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Technology Acceptance in the Auditing Education: Evidence from the MENA Region

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Abstract –

There is increasing recognition worldwide of the disruptive nature of technology and its use by auditors, which has brought new opportunities and challenges to accounting and auditing education worldwide. Many business schools have responded to these challenges by incorporating Information Technology (IT) in their respective programs and curriculums. Despite these recent changes, little research was done to comprehend students' perceptions and attitude toward IT. In the current research, students' performance was conceptualized through individual and task dimensions in a technology acceptance context. A survey instrument was utilized for this purpose and analyzed using PLS-SEM. Research results demonstrate two facets: students' perceived ease of use and perceived intention to use are affected by the fit between the software capabilities and the task students will perform. Finally, perceived ease of use was translated into superior student performance. The research broadens auditing education beyond traditional reaching ideology and highlights how students in the Arab countries perceive technology acceptance into the auditing curriculum and how their performance is impacted by the extent to which the software capabilities fit auditing curriculum outcomes.

Index Terms: ACL, auditing education, performance, technology acceptance, technology fit

I. INTRODUCTION

We live in an era full of technological advancements, and the demand for technical skills in auditing is unabated for the foreseeable future (Tang et al., 2017). The traditional audit is labor-dependent, time and effort-consuming. Similarly, the rapid IT development and accounting information systems are becoming more sophisticated and complex, spreading in most organizations worldwide. It became impossible for auditors to continue performing their tasks efficiently without relying on IT. Similarly, workplaces are moving towards more and more digitization, thus leading to the prevalence of IT-enabled business systems (Alamin et al., 2020).

Regarding the accounting and auditing professions, several researchers have reported that for students to have a successful career launch, it is necessary to possess specific skills that are not adequately addressed during their educational journey (Borthick & Schneider, 2018; Brink & Reichert, 2020; Hood, 2015; Jordan & Samuels, 2020; Kuruppu, 2012; Kuruppu, 2017; Madsen, 2020). Despite these technological advancements, which provide opportunities to prepare future accountants and auditors for 21st-century careers, 31 percent of new graduate hires in public accounting firms are non-accounting graduates (AICPA, 2019). That reality contributed to the increasing need for accounting positions with advanced technological skills (Damerji & Salimi, 2021) , which led to hiring computer programmers and software engineers with non-accounting backgrounds responding to the need for technologically adept graduates.

On the other hand, regulatory bodies and accounting firms are encouraging business schools to integrate audit software into the auditing curriculum considering these developments. Many business schools have responded to this challenge by incorporating IT in their respective programs and curriculums. Despite these recent changes, little is done to comprehend students' perceptions and attitude toward

IT, specifically Computer Assisted Auditing Tools and Techniques (CAATs)[1] (Alamin et al., 2020; Kuruppu, 2017). Furthermore, recent research suggested that accepting technology in the auditing profession faces many difficulties, especially when the tools are complex and require specific technical backgrounds (Pedrosa et al., 2012). Similarly and despite the increasing prevalence of CAATs, there is a scarcity of students entering the audit workforce with the required audit software skills (Kuruppu, 2012). Extant literature has investigated the adoption/use of information systems in different contexts (Kwahk et al., 2018; Venkatesh & Davis, 2003).

Responding to recent research calls, Gelinas et al. (2001), Hood (2015), Kuruppu (2012), Kuruppu (2017), Nieschwietz et al. (2002), Yan et al. (2016), and Weidenmier and Herron (2004), universities are urged to support narrowing the existing gap between what is being taught in classrooms and what the profession requires and needs. Advancements in the auditing curriculum and teaching methodologies are notably less than the changes in dynamic IT environment. Although technology has been incorporated into teaching to some extent, it has not significantly impacted teaching methodology or content (Pincus et al., 2017). Therefore, accounting and auditing education research will continue to be essential since that area of research addresses the real needs of the profession. Finally, the rising importance of CAATs in the auditing profession is behind the motivation to reach how CAATs affect the future internal auditors' behaviors toward technology acceptance. Therefore, this research examines the impact of two technological fits on technology acceptance and their respective impact on students' performance.

