International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 1: January-February 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Integrate UiPath into Robotic Process Automation in Accounting Course Teaching

Xinna Liang[1] and Changhan Li[2]
Teaching and Technology, Assumption University, Thailand
E-mail: 781951995@qq.com, ORCID ID: https://orcid.org/0009-0007-1594-0045
E-mail: lichanghan@au.edu, ORCID ID: https://orcid.org/0009-0004-5768-6733

Received 10/07/2024 Revised 15/07/2024 Accepted 15/08/2024

Abstract

Background and Aim: The study aims to investigate impacting factors of behavioral intention of accounting students in using RPA as a burgeoning technology and selecting UiPath as the preferred tool in accounting course. This study also combines the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Decomposed Theory of Planned Behavior (DTPB) in an attempt to assess students' perceptions of learning with UiPath in the context of using these three models. Testify that perceived behavioral control and attitude play a significant role in behavioral intention to use.

Materials and Method: In this study, a total of 470 junior students in three accounting majors at a private university in Zhanjiang (Guangdong province, China) participated in the study. The research utilized structural equation modeling (SEM) for hypothesis testing.

Results: The study results show that perceived behavioral control and social influence had a more significant impact on behavioral intention to use, and provide relevant information for students majoring in accounting to implement RPA by using UiPath. This research progress is discussed effort expectancy, performance expectancy, and attitude, self-efficacy had a stronger significant impact on perceived behavioral control.

Conclusion: The influence of perceived behavioral control on behavioral intention to use highlights the significance of self-efficacy and facilitating conditions in enabling students to utilize UiPath. Another element impacting students' behavioral intentions toward UiPath is social influence, with a p-value below 0.05. The platform's adoption and acceptance have been greatly aided by the backing and impact of colleagues, advisors, and the broader scholarly circle. Collectively, these findings enhance our comprehension of the intricate factors affecting students' views and actions regarding financial numeration.

Keywords: UiPath; RPA; Behavioral intention; UTAUT; Structural Equation Modeling (SEM)

Introduction

Robotic process automation is defined as ‘‘the automation of rules-based processes with software that utilizes the user interface, and which can run on any software, including web-based applications, ERP systems, and mainframe systems’’ (Deloitte 2017). It has risen to prominence as a leading buzzword within the realms of business and accounting. RPA is an important milestone in the field of automated digital tasks due to its increasingly powerful and efficient intelligent connectivity, user-friendly and non-invasive systems, and high return on small investments. The widespread adoption of this approach marks a shift in accounting technology away from "computerization" and toward "informatization”. Accounting education is also affected by technology and data analysis and needs to integrate content to develop students' integrated accounting technology and data analysis abilities to meet professional expectations.

Enhancements in data management have made retrieving information more straightforward. RPA's Optical Character Recognition (OCR) capability allows for the extraction of data from images and text for

Citation Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

various procedures and documents. Minimizing manual data input leads to more accurate and reliable results in a shorter duration through workflow automation software (Patri, P., 2021). Such a method has found application in sectors like agricultural banking, treasury, trading, foreign exchange, and more. RPA has enhanced conventional banking methods, achieving all goals for improved operation (Nair, K. S., 2018).

Accountants need to be aware of the far-reaching implications of the rapid development of information technology in information supply chains, where accounting plays a critical role in reinvigorating information supply chains through the capture of transaction data, integrating it, and transforming it into actionable or meaningful information for data consumers. As a result, accounting is a field that has developed with a heavy reliance on information technology. (Wang, 2021).

UiPath is one of the RPA solution providers, providing a complete one-stop RPA solution Cases. It entered China in 2018 and established a Chinese R&D team in the second year. In 2019, UiPath reached 5000 customers worldwide. At present, China has More than 2200 organizations that have implemented automated office projects using UiPath. UiPath Studio is an automated process development and design tool, that is an integrated development environment (IDE) to facilitate the creation and upkeep of connections among robots, as well as the ease of information transfer along with other robotic operations and queue control. Additionally, it makes process planning, modeling, and implementation possible (Ribeiro et al., 2021). The version used in this study is the Community version interface of UiPath Studio 3.10.1.

Because many of the accounting and finance tasks in the RPA (Kokina & Blanchette, 2019) have suitable characteristics, accounting professionals need to acquire the skills and competencies required to participate in or lead automated work in their department or organization. Educational institutions need to incorporate these technologies to foster digital skill development and equip students for an active and imaginative digital existence (Rizvi, A., & Srivastava, N., 2023). A strategy to assist faculty and students in adjusting to new technologies involves conducting practical exercises that teach students the application of these technologies in resolving business issues (Keys & Zhang, 2020).

Research Objectives

1. To identify the perceived behavioral control of UiPath in terms of self-efficacy and facilitating conditions for junior students at a private university in Zhanjiang, Guangdong province, China

2. To identify the attitude of junior students to use UiPath in learning and teaching RPA in a private university.

3. To identify junior students' perceptions of UiPath in terms of performance expectancy, effort expectancy, social influence, facilitating conditions, and behavior intention to use RPA in a private university.

Literature Review

To deepen the attitude and use behavior of junior accounting majors in private universities towards UiPath acceptance, this study combines TAM, DTPB, and UTAUT three technology acceptance models and analyzes them.

