Sibatik Journal
Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, dan Pendidikan
E-ISSN: 2809-8544

PAYMENT SCHEME'S EFFECTIVENESS AMONG SELECTED PRIVATE HIGHER EDUCATION INSTITUTIONS IN NATIONAL CAPITAL REGION: BASIS FOR DEVELOPING STRATEGIC POLICY

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Abstract

The COVID-19 pandemic boosted the utilization of online payment schemes or methods, which has been proven very beneficial. It kept the economy running as well as school operations. In particular, Higher Education Institutions (HEIs) adopted online payment transactions to allow students to proceed with enrollment. Yet, this abrupt change directly affected the students and parents especially on the use of online payment procedures in paying tuition fees. In this study, the researcher aimed to assess the effectiveness of online payment methods based on the following criteria: cost-efficient, safety, ease of use and speed. Also, the researcher wanted to investigate if there was a significant difference between the profile of the respondents and the effectiveness of online payment methods. Using cluster sampling, 1,050 students and 1,050 parents from selected cities in National Capital Region (NCR) namely, Manila City, Quezon City, and Taguig City, were recruited. Based on the results, the profile composition of parent respondents was, they were between 41 to 50 years of age, all females, with family monthly income of P30,001 to P45,000 and P45,000 to P60,000, college graduates, and preferred to use credit card and debit card. Furthermore, student respondents were mostly at the age of 19 to 20 years old, all females, in 4th year college, and preferred to use credit card and mobile payments. As to the assessment of online payment methods, most of the respondents perceived the online payment methods in terms of cost-efficiency, safety, and ease of use to be very effective. As to the challenges and issues experienced by students and parents on online payment methods, the following were identified: unfamiliarity, disorientation, difficulty in validation and problems with online applications. As to finding the significant difference between the age of respondents and the effectiveness of online payment methods, a significant difference between age groups and cost efficient, safety, ease of use, and speed was posited. As to finding the significant difference between sex of respondents and the effectiveness of online payment method, results revealed that there was a significant difference between sex and cost efficient, ease of use and speed. However, no significant difference was found between sex and safety. This study recommends that school administrators should provide orientation to new and old students regarding the use of online payment methods. They should make online tutorials on downloading and use of online applications available since it is critical for the student and parents to adapt online payment methods. The accounting and cashier should have a clear, simple and easy to follow procedure for online payment transaction. It is highly suggested also that the accounting office lessens the days of validating the payment made by the students and they must have a system for it. The school should promote online payment transaction as it saves them resources from filing payment receipts and using facilities. In addition, the social distancing should be encouraged to avoid the spread of COVID-19 virus. This study has significant implications on the management system implemented by the higher education institution.

Keywords: Higher Education, Online payment methods, parents, students, parents

INTRODUCTION

Electronic payment has progressed beyond its original purpose of making purchases and other monetary transactions more convenient than traditional methods worldwide. Today, e-payments are becoming a stress-free, quick, and simple payment method, allowing

DOI: https://doi.org/10.54443/sibatik.v2i3.658

businesses and consumers to achieve higher cash flow and operate smoothly. Lyra Network (2021) provides an all-encompassing definition of e-payment, which stands for "Electronic Payment," allowing customers to pay for services and products using electronic methods such as card-based payments, e-checks, digital wallets, and internet banking (Chaves et al., 2019; Pattan & Meenal, 2018). Recent technological advancements and the growth of online commercial transactions allow e-payment to enhance its usability vastly. For instance, a report from Statisca Research Department (2021) mentioned an increase in cashless transactions in 2020 and a projected 75.5 million e-payment users in the Philippines in 2025. Furthermore, the Bangko Sentral ng Pilipinas (BSP) reported that Filipinos used cashless payments to make 4.6 billion monthly payments in 2019. In addition, according to the Department of Trade and Industry, the Philippines now has 15 e-payment providers, with Paymaya, Gcash, and Coins.ph being the top three e-payment service providers (Raymart, 2021). As the said service providers are embracing cashless payment methods, contactless payments have also been introduced as another payment tool for customers. Consumers can use tap-to-go systems to make purchases without physically swiping a payment card into a point-of-sale device, signing names, or entering PINs (Kagan, 2020).

