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Exploring Generation Z Hospitality Students' Perceptions of Hotel Information Systems Using the Technological Acceptance Model

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ABSTRACT

This research addresses the challenges Generation Z hospitality students face in adapting to the use of Hotel Information Systems (HIS) through the Technology Acceptance Model (TAM). The dynamic hospitality industry presents opportunities for businesses to innovate and enhance guest experiences through integrating technology, including HIS. This study utilizes a quantitative approach and a questionnaire to collect data from 212 students at the Bandung Tourism Academy who are currently taking or have completed HIS courses. The minimum representative sample size was 137 respondents based on proportional random sampling. The findings demonstrate that learning new technology, such as HIS, can significantly influence Generation Z hospitality students' perceptions, attitudes, and behaviors toward technology adoption within the TAM framework. This study explores how perceived usefulness and ease of use impact students' attitudes and behavioral intention to use HIS. Technological innovation in learning HIS catalyzes shaping students' acceptance and utilization of technology, supporting their proficiency in hotel operations. This research provides valuable insights for educators and industry professionals to enhance training and integration strategies by examining the relationship between Generation Z hospitality students and HIS. The study's outcomes contribute to the broader understanding of TAM's application in the hospitality industry, offering practical implications for improving technology adoption and operational efficiency.

ABSTRAK

Penelitian ini menjawab tantangan yang dihadapi mahasiswa perhotelan generasi Z dalam beradaptasi dengan penggunaan Sistem Informasi Hotel (SIH) melalui *Technology Acceptance Model* (TAM). Industri perhotelan yang dinamis memberikan peluang bagi bisnis untuk berinovasi dan meningkatkan pengalaman tamu melalui integrasi teknologi, termasuk SIH. Penelitian ini menggunakan pendekatan kuantitatif dan kuesioner untuk mengumpulkan data dari 212 mahasiswa Akademi Pariwisata Bandung yang sedang atau telah menyelesaikan mata kuliah ini. Jumlah sampel minimal yang representatif adalah 137 responden berdasarkan proporsional *random* sampling. Temuan ini menunjukkan bahwa mempelajari teknologi baru, seperti HIS, dapat secara signifikan mempengaruhi persepsi, sikap, dan perilaku siswa perhotelan Generasi Z terhadap adopsi teknologi dalam kerangka TAM. Studi ini mengeksplorasi bagaimana persepsi kegunaan dan kemudahan penggunaan berdampak pada sikap dan niat perilaku siswa untuk menggunakan SIH. Inovasi teknologi dalam pembelajaran HIS menjadi katalis pembentukan penerimaan dan pemanfaatan teknologi oleh siswa, mendukung kemahiran mereka dalam operasional hotel. Penelitian ini memberikan wawasan berharga bagi para pendidik dan profesional industri untuk meningkatkan strategi pelatihan dan integrasi dengan mengkaji hubungan antara mahasiswa perhotelan Generasi Z dan HIS. Hasil penelitian ini berkontribusi pada pemahaman yang lebih luas mengenai penerapan TAM di industri perhotelan, menawarkan implikasi praktis untuk meningkatkan adopsi teknologi dan efisiensi operasional.

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INTRODUCTION

Hospitality is a dynamic industry, constantly presenting new challenges (Adeyinka-Ojo et al., 2020). However, these challenges allow businesses to innovate and provide exceptional guest experiences. One such opportunity lies in integrating technology and digitalizing new tools and platforms (Molina-Castillo et al., 2023), which can significantly enhance the guest experience and improve operational efficiency. When guests visit a hotel, they seek a place to relax and enjoy their free time. Hospitality professionals are responsible for ensuring they are welcomed with the highest standard of hotel services, contributing to their overall experience. Technology, such as the Hotel Information System (HIS), plays a pivotal role in this process. It helps in improving hotel operational efficiency by streamlining processes, enhancing communication across various departments, and providing real-time data for decision-making (Ramanathan et al., 2016). However, competency and skills-based training is essential for enhancing the performance of the tourism workforce, which, in turn, can indirectly facilitate the adoption of technology in the hotel industry (Puspitasari, 2023). This adoption of technology, however, presents a significant challenge for Generation Z hospitality students, particularly in adapting to the use of HIS, which this research aims to address.

Proficiency in the Hotel Information System (HIS) is not just a requirement for hospitality professionals but a necessity. Mastery of HIS is crucial for managing reservations, guest services, billing, and more (Rachmawati & Wardana, 2022). This knowledge empowers them to handle daily tasks efficiently, such as quickly checking guests in and out, managing room availability, and responding promptly to guest requests. These efficient operations contribute to delivering exceptional guest experiences, underscoring the practical implications of this research.