Technology acceptance model (TAM)

TAM provides a foundational framework to explain the nature of "technology acceptance behavior." It emphasizes that the important variables that affect users' acceptance of a new product or

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

service are their demand preferences and the effects of related factors on their choice of the product or service. The basic characteristics covered by TAM include perceptions of factors influencing technology application such as ease of use, usefulness， attitude， behavioral intent, and usage behavior (McCoy et al., 2007).

Decomposed Theory of Planned Behavior (DTPB)

Taylor, and Todd (1995) proposed the Planned Behavior Decomposition theory (DTPB) to reveal the interaction between belief structure and BI. Based on the empirical research by Zahid and his team (Zahid & Haji Din, 2019), DTPB is highly recommended as a tool for exploring behavioral intent both online and in the latest Industry 4.0 technologies. This method is a new technique that combines psychology with computer technology to measure whether people have positive emotional tendencies and then produce behavior. It can be used to explain the motivation of individuals in the field of social economy.

Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh et al. (2003) proposed this theory, which is a technology acceptance model designed to explain users' intention to use information systems and their subsequent use behavior. UTAUT views performance expectations and effort expectations as a key determinant of willingness to use, especially in the early stages of new behavior processing (Im et al., 2011). There are major potential variables, including performance expectations, effort expectations, social impact, and the convenience of predicting the use of behavioral intentions, that are potentially influential (Shore et al., 2018).

Self-efficacy (SE)

Self-efficacy is the subjective judgment obtained by an individual after evaluating his or her ability and potential. It can predict whether an individual or a team will engage in a certain activity and what action to take in the future period. Several researchers have reported that perceived behavioral control has a significant impact on the self-efficacy of behavioral intent, and this conclusion has been confirmed as confirmation (Nor&Pearson,2008; Dwivedi, Y.K. et al., 2019).

Facilitating Conditions (FC)

Facilitating conditions are signified as the degree to which an individual believes that an organization and technical infrastructure exists to support the use of the system (Gao et al., 2022). In the network environment, convenience mainly includes hardware equipment, software services, and information. Typically, the classification of technical assistance, support, and resources is done as expediently as possible. These types of services are available to users who want technical support but are not familiar with the facilities. Users' willingness to use and actual use are influenced by convenience. Users believe that the use of specific technologies can be facilitated by institutional support and infrastructure (Bhattacherjee,2000).

Perceived Behavioral Control (PBC)

Perceived behavioral control refers to a person's perception of his or her ability to perform a specific behavior, which is related to the concept of self-efficacy. It plays an important role in the individual decision-making process, which directly determines whether a person can effectively complete the task and make the right choice, and ultimately leads to his work performance. (Ajzen, 1991; Kheng et al., 2010).

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 1: January-February 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Attitude (ATT)

Attitude is a kind of mental state, which reflects people's subjective view of things, that is, the attitude tendency, belief, and the resulting action intention (Dwivedi, Y.K et al., 2019). An individual's viewpoint on an object, be it admiration or disdain, is defined as a mindset. Put differently, people tend to spurn actions they find disagreeable and welcome those they concur with. This conveys an individual's feelings about the suitability of the activity (Al-Debei et al., 2013).

Performance Expectancy (PE)

Performance expectancy is defined as the degree of trust a person has in technology that determines the likelihood that he or she will succeed academically. Performance expectancy serves as a measure of a system's effectiveness, enhancement of productivity, impact on performance, and the system's advantages for both employers and employees (Osei et al., 2022).

Effort Expectancy (EE)

Effort expectancy is defined as the degree of ease associated with technology use. This type of structure is like perceived availability (Van Raaij et al., 2008). The straightforward and user-friendly nature of system technologies can improve user behavioral intentions. Effort expectancy refers to the degree of simplicity users perceive in applying the system technology (Mahande & Malago, 2019).

Social Influence(SI)

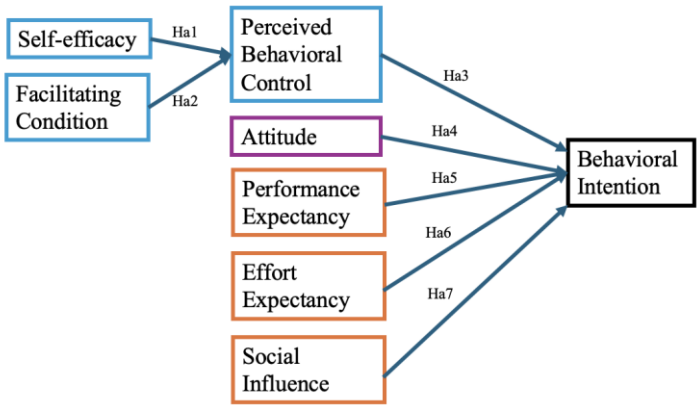
In a certain sense, social influence is the effect that an individual has a certain ability or belief to interact with others. The influence of individual attitudes or behavioral tendencies on society cannot be ignored. The social impact people feel varies greatly in different fields. According to Khechine et al. (2014), social influence can be assessed in the context of acquaintances, coworkers, or family members.

Behavioral Intention (BI)

Behavioral intention, which is a person's goal of undertaking a certain action, is the expected consequence that directs the intended action (Sivo et al., 2018). In the field of instructional technology, various studies have shown that behavioral intention, as a predictor of actual system use, has a direct and significant impact on the application of instructional technology (Mahmodi, 2017).