The transition from traditional to a new normal transaction required companies to drive innovation and stricter competition. Currently, the three major e-payment providers have provided contactless payment cards for daily purchases and transactions by Filipinos. To begin, coins.ph provided a beep card for transportation and retail purchases at Wendy's, FamilyMart, and Ministops (Coins.ph, 2021). Meanwhile, PayMaya Enterprise proudly introduced its three contactless payment cards, including beep cards, EMV cards, and prepaid cards, allowing customers to pay online and offline at stores accepting card payments (PayMaya Philippines Inc.). As well as PayMaya, GCash welcomed a reloadable prepaid card to customers, a payment tool for online and in-store purchases known as the Gcash Mastercard (Zoleta, 2021).

Recent studies have highlighted the link between security and trust and customers' adoption of e-payment. Security and trust concerns about privacy, fraud, and identity theft are the most prevalent determinants among consumers when considering using e-payment. (Patel et al., 2019; Nguyen & Huynh, 2018). Because of the increase in transactions, single authentication is not enough for expensive purchases. For instance, there is a need for a stronger security system and authentication to look at the validity of individuals by using multi factor authentication (Hassan et al., 2020; Piotrowska et al., 2017). In addition to the increased transactions, the COVID-19 pandemic significantly influenced society and services, driving businesses to adopt new technologies. Contactless payment technology

is proposed to be adopted and maintained as a protective health habit to reduce the risk of COVID-19 infection (Puriwat & Tripopsakul, 2021). However, Alrawais (2020) discussed that the security of near-field communication (NFC) or contactless payment remains an issue, requiring additional investigation and research. As an analogy, NFC cannot safeguard against several of the surveyed attacks, such as eavesdropping or data manipulation.

DOI: https://doi.org/10.54443/sibatik.v2i3.658

Despite the immense popularity and modernization of e-payment, the ongoing advancement of technology increases the risk, prompting the need for e-payment providers to improve their service and product offerings to stay abreast of the accelerated era of technological change. Security and trust have been identified as essential factors in the use of e-payment (Barkhordari et al., 2017; Oyelami et al., 2020). Meanwhile, perceived ease of use and perceived usefulness were among the original determinants for e-payment use and use of e-payment methods among customers (Setiawan & Setyawati, 2021; Antinoja & Scherlin, 2019). Furthermore, customer satisfaction was found to have a relationship with the initiatives of e-services in the three most accepted categories, such as security and trust, ease-of-use, and environmental concerns, in the areas of technology adoption (Herath, 2019). The gap between real technological innovations and the extent of security and customer trust in e-payment raises an intriguing question for researchers on eliminating the predictors that discourage customers from using e-payment regularly. For example, Filipinos prefer over-the-counter transactions and cash-on-delivery (COD) for online shopping because of security issues.

In the educational context, the growing popularity of electronic transactions has prompted schools to invest in tools and applications. This digital payment platform speeds up the processing of expenses like K 12 meal costs and college tuition (Paykamian, 2021). Payments in Higher Education Institutions (HEIs) are a crucial but often overlooked part of the equation for schools looking to serve their parents and students, as they are often handled by a third party (Coppolo, 2021). Moreover, schools have embraced more digital payment options for tuition fees and some after-school program expenses.

Despite using e-payment systems at universities, students have continued to face challenges with the system and traditional payment (Mwewa, 2018; Cendana & Palaoag, 2020). Some students still use traditional payment to complete the payment and registration process, imposing a threat to cleanliness and health safety, which is not part of the initial initiative in a cashless transaction. People are worried about virus infection using real money (Aji et al. 2020). Therefore, a new way of processing student payments must be found. Thus, this study assesses the potential success of an enhanced payment method to facilitate more accessible, reliable, and safer payment and registration processes in HEIs.

In the present study, the researcher examined electronic payment in an academic context as a mode of payment for students and parents in tuition fees and miscellaneous. However, existing research on electronic payment is found beneficial and advantageous. The researcher recognizes the need to assess the effectiveness of online payment to provide evidence of its usefulness and efficacy. Thus, this study focused on assessing the effectiveness of online payment in a selected private higher education institution.

METHOD

The Mixed-method sequential explanatory design was used in the study. It comprises two distinct quantitative and qualitative data (Creswell, 2018). The procedure aims to collect, analyze, and mix or integrate quantitative and qualitative data within a single study to

understand the research problem better. Mixing both kinds of data provides more relevant and grounded results for capturing issues and details of situations.