For hospitality students, adapting to the use of a hotel information system (HIS) can be a challenging task. However, the Technology Acceptance Model (TAM) framework can serve as a guiding light in this process. By assessing their perceived usefulness and ease of use of HIS, TAM can effectively guide practical training and integration, thereby supporting their learning and proficiency in hotel operations (Kim et al., 2022). This TAM reassures the effectiveness of the research and its potential to contribute to the industry.

Every hospitality student is given a Hotel Information Systems (HIS) course, including one at Bandung Tourism Academy, for at least one semester. The Hotel Information Systems (HIS) course for hospitality students is designed to provide them with the skills and knowledge required to utilize computerized information systems in hotel operations effectively. This course encompasses general and specific objectives to prepare students to excel in the industry. The course aims to familiarize students with HIS and its crucial role in modern hotel operations. Using various HIS applications, it teaches technological proficiency, critical thinking, and problem-solving skills. The course covers hands-on experience with commonly used HIS applications such as PMS, POS systems, and channel managers. It focuses on revenue management, process optimization, Customer Relationship Management (CRM), digital marketing, and online presence (Viglia et al., 2018). The HIS course prepares hospitality students to contribute effectively to hotel operations and enhance overall performance.

The primary objective of this study is to explore Generation Z hospitality students' perceptions of the Hotel Information System (HIS) course within the Technology Acceptance Model (TAM) framework. This investigation focuses on how perceived usefulness (PU) and perceived ease of use (PEU) impact students' attitudes toward using (ATU) the system. In turn, these attitudes are expected to influence students' behavioral intention to use (BIU) the HIS. By examining these relationships, the study aims to provide insights into how the HIS course can be tailored better to meet the needs and preferences of Generation Z students, ultimately enhancing their learning experience and readiness for continuous learning and work. This readiness is particularly important as they transition into the workforce, where work motivation becomes a crucial factor influencing hotel employee performance, with higher motivation leading to improved overall outcomes (Syarifuddin, 2019).

LITERATURE REVIEW

Characteristics of Generation Z Hospitality Students

Generation Z, the cohort born roughly between the mid-1990s and early 2010s, is known for its high level of digital fluency and comfort with technology (Hernandez-de-Menendez et al., 2020). This group has grown up with the internet, smartphones, and social media, making them adept at navigating digital tools and platforms. When it comes to travel, Gen Z prioritizes personalized experiences, authenticity, and sustainability, and they often seek out unique accommodations and activities.

Regarding career aspirations, Gen Z values work-life balance, flexibility, and opportunities for growth and development (Sánchez-Hernández et al., 2019). They are also drawn to organizations that align with their values and offer meaningful work experiences. Understanding these characteristics is essential for designing effective HIS training and hospitality programs that resonate with Gen Z students. Tailoring these programs to their preferences can help prepare them for successful careers in the hospitality industry. Their nature helps them understand and adopt new technology effortlessly. Generation Z hospitality students' familiarity with technology and their adaptive nature make them quick to understand and adopt new technologies effortlessly. Growing up in the digital age has equipped them with the skills to navigate and leverage various information systems, allowing them to readily integrate HIS into their learning and future careers. This ease of adoption can lead to more efficient and effective training programs in hospitality education.

Understanding the various functionalities of Hotel Information Systems (HIS), from reservation management to guest relationship management, is crucial for Generation Z students pursuing a career in hospitality. Mastery of these systems enables them to deliver seamless and personalized guest experiences, a key aspect of success in the industry. By registering for the HIS course, students gain hands-on experience with the technology that underpins modern hotel operations, enhancing their learning and preparing them to excel in the dynamic hospitality sector (Goh & Lee, 2018). This practical knowledge empowers them to meet the high expectations of today's guests and contribute to the operational efficiency and success of hotels.

Hotel Information Systems (HIS)

Hotel Information Systems (HIS) is a tourism education course for hospitality students. This course provides an in-depth examination of hotel information systems and their application in modern hospitality operations (Ratna et al., 2018). Students will learn about various HIS applications, including reservation systems, property management systems, and guest relationship management. Through practical exercises and case studies, students will gain hands-on experience using HIS to enhance guest experiences and improve operational efficiency.

The course aims to introduce students to various Hotel Information Systems (HIS) applications used in the hospitality industry, helping them become proficient in reservation management, billing, and other hotel operations. Students will learn to leverage HIS to provide personalized guest services and manage relationships effectively. The course also explores the integration of HIS with other hotel systems to streamline operations and improve overall efficiency. Students will enhance their analytical skills, enabling them to make informed decisions and adapt to the dynamic demands of the hospitality sector by applying data-driven insights from HIS and other related information systems (Yu, 2021), such as accounting and maintenance systems.