The current research context is set in four countries from the MENA region: Egypt, Iraq, Jordan, and the United Arab of Emirates. The research objective is achieved by administering a survey

[1] CAATs are de□ned as any use of technology to assist in completing an audit (Li et al., 2018).

instrument to examine the students' task technology fit and individual technology fit on technology acceptance and eventually on their performance. The remainder of this paper is organized as follows. The remainder of this paper is organized as follows: section 2 reviews extant literature related to two areas, technology acceptance in the auditing profession and technology acceptance in accounting education, section 3 details the research hypotheses development, section 4 presents research methodology and context, section 5 presents the results and main findings, and finally, discussion and research contribution are presented in section 6.

II. BACKGROUND

A. Technology Acceptance in the Auditing Profession

IT use, and reliance has increased exponentially over the past years. In auditing firms, IT was initiated systematically throughout many years, starting electronically, followed by developing software to assist in decision-making, such as analytical procedures, going concern decisions, and client acceptance (Dowling & Leech, 2007). Artificial intelligence and machine learning are recently used in fraud detection and prevention (PricewaterHouseCoopers, 2019). Generally, IT is associated with better audit quality, productivity, and enhanced knowledge-sharing capabilities (Ahmi et al., 2014; Vera-mun et al., 2006). Also, internal auditors rely extensively on IT by adopting Generalized Audit Software (GAS). GAS is used in data extraction, data manipulation, and data analytics (Protiviti Inc., 2008), and internal auditors use robotics as a process automation tool to perform their tasks (Le Clair, 2017).

The successful use of IT is affixed to the employees' commitment to such a process, which requires reinventing the IT function in the organization. Such changes are necessary but far-reaching as they require talent, infrastructure, and multiple years to accomplish (Andersson & Tuddenham, 2014). At the same time, the reliance on IT is becoming increasingly less voluntary (Bhattacherjee et al., 2018). In the auditing environment, substantial pressure is facing audit firms to be as efficient as possible in such a dynamic, complex, and competitive environment. Thus, technology-based audit techniques are perceived as a haven for auditors that is an effective tool to expedite and maximize audit efforts significantly (Janvrin et al., 2008). There are a variety of technologies available to the auditor ranging from continuous audit management programs such as Approva and AutoAudit to other CAATs in the form of GAS such as Audit Command Language (ACL) and Interactive Data & Extraction & Analysis (IDEA) (Kuruppu, 2012; Kuruppu, 2017; Nieschwietz et al., 2002). Many auditing tasks are widely performed using IT tools such as CAATs in performing analytical procedures, fraud detection procedures, data queries, and sampling (Ahmi et al., 2016; Nieschwietz et al., 2002; Pedrosa et al., 2012; Richardson & Louwers, 2010).

Leaders throughout the accounting profession highlighted their three "biggest nightmares:" (1) changes inducing new technology disruption that devalues extended core services- standing, (2) finding new employees with the correct mix of skills and capabilities as well as retraining existing employees and equipping them with new skills, and (3) following with the high and dynamic pace of technological changes (Hood, 2015). The workforce input is the universities' output proliferating but in vain. Technology is already shifting the skills required from senior audit team members to entry-level positions (PricewaterHouseCoopers, 2015). On the other hand, with the dominance of some tools, such as CAATs, in the audit workforce, a rarity of graduates entering the workforce with the required audit software skills is recognized (Kuruppu, 2017). Recent reports showed that 68% and 87% in the US and UK face hiring challenges due to the skills gap (Hagel, 2015). Thus, revisiting our curricula and classroom pedagogy is necessary to equip the future workforce with the right set of skills.