Respondents and Sampling

The target participants of this study were 1,050 college students and 1,050 parents from selected Private Higher Education Institutions (HEIs) in the National Capital Region. Since there are many private schools in NCR and it is impossible to collect the data simultaneously, the researcher decided to use cluster sampling.

The cluster sampling technique was used in the study. It is a probability sampling technique usually used to study large populations geographically dispersed (Makela et al., 2018). In this study, 1,050 student and 1,050 parent respondents were recruited from the study NCR. Using the fishbowl technique, the researcher listed all the cities in NCR and put them in the bowl (the cities represent the clusters for NCR). The researcher randomly selected three cities that will be the focus of the study namely, Taguig City, Quezon City, and Manila was randomly selected. From here, twenty-one (21) private schools were randomly selected; seven (7) schools in Taguig, seven (7) schools in Quezon City, and seven (7) schools in Manila. The letter of request was sent to the twenty-one (21) private HEI's. Furthermore, participants should be given a variety of methods for obtaining survey approval, such as messenger or email (Owen-Smith et al., 2016).

After the survey, a purposive sampling technique was utilized to interview five student respondents and five parents to determine the problem, challenges, and issues with an online payment transaction.

Student respondents' inclusion criteria:

1. Must be enrolled in private HEIs in Quezon City, Manila City, and Taguig City.
2. Have experienced paying tuition through online transactions for at least 2 terms.
3. Full-time College Students.

Parent respondents' inclusion criteria:

1. Must have child/children enrolled in private HEIs in Quezon City, Manila City, and Taguig City.
2. Have experienced paying tuition fees through online transactions for at least 4 months.

Research Instruments

A researcher-made survey questionnaire will be used to collect data needed to answer the problems in the study.

Personal information sheet.

Part I displays a copy of the researcher's information sheet or profile of the respondent's questionnaire, which was created to elicit information on the respondents' profile variables.

DOI: https://doi.org/10.54443/sibatik.v2i3.658

Effectiveness of Payment Scheme Questionnaire

(Cronbach α = 0.80) A 16-item question that measures the effectiveness of the payment scheme as to cost efficiency (4-item), safety (4-item), ease of use (4-item), and speed (4-item) answer using a 5-point Likert scale from 1 = as very not effective to 5 = very effective. Sample question, '*helps me saves my transportation,*' 'my personal data, '*password and pin are protected,*' and '*I am free of filling out many forms before payment*.'

Semi-structured questionnaire

The guide questionnaire was prepared for the interview. This helps the researcher explore the challenges, issues, or problems experienced in using online payment.

Data Gathering

To achieve the study's goal, the protocol was approved by the AMA school administrators and selected Private HEIs. The researcher obtained permission from twenty-one selected private HEIs before distributing the survey form. Participants who will give their consent will be given a survey form. The survey form contained information on the study's purpose before the survey was administered. This contains information regarding their rights, such as: a) they can join or leave the study at any time; b) they will not be paid in any way for participating; c) there are no right or wrong responses; d) all items must be answered, and e) they can take their time when completing the instrument. To maintain anonymity, the participants' identities were not obtained.

Data Analysis

The researcher will use different statistical tools to organize the analyzed data that shall be gathered to answer the question depicted in the study. Statistical Package for Social Science (SPSS) will be used to analyze the data. SPSS is a Windows-based program that can perform data entry and analysis to create tables and graphs. It can perform highly complex data manipulation and analysis with simple instructions.

The statistical tools that will be used in the study are the following:

1. Frequency and Percentage Distribution. This will be used to determine how a part relates to its whole, percentage statistical measures will be used extensively in describing the profile of the respondents. This will be used to determine and present the profile of the study's respondents quantitatively.
2. Weighted Mean. Since the options of the items of the questionnaires are assigned with points, the weighted mean is used as the measure of central tendency. The researcher will use this to determine the perceptions of the respondents. The following 5-point Likert Scale will be used:

   For the assessment of the respondents as to the effectiveness of payment methods:

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Scale Value	Mean Range	Descriptive Interpretation	Narrative Interpretation
5	4.21-5.00	Very Effective	This means that the students and parents very delighted with HEIs payment methods
4	3.41-4.20	Effective	This means that the students and parents are delighted with HEIs payment methods
3	2.61-3.40	Moderately Effective	This means that the students and parents are occasional delighted with the HEIs payment methods
2	1.81-2.60	Not Effective	This means that the students and parents are not delighted with HEIs payment methods
1	1.00-1.80	Very Not Effective	This means that the students and parents are very not delighted with HEIs payment methods