With explicit instructor guidance, Generation Z students find learning and adapting to new technology easier, including various Hotel Information Systems (HIS) applications used in the hospitality industry. Their familiarity with digital tools and platforms, as they have grown up in a technologically advanced environment, makes them quick learners and comfortable using new software and systems (Szymkowiak et al., 2021). This inherent digital fluency allows them to efficiently integrate HIS into their education and future careers in hospitality, helping them excel in reservation management, guest services, and other hotel operations.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theoretical framework developed to understand and predict how users accept and adopt new information technology. Fred Davis proposed it in the late 1980s and early 1990s, and it has since been widely used in various fields to study user acceptance of technology, including educational contexts (Lala, 2014). This TAM model has undergone several changes. The initial model proposed is perceived usefulness, perceived ease of use, attitude toward use, and actual system use. The components of TAM can be described briefly (Al-Rahmi et al., 2019; Granić & Marangunić, 2019; Saleh et al., 2022): First is Perceived Usefulness. This component refers to the user's belief that using a particular technology would enhance their job performance or make tasks more manageable. It assesses the user's perception of the technology's utility in achieving specific goals or improving outcomes. The second is Perceived Ease of Use. This component relates to the user's perception of the ease or difficulty of using the technology. It considers factors such as the effort required to learn and operate the technology, the complexity of the interface, and the user's comfort level with the technology. The third is Attitude Toward Using. It directly influences an individual's intention to use a technology. A positive attitude based on perceived usefulness and ease of use leads to a stronger intention to use the technology. Attitude toward using acts as a mediator between perceived usefulness, perceived ease of use, and behavioral intention. It encapsulates the user's overall evaluation and emotional response toward the technology. The next is Behavioral Intention. TAM posits that an individual's intention to use a technology is influenced by their perception of its usefulness and ease of use. A positive attitude towards perceived usefulness and ease of use leads to a higher intention to use the technology. The last one is Actual Use. The model suggests that a user's intention to use a technology strongly predicts their actual use. However, external factors or constraints also impact the actual usage of technology.

The Technology Acceptance Model (TAM) has been widely applied in educational settings to examine students' acceptance and adoption of technology (Marangunić & Granić, 2015; Salloum, 2018). For instance, TAM has been used to assess students' perceptions of the usefulness of educational software and online learning platforms in enhancing learning outcomes. It also helps to understand students' comfort with classroom digital tools and their ease of use. Furthermore, TAM can predict students' intention to use technology for educational purposes based on their perceived usefulness and ease of use, providing insights into how technology can be effectively integrated into educational practices. In summary, TAM remains a foundational framework for understanding user acceptance of technology. It includes its application in educational settings to assess students' attitudes and intentions toward using technology for learning purposes.

Research Framework and Hypotheses

According to TAM, perceived ease of use refers to the user's subjective perception of how easy it is to use a particular technology. It is one of the key determinants influencing users' acceptance and usage behavior. Perceived usefulness is another critical component of TAM, representing the user's belief that using a specific technology will enhance their job performance or make certain tasks easier and more efficient (Abdullah et al., 2016; Baki et al., 2018). It suggests that the perceived ease of use of a technology influences its perceived usefulness. In other words, when users find a technology easy to use, they are more likely to believe that it is useful in improving their performance or achieving their goals. A good fit between the characteristics of a technology and users' cognitive processes enhances usability and, consequently, perceived usefulness. When a technology is easy to use, it fits well with users' mental models, contributing to perceived usefulness. The ease with which a technology aligns with users' tasks and workflows affects its perceived usefulness. If a technology is easy to use, it is more likely to fit seamlessly into users' work processes, enhancing perceived usefulness (Huang et al., 2022).

Users are more likely to adopt a technology if they perceive it as easy to use. When the learning curve is minimal, and tasks can be accomplished with ease, users are more inclined to see the technology as beneficial, thus increasing perceived usefulness. A positive experience with the ease of use contributes to users' overall satisfaction and positive perceptions of the technology. This positive experience, in turn, influences perceived usefulness (Abdullah et al., 2016). It is in line with the central tenets of TAM, emphasizing the importance of users' perceptions of the ease of use in shaping their beliefs about the usefulness of a technology. It highlights the interconnectedness of these two factors in influencing users' acceptance and adoption behaviors.

In summary, Hotel Information System (HIS) serves as a catalyst of students' perceptions, attitudes, intentions, and actual use of technology within the TAM framework. Successful integration of innovative technologies that align with students' needs, provide clear benefits, and enhance their learning experiences can lead to increased acceptance and utilization of technology in educational settings. Based on the description above, the research framework of this study can be depicted in Figure 1.

