another user might regularly use e-banking services without having proper knowledge about keeping their information secure.

In Nepal's context, where digital access and literacy levels vary widely across regions and populations, analyzing the KAP related to e-banking is especially important. Many users may be unfamiliar with basic digital tools, which can lead to misuse or fear of online banking. Moreover, factors such as age, education, income, and whether someone lives in a rural or urban area can all influence how they interact with e-banking services.

The insights from this research are valuable for banks, policymakers, and technology providers. It highlights where users need more guidance, support, or education. By addressing

gaps in knowledge, shifting negative perceptions, and promoting safer usage habits, stakeholders can create more user-friendly systems and strengthen public confidence in digital finance.

The ultimate goal of this study is to not only assess the current state of e-banking use but also to support the development of a more secure, accessible, and inclusive digital banking environment. As Nepal continues its path toward digitalization, empowering citizens with the right knowledge, positive outlook, and responsible usage habits will be essential for achieving long-term financial inclusion and national progress.

Literature Review

The financial industry's shift toward digital platforms has fundamentally altered how individuals' access and manage banking services. Electronic banking (commonly referred to as e-banking or internet banking) empowers users to complete financial tasks such as transferring money or checking balances through online portals, mobile apps, and other digital mediums. With global usage of e-banking steadily rising, researchers have increasingly focused on the behavioral aspects driving this trend, frequently using the Knowledge, Attitude, and Practice (KAP) framework to analyze how users interact with digital banking.

Understanding of E-Banking

Awareness and comprehension play a vital role in whether users adopt and utilize e-banking services effectively. As noted by Chauhan and Choudhary (2015), individuals who are more familiar with how digital banking operates tend to use it more confidently and frequently. This includes an understanding of the available tools, operational processes, potential advantages, and the risks involved.

Pikkarainen et al. (2004) emphasized that users' perception of simplicity and familiarity greatly impacts their willingness to use internet banking. However, in developing regions, the picture is different. Sharma and Singh (2009) pointed out that limited technological understanding, poor digital literacy, and incorrect information about online threats act as significant barriers to widespread adoption. In Nepal, Joshi (2019) found that urban residents are generally better informed about digital banking options, while people in rural communities often lack even basic knowledge, leading to lower levels of engagement with such services.

Perceptions and Attitudes toward E-Banking

A user's emotional and cognitive evaluation of e-banking whether they trust it, feel comfortable using it, or believe it to be beneficial forms their attitude, which is a key factor in determining their likelihood of using the service. Based on Ajzen's Theory of Planned Behavior (1991), attitude is a strong predictor of behavioral intention.

Several studies have supported this idea. For example, Laukkanen et al. (2007) revealed that individuals who are generally open to new technologies are more inclined to adopt online banking. On the other hand, concerns over data breaches, online scams, or the complexity of digital systems can negatively shape user attitudes, discouraging them from using these services (Yousafzai et al., 2009). Cultural and psychological elements, such as preference for face-to-face interaction or general skepticism toward online platforms, also influence people's views especially in South Asia.

Actual Use and Behavior (Practice)

The practice component refers to what users actually do how often they perform financial tasks online, the variety of services they access, and the steps they take to stay secure. Tan and Teo (2000) suggested that factors such as usefulness, ease of access, and platform stability heavily influence how actively people use e-banking.

Nevertheless, practical engagement is not solely determined by knowledge or attitudes. It also depends on how good the infrastructure is and how ready people are with digital tools. In the Nepali context, Acharya and Poudel (2021) found that while a significant number of customers are enrolled in e-banking systems, many only use limited features like viewing account balances while avoiding more complex operations due to fear or lack of familiarity. Additionally, socio-economic characteristics influence usage trends; younger, more educated individuals in cities are more likely to embrace digital banking than their older or rural counterparts.