B. Technology Acceptance in the Auditing Education

A quantum leap in IT is concurrent with changes in software developments which should be parallel with changes in auditing education. It is time to prepare the next generation of business majors for the significant data era that we are living in and discuss how business programmers be prepared to contribute to such a task (Wang et al., 2016). The expansion of computer science into other specializations and majors to create data scientists with the ability to create valuable knowledge and value from big data is necessary (Kuruppu, 2017). Business schools need to take the initiatives to update the auditing curriculum to encompass auditing software through e-learning, self-contained courses, and instructor-led courses (Clark & Mayer, 2016). Similarly, technological advancement induces quick changes in financial information, primarily in how assurance is provided on such information. Thus, future auditors need to grasp that leap in the profession and be able to adopt new technologies (Ozlanski et al., 2020). These advancements create not only new tools of immense value for performing the usual tasks but also create new tasks and processes (Brink & Reichert, 2020).

The accounting education system is the sanctum for the earliest selection and transformation processes that attract and transform accounting students into professionals. This transformation occurs during formal training, classwork, and other experiences leading to possessing new traits and transforming old ones (Madsen, 2020). Moreover, the best candidates for such an overwhelming task are undergraduate students who can endure such an initial impact in this era. Based on that conclusion, they are the ideal apprentices of IT tools and techniques (Richardson & Louwers, 2010). Those tools enable students to become aware of how auditors utilize them, especially the practical know-how in the contemporary auditing environment, thus equipping students with more marketable skills to potential employers (Kuruppu, 2012). As such, incorporating such IT tools into the curriculum reinforces students' understanding of many auditing concepts and prepares them for future endeavors where they will use technology daily (Nieschwietz et al., 2002). Prior attempts to incorporate IT into the auditing curriculum reported that such tools, namely ACL, supplemented students' understanding of risk and audit procedures (Gelinas et al., 2001). In comparison, others reported that two-thirds of the students using such tools felt that the experience contributed to their learning process. It helped them comprehend the audit procedures concepts and how they are performed (Weidenmier & Herron, 2004).

Many theories have been developed over the past decades to understand better how individuals accept technology use. For instance, in 1989 technology acceptance model was developed by Davis, followed in 1990 by the Technological- Organizational-Environmental (TOE) framework developed by Tornatzky and Fleischer, and in 2003 the unified theory of acceptance and use of technology (UTAUT) was developed by Venkatesh, Morris, Davis, and Davis. Those theories seek to explain and predict system acceptance and use (Yu & Yu, 2010). The theory of interest in the current research is TAM (Chan et al., 2016; Kim et al., 2009; Larsen et al., 2009; Pennington & Kelton, 2006). The current research attempts to extend the TAM model to move toward technology-related aspects and task expertise to expand our understanding of the acceptance and use of technology in the auditing education context.

III. Hypotheses Development

In (Figure 1), the research proposed that students' technology acceptance is influenced by task and individual technology fit. The two dimensions of technology acceptance affect students' performance: perceived ease of use and perceived intention to use.

Technology Acceptance Model

TAM was suggested by (Davis et al., 1989); it explains the determinants of computer acceptance in general and traces the influence of external factors on attitudes, intentions, and internal beliefs. The primary internal beliefs for technology acceptance behaviors involve perceived intention to use and perceived ease of use. Perceived intention to use is the degree to which an individual believes that using a particular system would improve his/her task performance. While perceived ease of use is the degree to which an individual believes that using a particular system would be free of effort (Davis et al., 1989; Pennington & Kelton, 2006). Referring to prior research, Kim et al. (2009) investigated several factors influencing internal auditors' technology acceptance. The results revealed a significant impact of both organizational and individual factors on internal auditors’ perceived ease of use and perceived intention to use technology. Where perceived intention to use stimulates extrinsic motivation, increasing technology use (Chan et al., 2016). Another addition to TAM provided evidence that qualitative overload mediates the relation between perceived ease of use and perceived intention to use (Pennington & Kelton, 2006). In a complementary stream of thoughts, Larsen et al. (2009). Perceived ease of use is an indicator of the effort an individual exerts to perform a particular task, and perceived intention to use is a display of how an individual believes that using technology enhances performance. Thus, the following first and second hypotheses are formulated as follows:

H1: Perceived ease of use is positively associated with higher performance for undergraduate students.