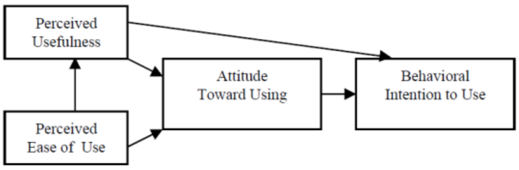

Figure 1. Research Framework
Source: Abdullah et al. (2016); Baki et al. (2018)

From this research framework, we can outline the hypotheses of direct effects as follows.

Hypothesis 1: Perceived Ease of Use (PEU) has a significant effect on Perceived Usefulness (PU).
Hypothesis 2: Perceived Ease of Use (PEU) has a significant effect on Attitude Toward Using (ATU).
Hypothesis 3: Perceived Usefulness (PU) has a significant effect on Attitude Toward Using (ATU).
Hypothesis 4: Perceived Usefulness (PU) has a significant effect on Behavioral Intention to Use (BIU).
Hypothesis 5: Attitude Toward Using (ATU) has a significant effect on Behavioral Intention to Use (BIU).

RESEARCH METHOD

This research utilizes a quantitative approach and a questionnaire as the primary tool to collect data. The gathered dataset is coded and analyzed using descriptive and inferential methods to examine the relationships among variables. Descriptive statistics such as mean, median, standard deviation, and frequency distributions are employed to summarize and describe the dataset, providing a comprehensive overview of key measures and characteristics related to students' Technology Acceptance Model (TAM) of Hotel Information System (HIS).

Additionally, inferential statistical techniques of structural equation modeling (SEM) using Partial Least Square (PLS) is utilized to explore the associations, dependencies, and predictive relationships among various factors identified within the Students' Technology Acceptance Model (TAM) of Hotel Information System (HIS). These methods help in assessing the strength and significance of relationships, determining the extent to which factors such as novelty, adoption, impact, and value creation influence students' acceptance and use of Hotel Information System (HIS) in their learning experiences.

Referring to the research framework and paradigm, operationalization of the variables from the variables, can be listed in Table 1.

Table 1. Operationalization of Variables

Variables	Indicators
Perceived Ease of Use (PEU)	1.01. Easiness to use technology 1.02. Easiness to learn technology 1.03. Easiness to understand technology 1.04. Easiness to find something with technology
Perceived Usefulness (PU)	1.05. Enhancing effectiveness in learning 1.06. Improve learning performance 1.07. Increase productivity in courses 1.08. Improve usefulness in using technology
Attitude toward using (ATU)	1.09. Fond of idea of using technology 1.10. Favorable attitude toward using technology 1.11. Believe in using learning technology continually 1.12. Being smarter using learning technology
Behavioral Intention to Use (BIU)	1.13. Intention to use learning technology during the semester 1.14. Return to learning technology often 1.15. Using learning technology for all courses 1.16. Intention to use more integrated application

Source: Abdullah et al. (2016); Baki et al. (2018)

The population of this study was 212

students of Bandung Tourism Academy, who are currently taking or have completed HIS courses, as outlined in Table 2. Based on the proportional random sampling technique, the minimum representative sample was 137 respondents. So, there were 137 students as respondents participated in this research.

Table 2. Population

Major	Male	Female	Total
Room Division	20	6	26
Food & Beverage Service	9	5	14
Kitchen	81	37	118
Pastry	12	42	54
Total	122	90	212

Source: Akademik Pariwisata NHI, Bandung (2024)

In this particular study, a questionnaire was utilized, which included a set of statements and a 5-point interval scale (with four categories: very low, low, high, and high). The questionnaire was carefully designed to allow respondents to provide their subjective evaluation of each variable indicator. Before its distribution, the research instrument underwent validity and reliability tests to ensure accuracy. A construct validity test was conducted through the Pearson correlation formula, r-test or t-test, and item-total correlation to test its validity. On the other hand, the reliability testing was done using Cronbach's Alpha formula.

To analyze the data, this study used the Partial Least Squares (PLS). Unlike the covariance-based SEM, specifically, the evaluation of the SEM-PLS model is divided into two, namely: (1) Evaluation of the outer model (measurement model), which includes the value of outer loading (valid if outer loading > 0.5 and ideally outer loading > 0.7), average variance extracted (AVE) is valid if > 0.5, and composite reliability (CR) is valid if > 0.7; and (2) Evaluation of the inner model (structural model), including the value of latent variable correlations (valid if □ > 0.5), path coefficients (if □ is valid, then the path coefficient is significant), R-square (R2 means the diversity or variance of the construct endogenous which can be explained by exogenous constructs simultaneously), and the value of f-square (f2). The f-Square or f2 is used to measure the strength of the predictor variable (X) in explaining the endogenous variable (Y). The f2 values of 0.02, 0.15, and 0.35 indicate weak, moderate, and substantial effects. Figure 2 depicts the proposed Structural Equation Model.