3. Standard Deviation. The researcher will use this because it is the most used indicator of the degree of dispersion and the most reliable measure to estimate the variability in the total population from which the sample came.
4. One-Way ANOVA. The One-way ANOVA will be used to determine the differences between respondents in terms of socioeconomic status, age, and educational attainment on their perception of the effectiveness of the implemented payment methods.
5. T-test for independent sample. The t-test for the independent sample will be used for gender comparison on the perceived effectiveness of implemented payment methods.
6. Thematic Analysis. This qualitative analytic tool will be used to analyze interviews and create a meaningful theme out of the interview.

RESULTS AND DISCUSSION

The study's goal is to assess the effectiveness of the payment scheme. This study has two types of respondents 1) parents and 2) students using various payment methods for paying for school tuition fees and miscellaneous.

Profile of the parent and student respondents

Table 1 presents the profile of parent respondents (n = 1050). Data shows that most of the parent respondents are in the age of 41 to 50 years old (66.67%), female (66.67%), with a family monthly income of P30,001 to P45,000 (33.33%), and P45,000 to P60,000 (33.33%), college graduates (61.90%), and prefer to use credit cards (33.33%) and debit cards (33.33%).

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Table 1. Profile of the Parent respondents (n = 1050) and student respondents (n = 1050)

Profile	Frequency	Percentage
Parents		
Age		
31 to 40 years old	200	19.05
41 to 50 years old	700	66.67
51 to 60 years old	150	14.29
Gender		
Female	700	66.67
Male	350	33.33
Monthly income		
PHP30,001 to PHP45,000	350	33.33
PHP45,001 to PHP60,000	350	33.33
PHP60,001 to PHP75,000	200	19.05
PHP75,001 to PHP90,000	150	14.29
Educational Attainment		
College Level	230	21.90
College Graduate	650	61.90
Post-Graduate	170	16.19
Payment methods		
Credit card	350	33.33
Debit card	350	33.33
Mobile payments	200	19.05
Online banking	150	14.29
Students' Age		
18 years old and below	200	19.05
19 to 20 years old	700	66.67
21 years old and above	150	14.29
Gender		
Female	650	61.90
Male	400	38.10
Year/ Level		
1st Year	150	14.29

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2nd Year	200	19.05
3rd Year	300	28.57
4th Year	400	38.10
Payment methods		
Credit card	350	33.33
Debit card	200	19.05
Mobile payments	350	33.33
Online banking	150	14.29

As to student-respondents profile, mostly are between the age of 19 to 20 years old (66.67%), female (61.90%), 4th-year college students (38.10%), and prefer to use credit cards (33.33%) and mobile payments (33.33%) see table 2.

Effectiveness of online payment methods

The parent and student respondents assess the effectiveness of online payment based on efficiency, safety, ease of use, and speed. Table 3 shows the effectiveness of online payment methods as to cost-efficiency.

Table 2. Effectiveness of online payment methods as to cost-efficiency

Indicators	Mean	SD	Verbal Interpretation
1. Helps me save my transportation expenses	4.26	0.44	**Very Effective**
2. Saves my energy and time from going to school	4.38	0.50	**Very Effective**
3. I can still save some money even if some payment method has an additional charge	4.28	0.44	**Very Effective**
4. I can still attend to my other activities	4.39	0.49	**Very Effective**
Overall	**4.32**	**0.28**	**Very Effective**

Table 2 describes the effectiveness of online payment methods as to be cost-efficient. The indicator "I can still attend to my other activities" as very effective with 4.39 mean. Followed by the indicator "saves my energy and time from going to school" shows a 4.38 mean, interpreted as very effective, and the indicator "I can still save some money even if some payment method has an additional charge" got a mean of 4.28, interpreted as very effective. Lastly, the indicator "helps me save my transportation expenses" is very effective, with a 4.26 mean. The overall mean shows 4.32 interpreted as very effective.