Conceptual Framework

The conceptual framework of this study was originally based on TAM, UTAUT, and DTPB theories. However, due to the teaching environment and student situation, not all variables in the model are used. Therefore, the variables used are shown in Figure 1 Conceptual Framework.



Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Figure 1 Conceptual Framework

Hypotheses

Based on the literature review, and the conceptual framework, the hypotheses have been developed as follows:

H_a1: Self-efficacy has a significant influence on Perceived behavioral control of junior students in using UiPath.

H_a2: The facilitating condition has a significant influence on the perceived behavioral control of junior students in using UiPath.

H_a3: Perceived behavioral control has a significant influence on behavioral Intention of junior students in using UiPath.

H_a4: Attitude has a significant influence on the behavioral intention of junior students in using UiPath.

H_a5: Performance expectancy has a significant influence on behavioral Intention of junior students in using UiPath.

H_a6: Effort expectancy has a significant influence on the behavioral intention of junior students in using UiPath.

H_a7: Social influence has a significant influence on the behavioral intention of junior students in using UiPath.

Methodology

The design of the scale formed the basis of data analysis, and the index of Item-Objective Congruence (IOC) has been used to assess the questionnaire's content validity. The questionnaires were checked by five experts in the field of education who were identified and requested their consent to validate each measuring item or question. In addition, this research used Cronbach's coefficient alpha to check the reliability of the variables. According to Kadir et al. (2019), if Cronbach's alpha value is between 0.60 to 0.70 or above, it is confirmed the questionnaires are reliable for this research. This response from 5 experts showed exceeding values of 0.67.

To facilitate the distribution and collection of data, the questionnaire is made by online matrix form of Questionnaire Star. In a quiet environment, students are asked to rate the scale based on their cognition. The design of the study focuses on the preparation before data collection and the analysis after data collection. From November to December 2023， the researcher invited 470 students to use the Questionnaire Star platform to distribute, fill in, and collect the questionnaire. It was assessed using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

In the research, questionnaires were conducted in the national tongue, Chinese. Consequently, the researchers must convert every piece of English into Chinese and forward it to a Chinese language expert for verification.

The current study utilized the Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM) to test all hypotheses in the study. The data were analyzed through Jamovi statistical software. Confirmatory Factor Analysis (CFA) was conducted to examine factor loadings, composite reliability, convergence validity, discriminant validity, and goodness of fit of the measurement model.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 1: January-February 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Structural Equation Modelling (SEM) was used to assess the survey method to collect sample data through a group of questionnaires to explore the factors that affect the behavior intention and behavior of college accounting students using UiPath to study RPA. The structural model was analyzed by SPSS and AMOS data analysis to execute under SEM to determine significant relationships and hypotheses of this research.

Results

The research outcomes offer a detailed, tripartite examination encompassing demographic data, an overview of crucial variables through descriptive statistical methods, and extensive testing of hypotheses. The presented structure provides an in-depth account of the study subjects, the principal characteristics of the data, and the statistical validation of the suggested hypotheses.

Demographic Information

Table 1 is the summary of the demographic profile of respondents (N=470) in this study.

Table 1 Demographic Profile of Respondents

N=470	Demographic Profile	Percentage	Total
Gender	Male	26.2%	100%
	Female	73.8%	
Age	21 years old or below	45.7%	100%
	Over 22 years old	54.3%	
Subjects	Accounting	77.9%	100%
	Financial Management	11.5%	
	Audit	10.6%	

Of the participants, males made up 26.2%, whereas females were 73.8%. For each subject there was Accounting at 77.9%, Financial Management were 11.5% and Audit were 20.0%. Additionally, most respondents were Over 22 years old and above at 54.3%, while the least was 21 years old or below at 45.7%， and all respondents using UiPath is equal to 100%.

Descriptive Statistics

The descriptive analysis is accounted for by the central tendency of mean and standard deviation (SD) and is exemplified in Table 2. The highest mean of “Self- -efficacy” (Mean 3.78, S.D. = 0.981), this was followed by “Social Influence” (Mean 3.76, S.D. = 0.872), “Effort Expectancy” (Mean 3.76, S.D. =0.869), “Facilitating Conditions” (Mean 3.70, S.D. = 0.979), “Behavior Intention” (Mean 3.61, S.D. = 0.875), “Performance Expectancy” (Mean 3.60, S.D. = 0.898), “Perceived Behavioral Control” (Mean 3.49, S.D. = 0.840), and “Attitude” (Mean 3.07, S.D. = 0.911).

Table 2 Descriptive Statistics

Variables	No. of items	Mean	S.D.	Interpretation
Self-efficacy (SE)	5	3.78	0.981	Agree
Facilitating Conditions (FC)	4	3.70	0.979	Agree
Perceived Behavioral Control (PBC)	5	3.49	0.840	Agree

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 1: January-February 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Variables	No. of items	Mean	S.D.	Interpretation
Attitude (ATT)	4	3.07	0.911	Agree
Performance Expectancy (PE)	5	3.60	0.898	Agree
Effort Expectancy (EE)	4	3.76	0.869	Agree
Social Influence (SI)	4	3.76	0.872	Agree
Behavioral Intention (BI)	4	3.61	0.875	Agree

Discriminant Validity

Each construct's discriminant validity undergoes verification before analyzing the structural equation models.