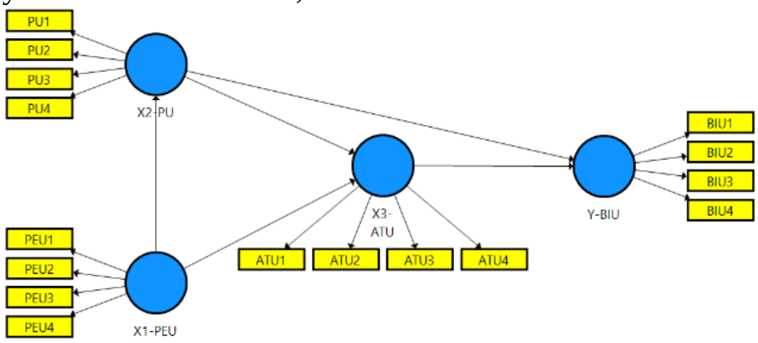

Figure 2. Proposed Structural Equation Model

Source: Author (2024)

RESULTS AND DISCUSSION

Results

Statistical descriptions for each variable and indicators can be explained in Table 3.

Table 3. Statistical Descriptions of Variables and Indicators

Variables	Mean	SD	%	Category
X1-PEU	3.560	0.900	64.0	High
X2-PU	3.544	0.876	63.6	High
X3-ATU	3.578	0.882	64.5	High

Indicators	Mean	SD	%	Category
Y-BIU	3.524	0.877	63.1	High
PEU1	3.679	0.907	67.0	High
PEU2	3.657	0.958	66.4	High
PEU3	3.453	0.849	61.3	High
PEU4	3.453	0.866	61.3	High
PU1	3.642	0.864	66.1	High
PU2	3.504	0.884	62.6	High
PU3	3.569	0.889	64.2	High
PU4	3.460	0.866	61.5	High
ATU1	3.518	0.867	63.0	High
ATU2	3.628	0.939	65.7	High
ATU3	3.620	0.824	65.5	High
ATU4	3.547	0.899	63.7	High
BIU1	3.613	0.918	65.3	High
BIU2	3.489	0.867	62.2	High
BIU3	3.380	0.806	59.5	High
BIU4	3.613	0.901	65.3	High

Source: Primary Data (2024)

The descriptive statistics in Table 3 provided summarize the results of a study examining four key variables related to students' acceptance and adoption of technology in the context of the Technology Acceptance Model (TAM). Each variable is rated on a scale, with higher scores indicating a greater degree of agreement with the respective construct.

The mean score for PEU is 3.560, with a standard deviation of 0.900. This score represents a high level of perceived ease of use among participants, indicating that students generally find the technology straightforward and user-friendly. The mean score for PU is 3.544, with a standard deviation of 0.876. This score reflects a high level of perceived usefulness, suggesting that students believe the technology can effectively enhance their performance and learning outcomes.

The mean score for ATU is 3.578, with a standard deviation of 0.882. This score signifies a high positive attitude toward using the technology, indicating that students have a generally favorable disposition towards adopting the system. The mean score for BIU is 3.524, with a standard deviation of 0.877. This score represents a high level of intention to use the technology, suggesting that students are likely to adopt and utilize the system in their educational activities.

To test the hypothesis and model, a structural equation model using the Partial Least Square (PLS) method was used. The first step in PLS structural equation model analysis is model testing or model quality testing. After the dimensions or indicators of each construct variable have been measured, the analysis can continue with testing hypotheses formulated based on the propositions. Variations in data values contained in dimensions describe variations in construct variables. The value of the loading factor for each indicator of the construct variable shows whether or not the relationship between the various indicators and the construct variable is substantial. Table 4 presents the output of outer loadings of each indicator.

Table 4. Measurement Model (Outer Loadings)