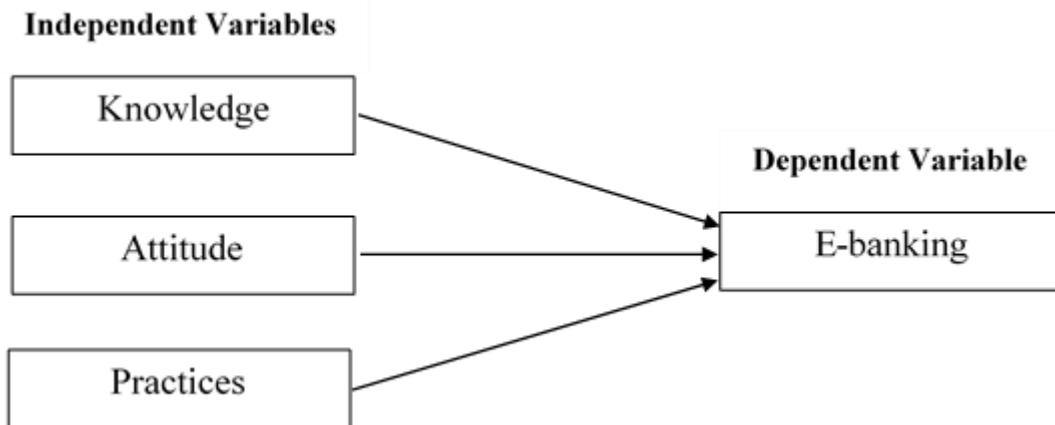
The KAP Framework in the Context of E-Banking

Initially popular in public health research, the KAP framework is increasingly being applied to the study of digital service usage, including financial technologies. It offers a comprehensive method to explore how awareness shapes attitudes and how these, in turn, affect real-world usage patterns. A study by Njuguna and Moronge (2013) in Kenya demonstrated that even when users possess sufficient knowledge of mobile banking, their usage remained limited if their attitudes were skeptical or if they lacked access to reliable infrastructure.

For Nepal, adopting this framework helps in pinpointing where educational efforts are most needed, what kinds of misinformation need to be corrected, and how banking platforms can enhance the user experience. Financial institutions and policymakers can use insights from KAP analysis to craft more precise strategies, focusing on building digital trust, improving accessibility, and encouraging safe usage habits across diverse populations.

Conceptual Framework

The conceptual framework of this study focuses on the three independent variables i.e. awareness (knowledge), perception (attitude), and actual behavior (practices) of e-banking among individuals. And the dependent variable is e-banking as provided in the below figure:



Objective

The objectives of the study are given as

- To access the perception (attitude) of consumers towards e-banking,
- To examine the relationship between knowledge, attitude and practices (KAP),
- To compare the Knowledge, attitude, practices of e-banking.

Research Methods

This study aimed to understand how people in Nepal use electronic banking by examining their knowledge, attitudes, and practices through a structured survey. Using a quantitative descriptive and comparative research design guided by the Knowledge, Attitude, and Practice (KAP) framework, data were collected from 195 e-banking users of various ages and backgrounds using convenience sampling. An online questionnaire with four sections demographic information, knowledge, attitude, and practice was shared via social media and personal contacts, and participants rated statements on a 5-point scale. The collected data were analyzed using SPSS with tools such as averages, correlation (Kendall's tau-b), and Repeated Measures ANOVA (with Greenhouse-Geisser correction) to examine relationships and differences among the three areas and to compare responses across different groups. Ethical guidelines were followed by ensuring voluntary participation, informed consent, and confidentiality throughout the study.

Results

The Results section presents the key findings of the study, highlighting the levels of knowledge, attitudes, and practices related to e-banking among users in Nepal. It also shows how these factors are interrelated and differ across various demographic groups.

Table 1

Demographic Information

Gender					
	Frequency	Percent			
Male	95	48.7			
Female	100	51.3			
Total	195	100.0			
Education Level					
	Frequency	Percent			
Bachelors	135	68.7			
Master's or above	61	30.8			
Total	195	99.5			
Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	195	18	47	25.66	4.342

The demographic information provides a basic overview of the participants involved in the study. Out of the total 195 respondents, 48.7% were male and 51.3% were female, indicating a fairly balanced gender distribution. Regarding educational qualifications, the majority of participants (68.7%) held a bachelor's degree, while 30.8% had completed a master's degree or higher, reflecting a generally well-educated sample. Age data was collected from all 195 participants, with ages ranging from 18 to 47 years. The average age was approximately 25.66 years, with a standard deviation of 4.34, suggesting that the group was relatively young and moderately varied in age.