The students and parents perceived online payment methods as effective based on cost efficiency. They save transportation expenses, time, and energy by paying online instead of attending the school account accounting office. MyEdu (2021) states that a solid digital payment system is very cost-effective and saves both institutions and parents a lot of money. It saves educational institutions money on ledgers, registers, fee cards, and other paper-based

DOI: https://doi.org/10.54443/sibatik.v2i3.658

documentation. It saves parents money commuting and allows them to pay from their offices or homes. They avoid late penalties because of the timely notices and reminders.

E-payment provides greater value for money. Traditional payment methods can provide less value for money than digital payment options. Several institutions provide cash back and reductions when parents pay their cashbackosts digitally. Some companies may offer considerable discounts for paying fees in advance or on time. In addition, the electronic payment system encourages parents and kids to adopt sound financial habits (MyEdu, 2021).

In addition, Table 3 presents the effectiveness of online payment methods regarding safety based on parent and student perspectives.

Table 3. Effectiveness of Online Payment Methods as to Safety

Indicators	Mean	SD	Verbal Interpretation
1. No chances of getting a COVID-19 infection	4.39	0.48	**Very Effective**
2. No chances of involvement in any accident	4.64	0.50	**Very Effective**
3. My personal data, password and pin is protected	4.26	0.44	**Very Effective**
4. My money is free from stealing	4.39	0.50	**Very Effective**
Overall	**4.54**	**0.19**	**Very Effective**

Table 3 depicts the effectiveness of online payment methods as to safety. The indicator "no chances of involvement in any accident" reflects 4.64 mean or very effective. The second category, "no chances of getting COVID-19 infection" and "my money is free from stealing" with 4.39 mean interpreted as very effective. Lastly, the last category "My personal data, password and pin is protected" with 4.26 mean interpreted as very effective. The overall mean shows 4.54 mean interpreted as very effective.

Safety on using the online payment method such as protection for data privacy and passwords and physical safety to avoid COVID-19 infections is perceived by the parent and student respondents' advantage on using the online payment method. The hazards associated with traditional money, on the other hand, are eliminated with digital payment. MyEdu (2021) claims that digital payment gradually supplanted traditional monetary transactions during the coronavirus outbreak.

Due to the tremendous impact of the coronavirus pandemic on their daily lives, particularly the constraints on physical travel imposed by the crisis, more Filipinos are now adopting digital channels to perform transactions — even vital payments, as stated by Lucas (2020). More crucially, due to public health concerns, as many as nine out of ten local users of electronic payment systems now prefer conducting cashless transfers over cash payments (Lucas, 2020).

Based on the findings of the online poll conducted by PayPal, 87% of Filipinos increased their use of digital payments during the pandemic, and 90% stated they preferred digital payments to cash during this time.

Jadhav et al., (2015) observe that under the present traditional payment system, there is a risk of encountering faked signatures for transactions, and in the E-payment system, a customer's password could be hacked and abused by another person. As a result, security is still an issue in these payment apps. There are various methods for protecting user or customer information from forging signatures, password or security PIN hacking, and other threats. However, such payment schemes are not without flaws. Single-factor authentication, such as two-factor authentication, is now widely used. In the internet and banking systems, passwords are no longer considered secure. Automated password-collecting algorithms can readily identify easy-to-guess passwords, such as names and ages, posing a risk to our personal information or bank accounts.

In the case of E-payment, biometric authentication makes sense. No one needs pockets in today's world, i.e., pocketless. Those jingling keys, plastic cards (i.e., credit cards, etc.), and checkbooks are replaced with something closer to the body. When someone needs to unlock a door or make a transaction, they can use a fingerprint or other biometric approaches, such as a voice command or a computer scan of their eyeball. A new approach to fingerprint payment technology, namely combining E-payment with biometric technology, is superior since it not only identifies but also authenticates (Dynamically) (Jadhav et al. 2015).

Furthermore, payments done through wireless devices such as mobile phones and smartphones, according to Hoofnagle et al. (2012), are expected to give greater convenience, lower transaction fees, and increase the security of electronic payment.

As to ease-of-use, table 4 illustrates the effectiveness of online payment methods.