Table 3 Discriminant Validity

	SE	FC	PBC	ATT	PE	EE	SI	BI
SE	**0.777**							
FC	0.586	**0.813**						
PBC	0.399	0.339	**0.787**					
ATT	0.430	0.419	0.352	**0.810**				
PE	0.577	0.478	0.533	0.435	**0.775**			
EE	0.471	0.427	0.443	0.426	0.570	**0.771**		
SI	0.578	0.451	0.594	0.428	0.479	0.591	**0.765**	
BI	0.592	0.519	0.537	0.488	0.580	0.568	0.626	**0.771**

According to Fornell and Larcker (1981), discriminant validity was examined by the calculation of the square root of each AVE which is larger than all inter-construct/factor correlations as in Table 3. To guarantee discriminant validity, the square root outcomes of AVE must exceed the construct's correlation coefficient, all the results of this test meet this requirement

Confirmatory Factor Analysis (CFA)

The confirmatory factor analysis (CFA) was conducted to measure factor loading, determining discriminant validity. Factors loading show a greater value than 0.30 and Significance (p) is lower than 0.05. When the value of Composite Reliability (CR) is larger than the Average Variance Extracted (AVE), and the AVE is greater than 0.50, the convergent validity is determined (Hair et al., 2009). The validation factor standardized factor load table mainly includes latent variables, standardized factor loading, and z-price (C.R.).

Table 4 Confirmatory Factor Analysis Result, CR and AVE

Latent Variables	Factors Loading	p	CR	AVE
Self-efficacy (SE)	0.729- 0.765	<.001	0.884	0.604
Facilitating conditions (FC)	0.755 - 0.818	<.001	0.887	0.662

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Latent Variables	Factors Loading	p	CR	AVE
Perceived Behavioral Control (PBC)	0.751 - 0.807	<.001	0.890	0.619
Attitude (ATT)	0.731 - 0.837	<.001	0.884	0.656
Performance Expectancy (PE)	0.698 - 0.752	<.001	0.883	0.601
Effort Expectancy (EE)	0.703 - 0.787	<.001	0.855	0.595
Social Influence (SI)	0.657 - 0.753	<.001	0.849	0.585
Behavioral Intention (BI)	0.674 - 0.762	<.001	0.854	0.594

In Table 4, the composite reliability (CR) is greater than the cut-off point of 0.7, and the average variance extracted (AVE) was higher than the cut-off point of 0.5 (Fornell & Larcker, 1981). Thus, all the estimates are significant. Due to the statistical values for the CFA being very much within the acceptable values, no adjustments were needed. The normalized factor load was greater than 0.5, indicating that each observed variable can explain the latent variables well.

Table 5 Goodness of Fit for Measurement Model

Index	Acceptable Values	Statistical Values
CMIN/DF	< 3.00 (Hair et al., 2006)	720.662/532=1.355<3
NFI	≥ 0.80 (Wu & Wang, 2006)	0.928
CFI	≥ 0.80 (Bentler, 1990)	0.980
GFI	≥ 0.80 (Sharma et al., 2005)	0.920
SRMR	< 0.08 (Pedroso et al., 2016)	0.052
RMSEA	< 0.08 (Pedroso et al., 2016)	0.027
Model summary		**Acceptable Model Fit**

Additionally, CMIN/DF, NFI, CFI, TLI, and RMSEA are used as indicators for model fit in CFA testing. The convergent validity and discriminant validity were also confirmed for the value of this study's results, as expressed in Table 5. Due to all fit values being acceptable, convergent validity and discriminant validity are ensured.

The above table shows the fitting indicators of the model, and some indicators can be appropriately selected for evaluation. Model CMIN was 720.662, DF was 532, and CMIN / DF was 1.355 <3, which was ideal. RMSEA was 0.027 <0.08, and the indexes of GFI, CFI, NFI, and IFI were greater than 0.9. In conclusion, each index meets the standard, indicating a good fit for the model. The t-and p-values are mainly significance judgments, with p-values less than 0.05 indicating that the normalized factor loading is significant. As a result, convergent and discriminant validity were validated to assure construct validity in Table 5.

Structural Equation Model (SEM)

The Structural Equation Model (SEM) is a statistical method to analyze the relationship between variables according to the covariance matrix of variables.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 1: January-February 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