Table 2

Knowledge of E-banking

Particulars	Mean	Std.
		Deviation

I am aware that banks offer mobile banking activity.	4.38	.733
I know how to use internet banking to perform transaction.	4.40	.808
I can differentiate between legitimate and fraudulent e-banking websites.	3.79	.812
I know how to report suspicious e-banking activity.	3.85	.771
I understand the risks involved in using e-banking.	4.07	.682
I understand how encryption helps protect online transaction.	3.76	.849
I am familiar with two-factor authentication used in e-banking.	3.87	1.045

The descriptive statistics for the knowledge of e-banking reveal that participants generally have a good understanding of electronic banking services. The highest mean score was for the statement "I know how to use internet banking to perform transactions" (mean = 4.40), followed closely by "I am aware that banks offer mobile banking activity" (mean = 4.38), showing strong awareness and usage knowledge among respondents. Participants also demonstrated moderate understanding in identifying fraudulent websites (mean = 3.79) and reporting suspicious activity (mean = 3.85), indicating some room for improvement in security-related knowledge. Understanding of risks involved in e-banking was relatively high (mean = 4.07), while knowledge of encryption (mean = 3.76) and two-factor authentication (mean = 3.87) showed that some technical concepts were less clearly understood. The standard deviation values indicate a reasonable spread of responses, with the widest variation observed in familiarity with two-factor authentication (SD = 1.045), suggesting differing levels of exposure or awareness in this area.

Table 3

Attitude towards E-banking

Particulars	Mean	Std. Deviation
E-banking makes financial transactions more convenient.	4.35	.733
I trust e-banking services offered by banks in Nepal.	3.95	.791
I am concerned about the security of e-banking transactions.	3.98	.739
I feel confident using e-banking platforms.	3.91	.733
Traditional banking is safer than e-banking.	3.35	1.236
The government and banks are doing enough to promote e-banking awareness.	3.61	.927

I would recommend e-banking to friends and family.	4.12	.602
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The descriptive statistics on attitudes toward e-banking show that participants generally have a positive outlook on digital financial services. Most respondents agreed that e-banking makes financial transactions more convenient, with a high mean score of 4.35. Similarly, many were willing to recommend e-banking to others (mean = 4.12), showing favorable acceptance. However, while trust in e-banking services in Nepal was moderately high (mean = 3.95), concerns about transaction security were also evident (mean = 3.98), indicating that although users trust the system, they still remain cautious. Confidence in using e-banking platforms was reported with a mean of 3.91, suggesting a generally comfortable user experience. Interestingly, the statement "Traditional banking is safer than e-banking" received a lower mean of 3.35 with a high standard deviation (1.236), showing mixed opinions among participants on the relative safety of e-banking. Lastly, the belief that the government and banks are doing enough to raise awareness had a mean of 3.61, reflecting moderate satisfaction with current promotional efforts. The results suggest a positive but cautious attitude toward e-banking.

Table 4

Practices in E-banking

Particulars	Mean	Std. Deviation
I regularly use internet banking for financial transactions.	4.25	.776
I pay bills or transfer funds online through e-banking.	4.36	.670
I change my e-banking passwords regularly.	3.64	1.038
I log out of my e-banking account after each session.	3.94	1.024
I verify the URL before logging into internet banking.	3.45	.980
I educate others on safe e-banking practice.	4.00	.681
I have enabled notifications for my e-banking transactions.	4.11	.929

The descriptive statistics for practices in e-banking indicate that most participants actively use digital banking services. A high mean score of 4.36 shows that many users frequently pay bills or transfer funds online, and a similar trend is observed in the regular use of internet banking (mean = 4.25). Participants also reported good habits like enabling transaction notifications (mean = 4.11) and logging out after each session (mean = 3.94), which are essential for maintaining security. However, fewer participants regularly change their e-banking passwords (mean = 3.64) or verify the URL before logging in (mean = 3.45), indicating

that some users may overlook basic security practices. The practice of educating others on safe e-banking use scored a relatively high mean of 4.00, showing a positive trend in sharing knowledge. The data reflects strong engagement with e-banking platforms, though some security practices could be improved to enhance digital safety.