Table 4. Effectiveness of Online Payment Methods as to Ease-of-Use

Indicators	Mean	SD	Verbal Interpretation
1. I am comfortable paying tuition fees	4.39	0.50	**Very Effective**
2. I am free of filing out many forms' prior payment	4.25	0.44	**Very Effective**
3. I am free from counting bills and coins during payment	4.33	0.49	**Very Effective**
4. I am free from a long waiting line during payment	4.31	0.50	**Very Effective**
Overall	**4.32**	**0.25**	**Very Effective**

The above table tackles the effectiveness of online payment as to ease of use. The category "I am comfortable paying tuition fees" with a mean of 4.39, is interpreted as very effective. The second category, "I am free from counting bills and coins during payment" shows a 4.33 mean, interpreted as very effective. Then, "I am free from a long waiting line during payment" with a mean of 4.31, is very effective. Lastly, "I am free of filing out many

forms' prior payment" with a mean of 4.25, interpreted as very effective. The overall mean shows 4.32 with very effective interpretation.

This means that students and parents perceived online payment as easy to use and convenient. They get away from the hustle of counting bills, filling out the forms for traditional payment, and waiting in long lines. MyEdu (2021) mentioned that advanced digital payment systems and school management software are very easy to use. It not only offers a variety of payment options, but it also provides real-time analytics, is designed for speedy operations, and allows users to see all the data. Parents can even pay their fees in a few easy steps outside of office hours.

Setiawan and Setyawati (2020) stated that perceived ease of use has a favorable and significant impact on attitudes about usage based on statistical findings. This effect demonstrates that the convenience of mobile payment will increase the desire to utilize mobile payment in transactions. In addition, Previous research (Jiwasiddi et al., 2019) supports the findings of this study, leading to the conclusion that perceived ease of use is one of the elements that greatly influence attitudes toward usage. Users will embrace new technology more quickly if it is perceived as simple and consumes less time and energy. As Chuang et al., (2016) claims, perceived ease of use positively impacts attitudes toward utilizing mobile payments because if a mobile payment service is simple to use, consumers' attitudes toward using mobile payments will also improve.

Lastly, table 5 describes the effectiveness of online payment methods as to speed. The table above discussed the effectiveness of online payment as to speed. The indicator "paying is fast" reflects a 4.64 mean, interpreted as very effective. Then, the indicator "processing of payment is fast" shows a mean of 4.40, interpreted as very effective. The indicator, "payment validation is fast" reflects 4.31, interpreted as very effective. Lastly, "the procedure and process for payment are short," with a mean of 4.26, interpreted as very effective. The overall mean is 4.40, with a very effective interpretation see table 6.

Table 5. Effectiveness of Online Payment Methods as to Speed

Indicators	Mean	SD	Verbal Interpretation
1. Processing of payment is fast	4.40	0.49	**Very Effective**
2. Paying is fast	4.64	0.50	**Very Effective**
3. The procedure and process for payment is short	4.26	0.44	**Very Effective**
4. Payment validation is fast	4.31	0.46	**Very Effective**
Overall	**4.40**	**0.22**	**Very Effective**

This means that the students and parent respondents perceived online payment as fast in paying tuition and other school fees. They perceived paying online as a simple procedure. When parents can pay fees with a single click of a button, they will be less likely to visit the institute and wait in huge lines to do so. Parents can also pay through a variety of methods, such as net banking, smartphone apps, or UPI transfer. MyEdu (2021) argues that it ensures

DOI: https://doi.org/10.54443/sibatik.v2i3.658

speedy operations because the complete transaction will take only a few seconds, and parents will be able to download fee receipts as proof of payment.

According to Newsbytes.PH (2020), PayMaya has provided cashless payment solutions online and in-school to over 40 schools across the country, providing students with a safe and simple way to pay for registration fees and other educational expenses as schools embrace alternative learning methods this year. Furthermore, by removing the need for students to carry currency on their person, cashless payment in educational institutions can lead to faster financial transactions, transparency, reduced risk of theft, efficiency, expense tracking, and bank benefits, and may even contribute to proper cleanliness.

Convenience (or compatibility) is the consistency between technological progress and consumers' experiences, values, and needs. The flexibility of these systems, which allows them to be easily integrated into consumers' daily life, is a crucial feature of compatibility for users to accept mobile payment methods. In a study, Mallat (2007) discovered that mobile payment methods are the most convenient for modest payments, such as cinema tickets, mobile games, and internet content.

PYMNTS (2021) argues that the demand for faster, more efficient ways to collect and disburse payments for educational services ranging from distance learning to online test preparation to student loan repayment, is growing as the learning environment expands beyond campuses and into the virtual sphere.