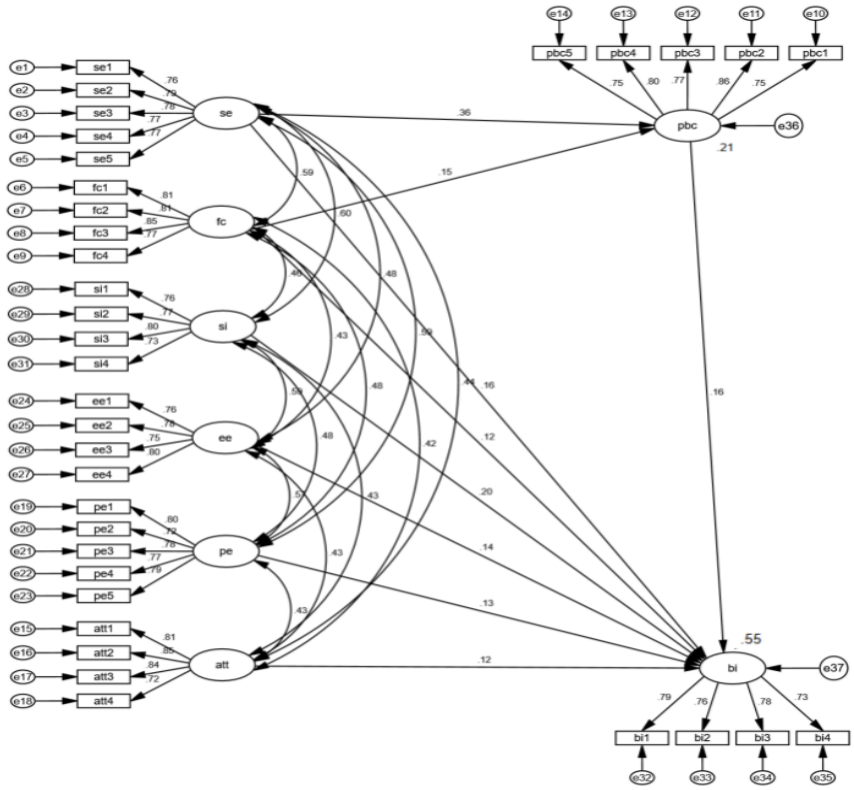


Figure 2 Structural Equation Modeling

SEM was applied to the model to test the hypotheses of causal relationships among the variables proposed. Figure 2 shows the fitting indicators of the model, and some indicators can be appropriately selected for evaluation.

In Table 6, the CMIN of the Model was 836.722, DF was 536, and CMIN / DF was 1.561 <3, which was ideal. The RMSEA was 0.035 <0.08, and the indexes of GFI, CFI, NFI, and IFI were all greater than 0.9. In conclusion, each index meets the criteria, indicating the good fit of the model as presented.

Table 6 Goodness of Fit for Structural Model

Index	Acceptable Values	Statistical Values
CMIN/DF	< 3.00 Hair et al. (2006)	836.722/536=1.561<3
NFI	≥ 0.80 (Wu & Wang, 2006)	0.916
CFI	≥ 0.80 (Bentler, 1990)	0.968
GFI	≥ 0.80 (Sharma et al., 2005)	0.909
SRMR	< 0.08 (Pedroso et al., 2016)	0.050
RMSEA	< 0.08 (Pedroso et al., 2016)	0.035
Model summary		**Acceptable Model Fit**

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Research Hypothesis Testing

The path coefficients (β), t-statistics, and p-value were measured for the significance of relationships or hypotheses in the structural model. The implication of each variable is depicted in Table 7. The results indicate that all hypotheses were supported with a significance at $p < 0.05$. Self-efficacy has the strongest impact on perceived behavioral control to use UiPath (β=0.357), followed by facilitating condition (β= 0.147). The significant driver of behavioral intention has the strongest impact on social influence (β=0.205), followed by perceived behavioral control (β=0.158), effort expectancy(β=0.138), performance expectancy (β=0.131), and attitude(β=0.122). Each result is supported.

Table 7 Hypothesis Results of the Structural Equation Modeling

Hypothesis	Standardized Coefficients (β)	p	z-value	Result
H_a1: SE→PBC	0.357	<.001	5.518	Supported
H_a2: FC→PBC	0.147	0.018	2.372	Supported
Ha3: PBC→BI	0.158	<.001	3.448	Supported
Ha4: ATT→BI	0.122	0.012	3.277	Supported
Ha5: PE→BI	0.131	0.027	2.273	Supported
Ha6: EE→BI	0.138	0.023	2.215	Supported
Ha7: SI→BI	0.205	0.001	2.505	Supported

The hypothesis testing results are explained in the following:

Ha1: The results were consistent with earlier research that students' self-efficacy has a direct effect on perceived behavioral control to use UiPath (Venkatesh et al., 2012).

Ha2: Facilitating condition plays a significant degree of impact on perceived behavioral control as aligning with the results from earlier studies, which indicated effortless UiPath can promote the perceived behavioral control of students to use the system (Ngampornchai & Adams, 2016;).

Ha3: Perceived behavioral control significantly impacts the behavioral intention to use UiPath of students in this study. The results imply that when students regularly engage in UiPath, they express more and more intentional behavior to use the system (Ambarwati, 2020).

Ha4 : Attitude has a significant impact on behavioral intention as evidenced by the statistical results. The use of UiPath requires tools, materials, and system infrastructure to promote the students' willingness to use the system for their learning activities (Chao, 2019).

Ha5: Performance expectancy significantly impacts the use behavior of UiPath which explains that UiPath usage can happen when students are equipped with the necessary tools to use the system such as computers, laptops, mobiles, software, etc. (Chang, 2012).

Ha6: The relationship between effort expectancy and use behavior is supported. The assumption can be that students' effort expectancy does significantly affect their willingness of UiPath usage as confirmed by Tadesse et al. (2018).

Ha7: Social influence significantly impacts behavioral intention to use UiPath among students. The findings post that the influence of peers, family, and teachers theoretically and empirically affected behavioral intention to accept or use the UiPath among students. The results show similarity with previous studies (Chang, 2012).