Table 5*Correlations between Knowledge, Attitude, Practices*

		Knowledge	Attitude	Practices
Kendall's tau_b	Knowledge	1.000		
		195		
	Attitude	.268**	1.000	
		.000	.	
		195	195	
	Practice	.418**	.396**	1.000
		.000	.000	.
		195	195	195

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis using Kendall's tau-b reveals statistically significant positive relationships between knowledge, attitude, and practices related to e-banking among the respondents. The correlation coefficient between knowledge and attitude is 0.268 ($p < 0.01$), indicating a weak but significant positive association suggesting that higher knowledge about e-banking tends to be associated with a more favorable attitude. The correlation between knowledge and practices is stronger at 0.418 ($p < 0.01$), meaning that those with higher knowledge are more likely to engage in e-banking practices. Similarly, the correlation between attitude and practices is 0.396 ($p < 0.01$), suggesting that a more positive attitude is also linked with greater engagement in e-banking practices. All three variables are significantly and positively related, supporting the idea that knowledge and attitude contribute to actual e-banking behavior.

Table 6*Repeated Measures ANOVA*

Test/Effect	Statistic / Value	Significance (p-value)	Interpretation
Multivariate Test (Wilks' Lambda)	$\Lambda = 0.950, F(2, 193) = 5.130$	.007	Significant difference among variables
Mauchly's Test of Sphericity	$W = 0.949, \chi^2(2) = 10.063$	.007	Sphericity violated; correction needed
Sphericity Correction	Greenhouse-Geisser $\epsilon = 0.952$	—	Used to adjust degrees of freedom
Within-Subjects Effect (Greenhouse-Geisser)	$F(1.903, 369.241) = 4.270$	.016	Significant differences in means
Within-Subjects Contrasts	$F(1, 194) = 1.591$	.209	Not significant
– Linear			
Within-Subjects Contrasts	$F(1, 194) = 8.491$	.004	Significant quadratic trend
– Quadratic			

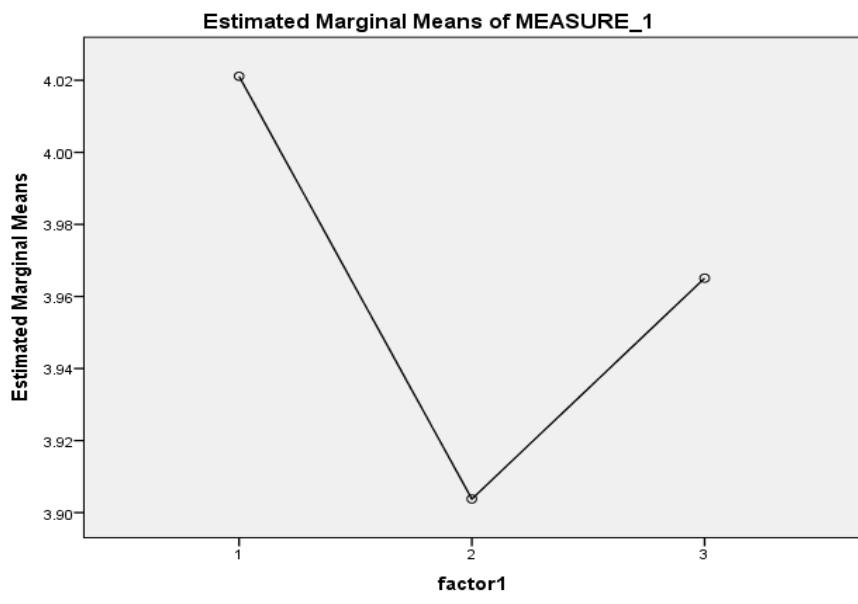
The Repeated Measures ANOVA was used to examine whether there were significant differences among participants' knowledge, attitude, and practice of e-banking. The multivariate test using Wilks' Lambda showed a statistically significant difference ($p = .007$), meaning that at least one of the variables knowledge, attitude, or practice differs in its average score. However, Mauchly's Test of Sphericity was also significant ($p = .007$), indicating that the assumption of sphericity (equal variances of the differences between variables) was violated. Because of this, the Greenhouse-Geisser correction was applied to adjust the results.

After correction, the within-subjects effect remained significant ($p = .016$), showing that the average levels of knowledge, attitude, and practice were not the same participants, on average, scored differently across these three dimensions. The linear contrast was not significant ($p = .209$), suggesting there was no consistent increase or decrease across the three variables. However, the quadratic contrast was significant ($p = .004$), indicating a curved trend perhaps participants scored high in knowledge and practice but slightly lower in attitude, or vice versa.