Challenges and issues experienced by the respondents in using online payment methods

The parent and student respondents shared their feedback on the use of online payment methods.

Theme 1: Not familiar with online payment methods

Respondents' familiarity with online payment methods makes it convenient and easy to pay tuition fees and miscellaneous. However, the use of online payment methods do not introduce properly may affect the success of online payment methods as well as the adaption of the customer to the new payment scheme.

According to Participant 1, "*I am conditioned to pay my son's tuition fees through going to the school student accounting office. Then, pandemic came I struggle because I am not familiar with online payment methods.*"

Participant 5 mentioned, "*I am not aware that Gcash and BPI online banking can be used for paying tuition fees. Even pandemic I book appointments to pay for my child's tuition in school. No announcement from schools they allow online payment*."

Theme 2: Lost! Not oriented on the use of various online payment methods

Due to the COVID-19 pandemic, private HEIs adopt online payment methods to protect their employees and students from infection. On the contrary, prior to its adaption, promotion, and orientation on the use of the new payment scheme should be conducted.

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According to Participant 5, "*The school did not provide any information in their Facebook page or formal communication on the acceptance of online payment. Terrible! We pay for penalties even if they know we cannot go out because of a lockdown*."

Participant 8, "*I am not tech savvy, I am not good at using mobile and computers… I ask my daughter to assist me so we can pay her tuition fees online*."

Participant 2 mentioned, "*There is this time I talked to the Department Chair regarding alternative means of paying tuition… hmm…The community quarantine limits us from going to school. Then, a school announcement came very late regarding online payment. However, it is not clear and not communicated properly as to the process of payment*".

In addition, Participant 10 shared that "*Pandemic came. I am a transferee. I don't know where to seek assistance. It takes three emails before accounting responds to my concerns about paying tuition fees. They did not inform me that online payment can be used for paying tuition fees*."

Theme 3: Validation of online payment is sometime difficult

The authenticity of parents' and students' claims on successful online payment requires validation from the accounting office. When validation of online payment is not systematic it adds to the dissatisfaction of customers with its payment system.

According to Participant 10, "*I thought once I pay the tuition fee it's already okay… Well it's not! You have to wait for three days for validation to reflect in the system before you become officially enrolled*".

Participant 1 discussed that "*They did not communicate earlier the process for online payment. Specifically, the validation of online payment…… They wait for many students to complain before they act on it*."

Theme 4: Online payment apps problem

The promise of online payment to ease transactions and make it comfortable for the customers backfire when the app itself has problems and internet connectivity.

According to Participant 2, "*When you update the Gcash app there is a problem with online payment. It did not provide confirmation about your payment but your balance has been deducted*." Participant 2 (student)

Participant 4 mentioned, "*When paying online, I learned you have to have a stable internet connection. It takes time for an apps to load. You cannot proceed with online payment unless you have stable internet or data*."

Differences in Respondents' Profile and Effectiveness of online payment methods

Table 6 below presents the differences in respondents' selected profiles on the effectiveness of online payment methods. Based on the results, there is a significant difference in the opinion of the various age groups on the payment methods as to cost-efficiency, $F(5, 2093)$ 122.38, $p < 0.01$. As to the decision of hypothesis, the null hypothesis is rejected. This means that various age groups (18 years old and below, 19 to 20 years old,

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21 to 25 years old, 31 to 40 years old, 41 to 50 years old, and 51 to 60 years old) perceived the online payment methods effectiveness differently as to its cost efficiency.

Table 6. Differences in Selected Profiles on the Effectiveness of Online Payment Methods

Profile	Cost Efficiency	Safety	Ease of Use	Speed
Age 31 to 40 years old 41 to 50 years old 51 to 60 years old 18 years old and below 19 to 20 years old 21 years old and above	F-value = 128.38, *df* (5, 2093) $p < 0.01$ Significant	F-value = 57.96, *df* (5, 2093) $p < 0.01$ Significant	F-value = 76.84, *df* (5, 2093) $p < 0.01$ Significant	F-value = 159.83, *df* (5, 2093) $p < 0.01$ Significant
Gender Female Male	t-value = 2.40, *df* (2098) $p < 0.01$ Significant	t-value = 2.50, *df* (2098) $p > 0.05$ Not Significant	t-value = 10.26, *df* (2098) $p < 0.01$ Significant	t-value = -3.59, *df* (2098) $p < 0.01$ Significant

As to safety, there is a significant difference in the perception of the various age groups on the payment methods safety, F (5, 2093) 57.96, p <0.01. As to the decision of hypothesis, the null hypothesis is rejected. This means that various age groups (18 years old and below, 19 to 20 years old, 21 to 25 years old, 31 to 40 years old, 41 to 50 years old, and 51 to 60 years old) perceived differently the online payment methods effectiveness as to the safety.