Outer Path	Original	Boot-strap	St Dev	t-stat	p-value
PEU1 <- X1-PEU	0.807	0.805	0.029	28.026	0.000
PEU2 <- X1-PEU	0.810	0.809	0.034	23.712	0.000
PEU3 <- X1-PEU	0.804	0.801	0.033	24.134	0.000
PEU4 <- X1-PEU	0.735	0.732	0.046	16.009	0.000
PU1 <- X2-PU	0.804	0.803	0.027	29.842	0.000
PU2 <- X2-PU	0.811	0.809	0.037	21.759	0.000
PU3 <- X2-PU	0.811	0.810	0.029	28.303	0.000
PU4 <- X2-PU	0.812	0.807	0.033	24.825	0.000
ATU1 <- X3-ATU	0.771	0.769	0.035	21.915	0.000
ATU2 <- X3-ATU	0.800	0.799	0.029	28.041	0.000
ATU3 <- X3-ATU	0.809	0.809	0.027	29.857	0.000
ATU4 <- X3-ATU	0.809	0.807	0.030	26.625	0.000
BIU1 <- Y-BIU	0.832	0.832	0.024	34.714	0.000
BIU2 <- Y-BIU	0.800	0.799	0.030	26.611	0.000
BIU3 <- Y-BIU	0.748	0.745	0.039	19.414	0.000
BIU4 <-	0.794	0.792	0.032	25.001	0.000

Y-BIU

Source: SmartPLS Output (2024)

The outer paths in Table 4 demonstrate strong and statistically significant relationships between the latent constructs (PEU, PU, ATU, BIU) and their respective indicators. All outer loadings are above 0.7, and all t-statistics are large with corresponding p-values of 0.000. The observed variables are suitable measures of their respective latent constructs in the TAM framework. To see the construct validity and reliability, we can refer to the values of Cronbach's Alpha (CA), Composite Reliability, (CR), and Average Variance Extracted (AVE), as seen in Table 5.

Table 5. Construct Validity and Reliability

Construct	CA	CR	AVE
X1-PEU	0.798	0.869	0.623
X2-PU	0.825	0.884	0.655
X3-ATU	0.809	0.875	0.636
Y-BIU	0.804	0.872	0.631

Source: SmartPLS Output (2024)

Table 5 outlines the construct validity and reliability for four constructs in a model examining relationships in the Technology Acceptance Model (TAM). The constructs assessed include Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude Toward Using (ATU), and Behavioral Intention to Use (BIU). Cronbach's Alpha (CA) measures internal consistency reliability, with values above 0.7 indicating good reliability. The constructs have CA values ranging from 0.798 to 0.825, suggesting satisfactory internal consistency. Composite Reliability (CR) evaluates the combined reliability of the indicators for each construct. CR values also indicate strong reliability, with all constructs scoring between 0.869 and 0.884. Average Variance Extracted (AVE) measures the amount of variance captured by the construct relative to the variance due to measurement error. All constructs have AVE values above the threshold of 0.5, indicating adequate convergent validity. Overall, the constructs demonstrate good reliability and convergent validity, suggesting that the model's constructs are measured consistently and accurately capture the underlying constructs within the TAM framework.

R-Square (R2) and f-Square (f2) are two measurements used in PLS-SEM to measure the research model's quality and the independent variable's explanatory effect on the dependent variable. The R-squared value measures the extent to which the research model can explain the dependent variable (Y) variations using the independent variables. A high R-squared value indicates that the research model can explain variations in Y using existing independent variables. The f-Square measures the explanatory effects of independent variables in the PLS-SEM model. From here, it can be seen how much the independent variable contributes to the dependent variable in the overall research model. The f-Square is calculated using a specific formula, and the values generally used as a guide are 0.02 (small), 0.15 (medium), and 0.35 (large). The output results of the R-Square (R2) and f-Square (f2) calculations can be seen in Table 6.

Table 6. Estimation of R-Square (R^2) and f-Square (f^2)

Model	R Square	R Square Adjusted
X2-PU	0,587	0,584
X3-ATU	0,672	0,667
Y-BIU	0,717	0,712

Path	f-Square	Effect
X1-PEU -> X2:PU	1,424	Substantial
X1-PEU -> X3:ATU	0,118	Moderate
X2-PU -> X3:ATU	0,396	Substantial
X2-PU -> Y:BIU	0,244	Moderate
X3-ATU -> Y:BIU	0,272	Moderate

Source: SmartPLS Output (2024)

The provided data in Table 5 evaluates the strength of relationships and effect sizes within a model examining the

Technology Acceptance Model (TAM). The analysis includes estimates of R-Square (R^2) and f-Square (f^2) values for various paths. The R^2 values measure the proportion of variance explained by the model's constructs. Perceived Usefulness (PU) has an R^2 of 0.587, indicating it explains 58.7% of the variance in the model. Attitude Toward Using (ATU) shows a higher R^2 of 0.672, suggesting it accounts for 67.2% of the variance. Behavioral Intention to Use (BIU) demonstrates the highest R^2 at 0.717, indicating 71.7% of the variance is explained. These high R^2 values reflect strong predictive power within the model. The f^2 values assess the effect size of each path. An f^2 value of 1.424 for the path from Perceived Ease of Use (PEU) to Perceived Usefulness (PU) suggests a substantial effect, underscoring the strong influence of PEU on PU. The path from PEU to ATU shows a moderate effect with an f^2 of 0.118. The path from PU to ATU has a substantial effect size (f^2 = 0.396), indicating PU significantly influences ATU. Similarly, the path from PU to BIU has a moderate effect (f^2 = 0.244), as does the path from ATU to BIU (f^2 = 0.272).