H2: Perceived intention to use is positively associated with higher performance for undergraduate students.

Task Technology Fit

Task Technology Fit (TTF) refers to the extent to which the complexity of the task being undertaken matches the decisional guidance provided by the technology. Goodhue and Thompson argue that the degree of task-technology fit, defined as a matter of how the capabilities of the information systems match the tasks that the user must perform, is a significant factor in explaining job performance levels (Goodhue & Thomson, 1995; Kokina & Blanchette, 2019). Prior accounting research shows that users of information systems utilize more functionality in the available technology when they perceive the system corresponds with the needs of accomplishing their tasks. Consequently, the more a technology meets specific work task characteristics, the more the students will accept technology. Hence, the third and fourth hypotheses are formulated as follows:

H3: Task Technology fit is positively associated with perceived ease of use in undergraduate students.

H4: Task Technology fit is positively associated with perceived intention to use in undergraduate students.

Individual Technology Fit

Individual Technology Fit (ITF) is defined by Parkes (2013) as the extent to which the technology fits the individual’s task expertise. It is argued that early career hires are likely to perceive additional information provided by technology use as applicable. Similarly, perceived usefulness is positively associated with performance. It is argued that individuals' interactions with information systems are often interlinked with their individual-technology adaptation performances. Students’ effective technology use depends on considerations associated with individual technology fit (Yu & Yu, 2010). More individual technology fit presents higher ease of use. Also, having more experience with a specific technological tool is associated with perceived intention to use it. Since more experienced individuals using a specific tool can better realize the tool's usefulness (Wu & Chen, 2017). When those technological functions match task requirements and individual capabilities, individuals are expected to perceive technology easier to use and intend to use. Thus, the fifth and sixth research hypotheses can be formulated as follows:

H5: Individual Technology fit is positively associated with perceived ease of use in undergraduate students.

H6: Individual Technology fit is positively associated with perceived intention to use in undergraduate students.