Furthermore, a significant difference in the opinion of the various age group regarding the payment methods as to ease of use, F (5, 2093) 76.84, p <0.01 was observed. As to the decision of hypothesis, the null hypothesis is rejected. This means that various age groups (18 years old and below, 19 to 20 years old, 21 to 25 years old, 31 to 40 years old, 41 to 50 years old, and 51 to 60 years old) perceived the online payment methods effectiveness differently as to the ease of use.

Based on the results, there is a significant difference in the perception of the various age groups on the payment methods as to safety, F (5, 2093) 159.83, p <0.01. As to the decision of hypothesis, the null hypothesis is rejected. This means that various age groups (18 years old and below, 19 to 20 years old, 21 to 25 years old, 31 to 40 years old, 41 to 50 years old, and 51 to 60 years old) perceived the online payment methods effectiveness differently as to the speed.

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In terms of differences in sex as to the effectiveness of payment methods for cost-efficient. Findings show that males, x = 4.36, and females, x = 4.31 significantly different as to online payment method for cost-efficient, t (2098) 2.40, p <0.05. As to the decision of hypothesis, the null hypothesis is rejected. This means that male and female respondents have different views on the effectiveness of online payment methods for cost efficiency.

Sex is also significantly different from payment methods in terms of speed. Based on the results, the male, x = 4.38, and female, x = 4.41, significantly have different perceptions of the effectiveness of online payment methods for speed, t (2098) -3.59, p <0.05. As to the decision of hypothesis, the null hypothesis is rejected. This means that male and female respondents have different views on the effectiveness of online payment methods for speed.

However, there is no significant difference between sex and the effectiveness of online payment methods to ease safety. Findings show that males, x = 4.54, and females, x = 4.53 did not significantly differ in their opinion of the effectiveness of online payment methods for safety, t (2098) 2.50, p >0.05. As to the decision of hypothesis, the null hypothesis failed to reject. This means that male and female respondents hold similar opinions on the effectiveness of online payment methods for safety.

CONCLUSION

This study examined the effectiveness of online payment methods on higher education institutions in Metro Manila. The researcher concluded that:

1. The parents are in middle adulthood and capable of providing financial support to their child or children's education. The parents are more comfortable using credit and debit cards to pay tuition fees for their child or children.
2. The students are in emerging adulthood and are technologically savvy. They can utilize various online payment methods for paying their tuition fees.
3. The students and parents recognize the advantages of using online payment methods for paying tuition fees.
4. Despite the effectiveness of online payment methods, students and parents experience challenges and problems in using online payment methods. The abrupt implementation of online payment methods resulted in confusion and unfamiliarity with online payment methods, including the validation of online payment.
5. Different age groups have varying views and perspectives on the effectiveness of online payment methods. In addition, diverse opinions and views from various gender groups emerged on the effectiveness of online payment methods.
6. A strategic policy on implementing online payment methods shall be established. This includes roles and responsibilities of the student accounting office, students, and other offices involved in the admission and enrollment of students.

Recommendations

Based on the findings and conclusions drawn, the researcher came up with the following recommendation:

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1. The school administrators should provide orientation to parents and students regarding online payment methods. An online tutorial on the download and use of the apps is critical for the student and parents to adopt online payment methods.
2. The accounting and cashier should improve the procedure or process specifically for online payment transactions.
3. The school should officially recognize the online payment scheme as a regular alternative payment for students and parents.
4. The school should promote online payment transactions as it saves them resources from filing payment receipts and using facilities. In addition, social distancing should be encouraged to avoid spreading disease or viruses.
5. Students and parents come from different backgrounds; it is recommended that the school should allow the students and parents to choose a payment scheme they are comfortable and convenient for them.
6. The private HEIs should develop strategic policies that address the concerns of the students regarding the validation of online payment, the process of validation of student payment, and role and responsibilities of concerned offices in enrolment.

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