The bootstrapping method was used to test the research hypothesis and obtain estimates, as presented in Table 7.

Table 7. Path Coefficients and Hypotheses Testing

Inner Path	Original	Bootstrap	StDev	t-stat	p-values
X1-PEU -> X2-PU	0.766	0.768	0.042	18.310	0.000
X1-PEU -> X3-ATU	0.307	0.310	0.078	3.927	0.000
X2-PU -> X3-ATU	0.561	0.559	0.071	7.880	0.000
X2-PU -> Y-BIU	0.435	0.442	0.085	5.131	0.000
X3-ATU -> Y-BIU	0.459	0.452	0.090	5.092	0.000

Source: SmartPLS Output (2024)

Table 7 presents path coefficients and results from hypotheses testing within a model examining the Technology Acceptance Model (TAM). The path from Perceived Ease of Use (PEU) to Perceived Usefulness (PU) has a path coefficient of 0.766 and a high t-statistic of 18.310, suggesting a strong and significant influence. PEU to Attitude Toward Using (ATU) has a moderate path coefficient of 0.307 and a t-statistic of 3.927, indicating a positive and significant influence. PU to ATU exhibits a strong path coefficient of 0.561 and a t-statistic of 7.880, demonstrating a significant influence. PU to Behavioral Intention to Use (BIU) shows a path coefficient of 0.435 and a t-statistic of 5.131, suggesting a moderate but significant influence. ATU to BIU demonstrates a strong path coefficient of 0.459 and a t-statistic of 5.092, indicating a significant influence. These findings support the model's hypotheses, demonstrating strong and statistically significant relationships and influences among the constructs in the TAM framework.

Discussion

Learning a new technology, such as Hotel Information System by the Generation Z Hospitality Students, can significantly influence the Students' Technology Acceptance Model (TAM) by shaping their perceptions, attitudes, and behaviors toward the adoption and utilization of technology in their learning experiences. The theoretical influence can be understood through the following perspectives.

The principle of TAM is learning about technological innovation (Persico et al., 2014). According to TAM, Perceived Ease of Use (PEU) refers to the user's subjective perception of the ease with which they can use a technology. This perception is influenced by various factors, including the user’s experience, training, and the system’s characteristics. Learning technological innovation implies the process by which users acquire the knowledge and skills needed to use a new technology (Al-Azawei et al., 2017). During the Covid-19 pandemic, innovative online learning was perceived easy to use by most of the students that self-awareness and the intention to use online learning during the epidemic are consistently related (Yao et al., 2022).

From social cognitive theory, this theory suggests that individuals learn by observing others. In the context of technological innovation, students may learn by observing their peers or through formal training programs. Learning contributes to the development of perceived ease of use as users gain familiarity and competence with the technology (Saleh et al., 2022). Next, the constructivist learning theory posits that individuals actively construct knowledge through their experiences. In the case of technological innovation, the learning process contributes to the construction of mental models about the technology, influencing the student perception of how easy it is to use (Bhattarai & Maharjan, 2020).

Learning about technological innovation, whether through formal training or informal means, can enhance users' familiarity with the technology. As users become more familiar, they are likely to perceive the technology as easier to use, aligning with the core concept of PEOU in TAM (Abdullah et al., 2016). TAM suggests that users are more likely to adopt technologies that they perceive as less complex. Learning about technological innovation can demystify the complexity associated with new technologies, leading to a reduction in perceived difficulty and an increase in perceived ease of use (Dhingra & Mudgal, 2019). So, the university can design effective education programs to facilitate users' learning about technological innovations, aiming to positively influence their perceived ease of use. Student support mechanisms and documentation can be developed to aid the learning process, ensuring that users have the necessary resources to understand and use the technology effectively.

Learning Technological Innovation can also affect the Perceived Usefulness of TAM. It introduces novel, transformative technologies in learning that can enhance students' perceptions of usefulness (Al-Rahmi et al., 2019). Innovations that demonstrably improve learning outcomes or streamline educational processes positively influence students' belief in the technology's utility. It also affects Perceived Ease of Use. Learning Technological Innovation often aims to create user-friendly and intuitive tools. Innovations that simplify learning processes or offer user-friendly interfaces can enhance students' perceptions of ease of use, facilitating technology adoption.