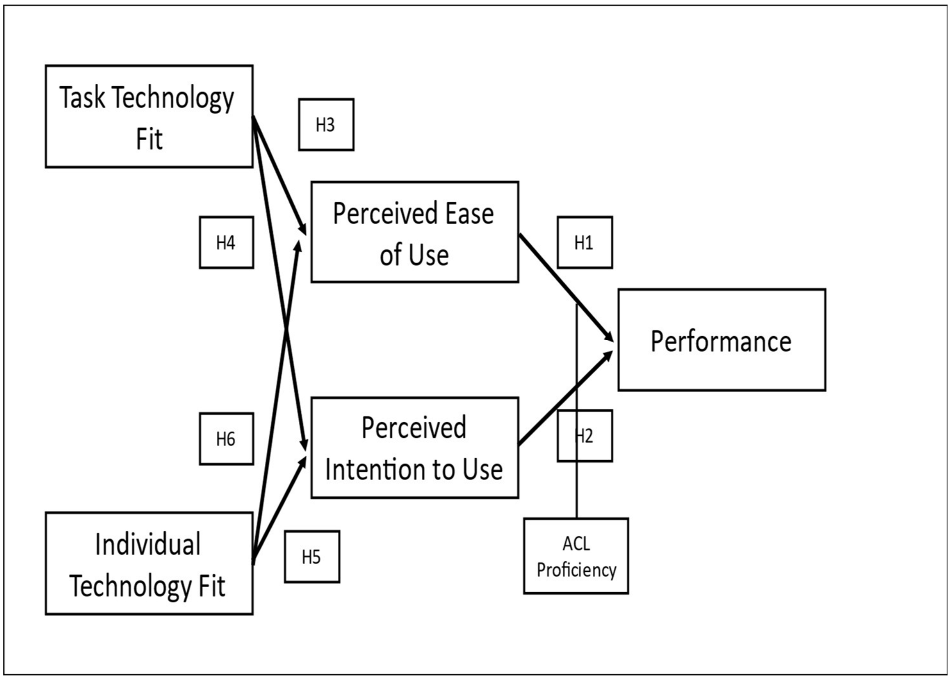

Figure 1: Research model

III. RESEARCH METHODOLOGY AND CONTEXT

A. Instrument development and validation

In developing the instrument of the research and examining the research hypotheses, the survey items are adopted from prior accounting research. Consistent with prior research in the same field, a five-point Likert scale is used anchored by 1 (strongly agree) to 5 (strongly disagree) (Ahmi et al., 2016; Alamin et al., 2020; Ozlanski et al., 2020). The target population was business school students in MENA region universities, and their primary studies are in the English language. Thus, there was no need to translate the survey to Arabic. Five auditing academics pretested the survey items to reach the final version, which consisted of 15 items (see Appendix A).

B. sample and context

The research's main objective is to identify the factors influencing students' technology acceptance in auditing education, the extent of alignment between the technology used and the task required to perform, also the extent of alignment between individual traits and technology used on their performance. This research design is based on a post-competition survey (Kim et al., 2009; Kuruppu, 2012; Kuruppu, 2017). The competition[2] was conducted in 8 countries all over the MENA region with 83 teams of three from 23 different business schools (Table 1), mainly 2nd, 3rd, and 4th-year students. Each student was given access to ACL software and instructed to complete ACL 101 and ACL 102 to qualify for the competition in two months. After completing each ACL level, students were subject to an online quiz provided by ACL, and a certificate of completion was granted. In that respect, CAATs are recognized as a tantalizing set of techniques that enable audits to be conducted cost-effectively and (Kuruppu, 2012) promptly. They are recognized as indispensable to the auditor's toolbox of technical skills capable of making audits more effective and efficient (Kuruppu, 2012). ACL was chosen as this CAATs package is accompanied by more textbooks and helping tutorials than any other audit software package. Moreover, ACL is presently used by the Big-4 audit firms and is considered the market leader in audit software ;Kuruppu, 2012) Pennington & Kelton 2006; Richardson & Louwers, 2010; Weidenmier .(Herron, 2004 &

Unfortunately, due to the COVID-19 pandemic, four out of the eight countries could not conduct the competition. Each team was handed 10

[2] The competition was hosted by the International Computer Auditing Education Association (ICAEA) during t

cases to solve using ACL software during the competition in 4 hours. After the competition, the participants were contacted via email and asked to complete the survey, which consisted of 15 items. Emails were sent to participants explaining the survey purpose and asking for informed consent about their willingness to participate in the study, followed by a survey link to a sample of 102 students. The final responses received were 92 responses meeting the minimum requirement when using PLS-SEM, which is 52 observations, to achieve a statistical power of 80% at a significance level of .05, where the maximum number of independent variables is two (Hair et al., 2013).

Demographically, the average age for the students was 22 years; 57.6% were males, while 42.4% were females. Geographically, 25% of the sample is from Jordan, 26.1% is from Iraq, 32.6% is from Egypt, and 16.3% is from UAE. 53.3% of the students had both accounting and auditing backgrounds, while 46.7% had only an accounting background.[3].

Table 1
Participating Countries

Country	Number of teams	No. of Universities	No. of Students	No. of Responses
Egypt	11	6	33	30
Jordan	9	3	27	23
Iraq	6	2	18	24
UAE	6	2	18	15
Total	32	13	96	92

C. Reliability and Validity

As for a normality check[4]Based on the Shapiro-Wilk test and Kolmogorov-Smirnov (KS) test, the p-values were less than .05[5]. As for the skewness and kurtosis values, ranging from -.975 and +1.348, which

[3] Those numbers are contributed to the fact that most business schools in the MENA region start the specialization subjects in the third or the fourth year (auditing), corresponding with the result that 53.3 of the sample are in the third or fourth year while 46.7% are in their second year

[4] Although normality is not one of the assumptions for using PLS-SEM, as recommended in (Hair et al., 2013), it is preferred to test for normality to gain insight into the data being tested.