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 1: January-February 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Indirect Effects

The proposed conceptual framework includes the testing of the indirect effects of Self-efficacy and Facilitating Conditions as the mediating variable of Perceived Behavioral Control toward Behavior Intention. In Table 8， the mediation effect test was performed at the 95% confidence level, the standardized path coefficient from Self-efficacy to Behavioral Intention was 0.151 (IE=0.053, p=0.003 <0.05), indicating that Self-efficacy has a significant positive effect on Behavioral Intention. The standardized path coefficient from Facilitating Conditions to Behavioral Intention was 0.106 (IE=0.021, p=0.029 <0.05), indicating that Facilitating Conditions has a significant positive effect on Behavioral Intention. The indirect analysis results show that the indirect effect is partially valid. Therefore, the null hypothesis is retained.

Table 8 Direct, Indirect, and Total Effects of Relationships

Path Relationship	Direct Effect	Indigo Effect	Bias-corrected（95%）		p
			Lower Bounds	Upper Bounds	
SE→PBC→BI	0.151(0.018)	0.053	0.017	0.114	0.003
FC→PBC→BI	0.106(0.033)	0.021	0.002	0.058	0.029

Discussion

This quantitative study aims to use the survey method to collect sample data through a group of questionnaires to explore the factors affecting the behavioral intention and behavior of college accounting students using UiPath to study RPA. The findings of the indirect analysis suggest that Perceived Behavioral Control is the intermediate variable between Self-efficacy and Facilitating Conditions to Behavioral Intention.

Furthermore, upholding the null hypothesis underscores the significance of considering various paths and variables. The perception of behavioral control, attitude, anticipated performance, expected efforts, and social impact play a substantial role in shaping behavioral intentions. These elements will influence how students employ UiPath learning to fulfill the objectives of RPA. Additional studies are required to investigate different variables and possible moderating factors. Utilizing UiPath, it's possible to elucidate the interplay of perceived behavioral control, attitudes, and social impact within the educational setting. Teachers and decision-makers will acquire a deeper understanding of these elements. Which influences how students perceive and act about UiPath. This ultimately guides approaches focused on enhancing productivity and acceptance within educational settings.

The Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Decomposed Theory of Planned Behavior (DTPB) are effective models to confirm the effects between variables, including direct and indirect effects between variables, with particular attention to indirect effects between variables, confirming that attitude, perceived behavioral control, performance expectancy, effort expectancy, and social influence have indirect effects on actual system usage through behavioral intention (Fussell & Truong, 2022; Manis & Danny, 2019; Venkatesh et al, 2003). In summary, the results of this study, answer the research questions and are consistent with the research objectives. During the research, 470 student volunteers engaged to gain extensive understanding. The research aimed to gather valuable insights to inform methods for enhancing the acceptance and effectiveness of UiPath among junior students in the selected educational setting.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Therefore, the results of this study suggest that it is important to understand students' perceptions about learning and using UiPath, particularly in terms of PBC and attitudes. This is of great significance for improving the acceptance and implementation of RPA among accounting majors in private universities in Zhanjiang, Guangdong Province. This study, which gleaned insights from 470 student volunteers, provides valuable information on strategies to improve the data collection and collation experience using UiPath.

Survey findings indicate that UiPath has shown multiple benefits, with its primary emphasis being on enhancing students' experience. This enables users to develop a workflow using a drag-and-drop technique. Students could modify the workflow to suit their requirements. UiPath additionally offers compatibility with open-source libraries tailored to students' requirements. UiPath offers efficient time management, eliminating the need for students, especially finance accounting specialty, to fill out forms daily for tasks such as gathering and organizing data. However, it's essential to have a physical classroom setting, as students must engage physically and socially with their peers and educators.

Recommendation for Future Research

Researchers did not apply the full model of TAM, UTAUT, and DTPB. Thus, future researchers can consider adding more variables appropriate to their topic such as perceived ease of use, perceived usefulness, etc. Next, the quantitative approach was selected for this study as it is less costly and less time-consuming. Hence, the future study is suggested to add qualitative methods such as focus groups or interviews.

In addition, the sample size was limited in China which has a unique educational culture. The following are the currently known research restrictions. The findings were confined to college students who participated in 2023 as empirical research. Before any future applications, appropriate adjustments to the research model should be explored. Depending on their teaching style and topic, teachers frequently modify the assessment rate and manner of UiPath. Simultaneously, varied educational content and progress will result in varying weights for the usage of virtual reality technology. Therefore, the use of UiPath cannot represent the comparable data of different course contents and lecturers. The total number of courses employing UiPath technology in this study was 32 hours. Differences in the amount of UiPath courses used may induce alterations in the study's outcomes.

Ultimately, UiPath technology was declared mandatory in the classroom, and students utilized it at the request of their instructors. The survey results may not be generalized to voluntary settings. For academic researchers, this study can add to the extent of knowledge of technology adoption in online and AI learning contexts. The limitations for future studies can guide new entry researchers to adapt the new research model to the findings of this study. In this place, school executives and instructional leaders are recommended to deploy an effective learning system by studying which motivational factors that most and least important to producing behavioral intention and satisfaction of existing and prospective students. The integrated strategies of online learning are to be properly planned and executed to ensure a return on investment. A decision maker can select either an RPA tool or develop an in-house platform to meet the needs of learners. UiPath providers and schools' information technology departments must work closely to improve the UiPath system to ensure ease of use and effective system performance.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Conclusion

The conclusions drawn from the analysis of UiPath as a tool of RPA for junior accounting majors reveal a complex and multi-dimensional phenomenon. This platform reveals the benefits of UiPath's specific environment and the areas that need to be further optimized. From a positive perspective, the students' acceptance of UiPath shows that UiPath has become critical in their data collection and organization process. UiPath has been widely praised for its outstanding features, user interface, and teamwork features, which help it conduct business and financial operations more widely in big data environments. In addition, the positive impact of UiPath on usage intent and actual behavior indicates that students have integrated UiPath into their daily learning and activity competitions. However, issues such as the slowness of network access, various issues related to enablement conditions, and different levels of technical readiness are difficult issues that require in-depth consideration. The study highlights the importance of addressing infrastructure issues, providing targeted technical assistance, and implementing strategies to improve the overall user experience.