According to TAM, perceived usefulness (PU) refers to the user's subjective belief that using a particular technology will enhance their job performance or make certain tasks easier and more efficient (Scherer et al., 2015). This concept implies the process by which users acquire knowledge and skills related to a new technological innovation. Learning can occur through formal training, hands-on experience, or exposure to the technology over time.

Innovative learning technologies can shape students' attitudes by eliciting positive emotions, curiosity, and interest. Novel and transformative technologies often generate excitement and intrigue, fostering a more favorable attitude toward their adoption and use. Learning Technological Innovation influences students' intention to adopt and use the technology, especially when perceived as beneficial and user-friendly. When innovations offer clear benefits and address educational needs, students are more likely to intend to use them. Successful implementation of Learning Technological Innovation that aligns with student's needs and expectations can increase actual use. If the innovation positively impacts learning experiences, students are more inclined to engage with technology actively.

Learning technological innovation involves acquiring the skills necessary to use the technology effectively (Rashid & Asghar, 2016). As students gain competence, they are more likely to perceive the technology as useful, especially if they believe it enhances their abilities and academic performance. Learning about a technological innovation often involves understanding its features, functionalities, and potential benefits. This knowledge contributes to students' assessment of how the technology could positively impact their study, aligning with the notion of perceived usefulness in TAM (Zhai & Shi, 2020). Students can learn through experiences. Learning about technological innovation through hands-on experiences or exposure can lead to a deeper understanding of its utility and, consequently, contribute to perceived usefulness. Students are more likely to perceive a technology as useful when they expect it to provide value or benefits. Learning about the innovation helps shape students' expectations, influencing their perceived usefulness (Raes & Depaepe, 2020).

It is consistent with the core tenets of TAM, suggesting that as students learn more about a technological innovation, they are likely to perceive it as more useful. This linkage is fundamental to understanding and predicting students' acceptance and adoption of new technologies, as proposed by the TAM framework.

According to TAM, perceived ease of use refers to the user's subjective perception of how easy it is to use a particular technology. It is one of the key determinants influencing users' acceptance and usage behavior. Perceived usefulness is another critical component of TAM, representing the user's belief that using a specific technology will enhance their job performance or make certain tasks easier and more efficient (Abdullah et al., 2016; Baki et al., 2018). It suggests that the perceived ease of use of a technology influences its perceived usefulness. In other words, when users find a technology easy to use, they are more likely to believe that it is useful in improving their performance or achieving their goals. A good fit between the characteristics of a technology and users' cognitive processes enhances usability and, consequently, perceived usefulness. When a technology is easy to use, it fits well with users' mental models, contributing to perceived usefulness. The ease with which a technology aligns with users' tasks and workflows affects its perceived usefulness. If a technology is easy to use, it is more likely to fit seamlessly into users' work processes, enhancing perceived usefulness (Huang et al., 2022).

According to TAM, users are more likely to adopt a technology if they perceive it as easy to use. When the learning curve is minimal, and tasks can be accomplished with ease, users are more inclined to see the technology as beneficial, thus increasing perceived usefulness. A positive experience with the ease of use contributes to users' overall satisfaction and positive perceptions of the technology. This positive experience, in turn, influences perceived usefulness (Abdullah et al., 2016). It is in line with the central tenets of TAM, emphasizing the importance of users' perceptions of the ease of use in shaping their beliefs about the usefulness of a technology. It highlights the interconnectedness of these two factors in influencing users' acceptance and adoption behaviors.

In summary, technological innovation in learning Hotel Information System serves as a catalyst, influencing students' perceptions, attitudes, intentions, and actual use of technology within the TAM framework. Successful integration of innovative technologies that align with students' needs, provide clear benefits, and enhance their learning experiences can lead to increased acceptance and utilization of technology in educational settings.

CONCLUSION

According to TAM, users are more likely to adopt a technology if they perceive it as easy to use. When the learning curve is minimal, and tasks can be accomplished with ease, users are more inclined to see the technology as beneficial, thus increasing perceived usefulness. A positive experience with the ease of use contributes to users' overall satisfaction and positive perceptions of the technology. This positive experience, in turn, influences perceived usefulness (Abdullah et al., 2016). It is in line with the central tenets of TAM, emphasizing the importance of users' perceptions of the ease of use in shaping their beliefs about the usefulness of a technology. It highlights the interconnectedness of these two factors in influencing users' acceptance and adoption behaviors.

In conclusion, technological innovation in learning Hotel Information System serves as a catalyst, influencing students' perceptions, attitudes, intentions, and actual use of technology within the TAM framework. Successful integration of innovative technologies that align with students' needs, provide clear benefits, and enhance their learning experiences can lead to increased acceptance and utilization of technology in educational settings.

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