[5] Based on (Sarstedt & Mooi, 2014)

is within the threshold of ±1.96[6]. Also, a visual inspection of the Q-Q plot and histograms for the constructs showed that the data was not seriously deviated from normality. As for reliability, it was tested using Cronbach's Alpha coefficients (.795 to .869) which exceeds the required threshold >.7[7]. Items loading and average variance extract were used to assess the model's convergent reliability. Two items: TTF 4 and ITF 2 were removed from the model; both had loadings of .612 and .534, respectively < .7[8]. As for average variance extract, all items were above the cut-off point of .50[9], ranging from.619 to .882, indicating that each construct explains more than half of the variance of its indicator (see Appendix B, Table A). Regarding the discriminant validity, Fornell-Larcker Criterion was used. The square root of the average variance extract was greater than the correlation coefficients of each construct (see Appendix B, Table B); the model's constructs share more variance with its associated indicators than with any other constructs under investigation (Hair et al., 2013). In all, the model has acceptable convergent validity as well as acceptable discriminant validity (see Appendix B, Table C).

IV. Hypotheses Testing Results

Table 2
Path Coefficients, PLS

Variables	Path Coefficients	t-values	p-values
ITF -> PI	.160	.166	.334
ITF -> PU	.135	1.884	.060
TTF -> PI	.459	3.131	.002
TTF -> PU	.704	10.010	.000
PU-> PR	.572	4.221	.000
PI -> PR	.197	1.539	.153

*p-value < .05

Table 3
R square Values

Variables	R^2	Adjusted R^2
PU	.605	.596
PI	.306	.290
PR	.523	.512

PLS version 3 was used to test the research hypotheses based on bootstrapping with 5000 resamples (Hair et al., 2013). Referring to

[6] Based on (Doane & Seward, 2011)
[7] Based on (Sarstedt & Mooi, 2014)
[8] Based on (Hair et al., 2013)
[9] Based on (Hair et al., 2013)

(Table 3), the overall model explains a considerable portion of the variance in student performance 52.1%. Three path coefficients reveal a significant relation at .05 level (TTF and PI, TTF and PU, and PU and PR), while the other three path coefficients revealed insignificant relations at .05 level (ITF and PI, ITF and PU, and PI and PR). Further investigation shows that technology task fit explains .704 of the variance in perceived ease of use which in turn explains .572 of the variation in students' performance (see Appendix C, Figure 2), which is compared favorably with prior research findings (Chan et al., 2016; Kim et al., 2009)[10] From the above findings, it is concluded that the higher perceived ease of use of technology, the superior the performance of an individual. Thus, the first hypothesis is supported at a p-value = .000. Also, it is concluded that the greater the fit between the task characteristics and the technology used, the higher perceived ease of use and intention to use. Thus, the third and fourth hypotheses are supported at p-value = .000 and .002, respectively. On the other hand, results revealed an insignificant impact of perceived intention to use on an individual's performance. Thus, the second hypothesis is not supported. Also, results revealed an insignificant impact of the extent of fit between the individual expertise and technology use and the perceived ease of use and perceived intention to use. Therefore, the fifth and sixth hypotheses are not supported.

The student's age, gender, accounting, and auditing background, ACL proficiency[11] and were included in the model as control variables. Overall, results show an insignificant impact of the control variables on the research model, except that ACL proficiency was found to impact students' performance (.003) significantly. Regarding age and gender, the impact is premised on the limited variance in student age (19- 22), while the sample of 42% females indicates that gender is less influential for technology acceptance. The lack of support for the accounting and auditing background may contribute to students' educational background consistent across business schools in the four countries included in the research. A further analysis to explore the significant

[10] Chan et al. (2016) reported a path coefficient of .239 and an indirect effect of .470, while Kim et al. (2009) reported a path coefficient of .34.