In addition, they studied various influencing factors such as performance expectations, effort expectations, and social effects when TAM, UTAUT, and DTPB are combined, which provided valuable insights for strategy refinement and intervention. The shift in these factors underscores the importance of adopting personalized strategies to meet the perceived and expected needs of different users. In short, UiPath has become an important tool for junior finance majors to learn and understand RPA, which has been widely recognized and used by students. However, to meet the specific data processing needs of junior finance students, we must adopt strategies to address the clear challenges and ensure a fluid and inclusive learning environment. Through this analysis, we have gained a deep understanding of future improvements, which provides a solid foundation for creating a dynamic and efficient digital learning environment in RPA.

Another important finding was an in-depth analysis of the various variables that influence the views of juniors at private universities and the use of UiPath for RPA tasks. This study focuses on perceived behavior control, attitude, and social influence, with particular emphasis on the few key variables that are statistically significant: how SE affects behavioral intention with a p-value of less than 0.001, which represents a positive development direction, emphasizing that the stronger the self-efficacy of students, the stronger their confidence and determination to complete the task, to strive to achieve the expected results. The influence of perceived behavior control on behavior intention is statistically significant. When the p-value is lower than 0.001, perceived behavior control has a significant direct effect on student's intention to use UiPath. The trust placed in the platform, the security measures taken, and its reliability all contribute directly to a positive and satisfying user experience. In addition, in terms of social influence and attitude, p-values are both lower than 0.05, which becomes an important factor affecting students' behavioral intention towards UiPath. UiPath has received strong support and far-reaching influence from industry colleagues, educators, and more academic organizations, which has played a key role in its wide acceptance and implementation. Together, these findings advance our understanding of the complex changes that affect student perception and behavior in a big data environment.

This study provides valuable insight into how perceived behavior control, attitude, and social influence play a central role in behavioral intent when using UiPath. These findings provide a solid

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

foundation for interventions and strategies that enhance the UiPath learning experience, foster positive perceptions among students, and ensure that the behavior intentions of accounting juniors at private universities are well understood. Overall, this research helps to update the body of knowledge on the various factors that higher education institutions rely on in the successful implementation of UiPath learning.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Al-Debei, M. M., Al-Lozi, E., & Papazafeiropoulou, A. (2013). Why people keep coming back to Facebook: Explaining and predicting continuance participation from an extended theory of planned behavior perspective. *Decision support systems*, *55*(1), 43-54.

Ambarwati, R.,& Mandasari, B. (2020).THE INFLUENCE OF ONLINE CAMBRIDGE DICTIONARY TOWARD STUDENTS' PRONUNCIATION AND VOCABULARY MASTERY. Journal of English Language Teaching and Learning. 1(2), 50-55. DOI:10.33365/jeltl.v1i2.605

Bhattacherjee, A. (2000). Acceptance of e-commerce services: the case of electronic brokerages. *IEEE Transactions on Systems, Man, and cybernetics-Part A: Systems and humans*, *30*(4), 411-420.

Buchanan, T., Sainter, P., & Saunders, G. (2013). Factors affecting faculty use of learning technologies: Implications for models of technology adoption. *Journal of Computing in Higher Education*, *25*, 1-11.

Chang, A. (2012). UTAUT and UTAUT 2: A review and agenda for future research. *The Winners*, *13*(2), 10-114.

Chao, C. M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in Psychology*, *10*, 1652-1654.

Deloitte. 2017. *The 3rd annual global robotics survey.* Retrieved from: https://www2.deloitte.com/lu/en/pages/technology/articles/robotsare-ready.html

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers*, *21*, 719-734.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

Fussell, S. G., & Truong, D. (2022). Using virtual reality for dynamic learning: an extended technology acceptance model. *Virtual Reality*, *26*(1), 249-267.

Gao, L., Vongurai, R., Phothikitti, K., & Kitcharoen, S. (2022). Factors influencing university students' attitude and behavioral intention towards online learning platform in Chengdu, China. *ABAC ODI Journal Vision. Action. Outcome*, *9*(2), 21-37.

Im, I., Hong, S., & Kang, M. S. (2011). An international comparison of technology adoption: Testing the UTAUT model. *Information & Management*, *48*(1), 1-8.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Kadir, A., AlHosani, A.H., Ismail, F., & Sehan, N. (2019). The effect of compensation and benefits on employee performance. In *Proceedings of the 1st Asian Conference on Humanities, Industry, and Technology for Society, ACHITS 2019, 30-31 July 2019, Surabaya, Indonesia*

Keys, B., & Zhang, Y. J. (2020). Introducing RPA in an undergraduate AIS course: Three RPA exercises on process automation in accounting. *Journal of Emerging Technologies in Accounting Teaching Notes*, *17*(2), 8-45.