The analysis shows that there is a meaningful difference in how participants rated their knowledge, attitude, and practice of e-banking, with the differences following a nonlinear pattern rather than a simple increasing or decreasing trend.

Figure 1

Different between knowledge, attitude, and practice



The line graph illustrates the estimated marginal means of three dimensions of e-banking: knowledge, attitude, and practice. The x-axis represents the factor (1, 2, 3) and the y-axis represents the estimated marginal means. The data points show a U-shaped curve, indicating that knowledge is the highest dimension, followed by practice, and then attitude. This pattern suggests a significant quadratic trend, where participants' knowledge and practice scores are higher than their attitude scores, despite being knowledgeable.

Discussion

This study explored how users in Nepal interact with e-banking services by examining their levels of knowledge, attitude, and practice (KAP). The findings reveal several important insights into current user behavior and point to areas where improvements can enhance digital

banking engagement and safety. First, the results show that users generally have a high level of awareness about e-banking. Most participants are familiar with mobile banking, capable of conducting online transactions, and understand basic digital security measures such as two-factor authentication and encryption. This high awareness can likely be attributed to the widespread use of smartphones, promotional efforts by banks, and the increased reliance on digital platforms during and after the COVID-19 pandemic. However, gaps remain in more technical aspects of cybersecurity. For instance, not all users felt confident in identifying fraudulent websites or reporting suspicious activity, suggesting that while general awareness is strong, deeper technical knowledge may be lacking.

Attitudes toward e-banking were also mostly positive. Participants appreciated the convenience of digital services, expressed trust in Nepali banking institutions, and showed confidence in using these platforms. Many were even willing to recommend e-banking to friends and family. Despite this, some users expressed lingering concerns about security and believed traditional banking to be safer. This indicates that while people are embracing digital platforms, a cautious mindset still exists. The findings also suggest that both the government and banks are only moderately successful in promoting e-banking awareness, indicating a need for more targeted and effective communication strategies to build trust and address users' concerns.

In terms of actual practices, users demonstrated high engagement with e-banking. Activities such as bill payments, fund transfers, and the use of transaction notifications were common, showing that digital banking has become a regular part of users' financial routines. However, inconsistencies in safe online behavior were evident. Many users did not regularly change passwords or verify website URLs before logging in basic practices essential for avoiding fraud. This points to a gap between usage and secure usage, highlighting the need for further education on safe digital habits.

The statistical analysis supported the KAP framework by revealing significant positive correlations between knowledge, attitude, and practice. Notably, knowledge had the strongest relationship with practice, indicating that those who are better informed are more likely to use e-banking actively and safely. Attitude also correlated with practice, suggesting that how users feel about e-banking influences how they use it. These findings reinforce the idea that improving users' knowledge through digital literacy programs, training, and clear instructions from banks can lead to more responsible and frequent use of e-banking services.

Additionally, the repeated measures analysis showed a significant difference among the average scores for knowledge, attitude, and practice. Interestingly, the attitude score was

slightly lower than the scores for knowledge and practice, forming a noticeable quadratic trend. This pattern indicates that while users are knowledgeable and actively using e-banking, their attitudes may not be fully aligned possibly due to unresolved concerns about trust and digital security.

The study suggests that although e-banking is expanding rapidly in Nepal and users are becoming more digitally engaged, there is still considerable room for improvement. Efforts should not only aim to enhance access to digital services but also focus on building trust, strengthening users' understanding of cybersecurity, and encouraging consistent safe practices. Banks and financial institutions can support this by offering user-friendly guides, launching awareness campaigns, providing responsive customer support for suspicious activity, and using digital platforms like apps and media channels to promote cybersecurity tips and best practices.

Conclusion

The study highlights the importance of addressing users' security concerns to improve their attitude toward e-banking. Although users demonstrate good knowledge and engagement, cautious perceptions may limit the full potential of digital banking adoption. Enhancing trust and confidence in e-banking services is essential for encouraging safer and more widespread use. Closing the gap between knowledge and attitude can help promote a more positive banking experience and support the growth of electronic financial services in Nepal.

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