[11] ACL proficiency refer to the level of ACL the students completed.

impact of ACL proficiency on performance shows that ACL proficiency significantly impacts students' perceived ease of use (.019).

In contrast, it insignificantly impacts students' perceived intention to use (.616). Those results are clarified by the importance and benefits of using ACL in conducting an audit. However, it provides a comprehensive and broad spectrum of data analysis tools and functionality that requires some time to familiarize with Weidenmier) &Herron, 2004).

V. DISCUSSION

The current business environment exhibits strong and compelling challenges, and opportunities for future auditors manifested in dynamic technological advancements and technical skills. Accounting and auditing educators need to be aware of such changes that the workforce lacks and seeks. After decades of calls, educators finally recognize the need for imminent change evident in prior accounting education research streams. The current research continues in this same line of thought, investigating technology acceptance and its impact on student performance through the alignment between the task students performed and the technology used on the one hand and the other, through the alignment between the student expertise in a specific task and the technology used. The current research results provided insights on how students accept using technology and how it can affect their performance. Results revealed that performance is significantly impacted by how students perceive the ease of using the technology and their perceived intention to use it. Students' acceptance is tied to the fit between the technology and the task they are performing. The lack of support for individual technology fit is interesting but explicable. The sample under investigation comprised undergraduate students in business schools with considerable accounting and auditing backgrounds but limited access to technological tools such as ACL. Concerning the results, it is expected that students do not have enough expertise with such tasks and enough expertise in using such tools. Thus, misfit between students' limited task expertise and technology is expected and justified. For future research, a better understanding of the leading role of technology and how it can be embraced and promoted in the accounting and auditing curriculum. Also, future research could explore other factors that affect technology acceptance as it is essential to adapt to such changes continually. Finally, accounting educators must embrace technology and encourage students to embrace such changes and become lifelong learners. To achieve the full benefit of technology, it is crucial to carefully design the curriculum to align with the technology adopted to complement the educational process.

Appendix A

Table 2

Research Variables

Construct	Code	Items	Source
Task Technology Fit	**TTF**	**ACL is fit for the requirements of my learning**	**(Larsen et al., 2009; Parkes, 2013; Yu & Yu, 2010)**
		Using ACL fits with my educational practice.	
		It is easy to understand which tool to use in ACL.	
		ACL is suitable for helping me complete online courses.	
Individual Technology Fit	**ITF**	**I can independently and consciously complete courses in ACL**	**(Goodhue & Thomson, 1995; Parkes, 2013)**
		I actively participate in various types of courses in ACL	
Perceived Ease of Use	**PU**	**My interaction with ACL is clear and understandable.**	**(Davis et al., 1989; Kim et al., 2009; Wu & Chen, 2017)**
		Interacting with ACL does not require a lot of my mental effort.	
		I find ACL to be easy to use.	
		I find it easy to get ACL to do what I want it to do.	
Perceived Intention to Use	**PI**	**Assuming I have access to ACL, I intend to use it.**	**(Kim et al., 2009; Wu & Chen, 2017)**
		Given that I have access to ACL, I predict that I would use it	
Performance	**PR**	**Using ACL improves our ability to identify more exceptions**	**(Li, Dai, Gershberg, & Vasarhelyi, 2018; Parkes, 2013; Yu & Yu, 2010)**
		Using ACL improves our audit efficiency	
		Using ACL improves our audit effectiveness	
		Using ACL reduces the likelihood of unintended errors in our business operations	