Khechine, H., Lakhal, S., Pascot, D., & Bytha, A. (2014). UTAUT model for blended learning: The role of gender and age in the intention to use webinars. *Interdisciplinary Journal of E-Learning and Learning objects*, *10*(1), 33-52.

Kheng, L. L., Mahamad, O., & Ramayah, T. (2010). The impact of service quality on customer loyalty: A study of banks in Penang, Malaysia. *International journal of marketing studies*, *2*(2), 57-60.

Kokina, J., & Blanchette, S. (2019). Early evidence of digital labor in accounting: Innovation with Robotic Process Automation. *International Journal of Accounting Information Systems*, *35*, 100431.

Mahande, R. D., & Malago, J. D. (2019). An E-Learning Acceptance Evaluation through the UTAUT Model in a Postgraduate Program. *Journal of Educators Online*, *16*(2), 1-10.

Mahmodi, M. (2017). The analysis of the factors affecting the acceptance of E-learning in higher education. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, *8*(1), e11158. Doi: 10.5812/ijvlms.11158

Manis, K. T., & Choi, D. (2019). The virtual reality hardware acceptance model (VR-HAM): Extending and individuating the technology acceptance model (TAM) for virtual reality hardware. *Journal of Business Research*, *100*, 503-513.

McCoy, S., Galletta, D. F., & King, W. R. (2007). Applying TAM across cultures: the need for caution. *European Journal of Information Systems*, *16*(1), 81-90.

Nair, K. S. (2018). Impact of robots in the financial sector. IOSR Journal of Business and Management (IOSR-JBM, 72-76. https://www.iosrjournals.org/iosr-jbm/papers/Conf.ADMIFMS1808-2018/Volume-1/11.%2072-76.pdf

Ngampornchai, A., & Adams, J. (2016). Students' acceptance and readiness for E-learning in Northeastern Thailand. *International Journal of Educational Technology in Higher Education*, *13*, 1-13.

Nor, K. M., & Pearson, J. M. (2008). An exploratory study into the adoption of Internet banking in a developing country: Malaysia. *Journal of Internet Commerce*, *7*(1), 29-73.

Osei, H. V., Kwateng, K. O., & Boateng, K. A. (2022). Integration of personality trait, motivation, and UTAUT 2 to understand e-learning adoption in the era of the COVID-19 pandemic. *Education and Information Technologies*, *27*(8), 10705-10730.

Patri, P. (2021). Robotic process automation: challenges and solutions for the banking sector. *Prateek Patri, Robotic Process Automation: Challenges and Solutions for the Banking Sector, International Journal of Management*, *11*(12), 2020.

Ribeiro, J., Lima, R., Eckhardt, T., & Paiva, S. (2021). Robotic process automation and artificial intelligence in industry 4.0–a literature review. *Procedia Computer Science*, *181*, 51-58.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264

Rizvi, A., & Srivastava, N. (2023). Exploring the Potentials of Robotic Process Automation: A Review. *Journal of Informatics Electrical and Electronics Engineering (JIEEE)*, *4*(2), 1-12.

Shih, Y. Y., & Fang, K. (2004). The use of a decomposed theory of planned behavior to study Internet banking in Taiwan. *Internet research*, *14*(3), 213-223.

Shore, L., Power, V., De Eyto, A., & O'Sullivan, L. W. (2018). Technology acceptance and user-centered design of assistive exoskeletons for older adults: A commentary. *Robotics*, *7*(4), 78. DOI:10.3390/robotics7040078

Sivo, S. A., Ku, C. H., & Acharya, P. (2018). Understanding how university student perceptions of resources affect technology acceptance in online learning courses. Australasian Journal of Educational Technology, 34(4), 72–91. https://doi.org/10.14742/ajet.2806

Tadesse, M. M., Lin, H., Xu, B., & Yang, L. (2018). Personality predictions based on user behavior on the Facebook social media platform. *IEEE Access*, *6*, 61959-61969.

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information systems research*, *6*(2), 144-176.

Van Raaij, E. M., & Schepers, J. J. (2008). The acceptance and use of a virtual learning environment in China. *Computers & Education*, *50*(3), 838-852.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. https://doi.org/10.2307/30036540.

Venkatesh, V., Thong, J.Y.L. and Xu, X. (2012) Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36, 157-178.

Wang, T. (2021). The impact of emerging technologies on the accounting curriculum and the accounting profession. *Pacific Accounting Review*, *34*(4), 526-535.

Zahid, H., & Haji Din, B. (2019). Determinants of intention to adopt e-government services in Pakistan: An imperative for sustainable development. *Resources*, *8* (3), 128. https://doi.org/10.3390/resources8030128

Zhu, Y. Q., & Kanjanamekanant, K. (2023). Human–bot co-working: job outcomes and employee responses. *Industrial Management & Data Systems*, *123*(2), 515-533.

Citation
Liang, X., & Li, C. (2025). Integrate UiPath into Robotic Process Automation in Accounting Course Teaching. International Journal of Sociologies and Anthropologies Science Reviews, 5 (1), 177-192;
DOI: https://doi.org/10.60027/ijsasr.2025.5264