Appendix B

Table A

	Loading before removing the items					Loading after removing one item				
	ITF	TTF	PI	PE	PR	ITF	TTF	PI	PE	PR
ITF 1	0.963					0.963				
ITF 2	0.534					Removed				
PI 1			0.957					0.957		
PI 2			0.921					0.922		
PR 1					0.773					0.773
PR 2					0.737					0.737
PR 3					0.813					0.813
PR 4					0.822					0.822
PU 2				0.767					0.767	
PU 3				0.934					0.934	
PU 4				0.841					0.842	
PU 1				0.847					0.846	
TTF 3		0.884					0.864			
TTF 4		0.612				Removed				
TTF 1		0.798					0.846			
TTF 2		0.757					0.813			

Table B

Fornell- Larcker Criterion

	ITF	PI	PU	PR	TTF
ITF	0.961				
PI	0.381	0.939			
PR	0.469	0.693	0.849		
PU	0.444	0.595	0.711	0.787	
TTF	0.477	0.537	0.768	0.695	0.841

Table C

Reliability Analysis

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted
ITF	0.874	0.880	0.924	0.890
PI	0.869	0.920	0.938	0.882
PU	0.870	0.880	0.912	0.722
PR	0.802	0.819	0.867	0.619
TTF	0.795	0.806	0.879	0.708

Appendix C

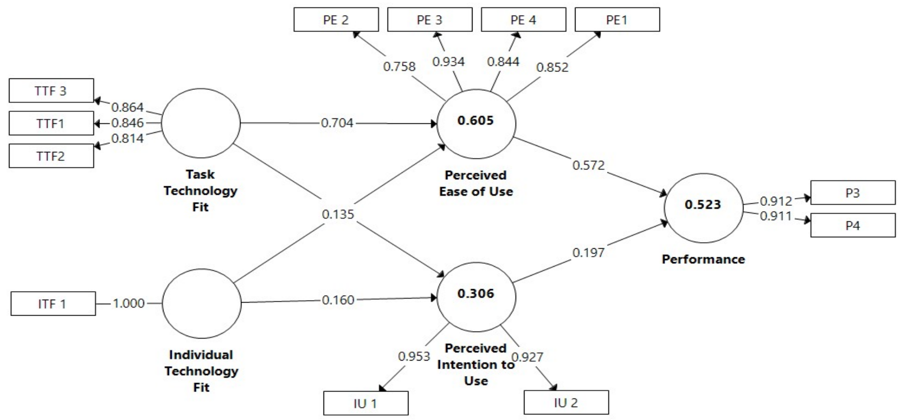

Figure 1: Model R²

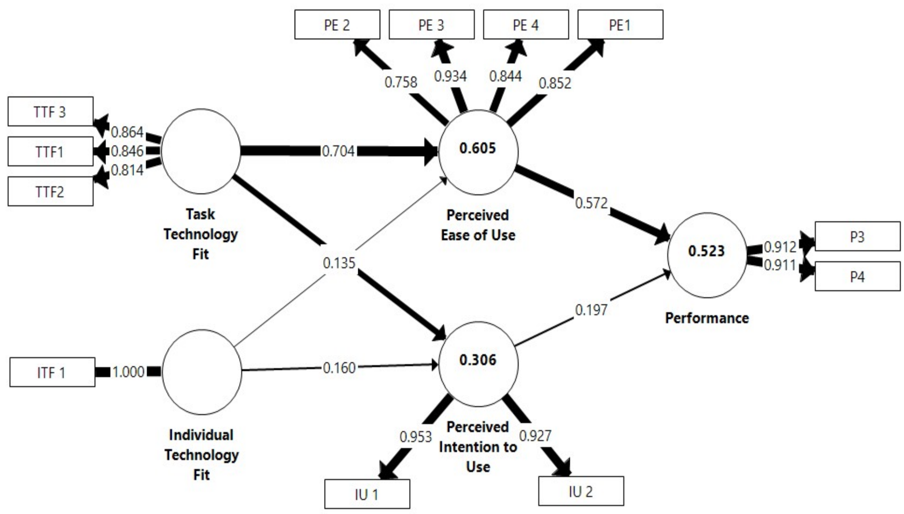

Figure 2: Model Highlighted Path

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