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EXPLORING BEHAVIOUR CONTROL AND ACTUAL USE OF MASSIVE OPEN ONLINE COURSES SYSTEM MANAGEMENT FOR EDUCATION SUSTAINABILITY*

Aida Ahmed Zahrani

Department of Business Management, College of Science and Humanities in Remah, Majmaah University, Al Majmaah, 11952, Saudi Arabia

E-mail: aida.z@mu.edu.sa

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Abstract. The effect of innovation diffusion theory (IDT) activities on the adoption of Massive Open Online Courses (MOOCs) system management for education sustainability was investigated in this research. The research extended the Technology Acceptance Model (TAM) with IDT. Therefore, the aim of this study is to investigate the factors that influence business students' perceived behaviour control and actual use of MOOCs system management for education sustainability. Structural equation modeling (SEM) was used to evaluate the hypothesized relationships basis of data collected from 235 business students at Majmaah University. Business Students' feedback was classified into eight factors and analyzed to see how they perceived about their perceived behaviour control and how they used MOOCs system management for education sustainability. The results showed a strong link between perceived compatibility, relative advantage, and perceived enjoyment, as well as perceived ease of use and usefulness. Perceived usefulness and perceived ease of use influenced positively business Students' attitudes toward use MOOCs, perceived behaviour control, and actual use of MOOCs system management for education sustainability. From the results, perceived compatibility, relative advantage, and perceived enjoyment all have a positive and important effect on perceived ease of use and usefulness of MOOCs, according to the findings. Business students' attitudes toward MOOCs, perceived behaviour control, and actual MOOCs system management for education sustainability use are all positively influenced by perceived ease of use and perceived usefulness.

Keywords: innovation diffusion theory (IDT); Technology Acceptance Model (TAM); Massive Open Online Courses (MOOCs) system; management for education sustainability; Structural equation modeling (SEM)

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1. Introduction

Massive open online courses (MOOCs) system management for education sustainability are a type of online learning that attracts a vast number of business students and, in most cases, provide free courses with open access. MOOCs have transformed the way higher education services are distributed. Although MOOCs were designed to be used for informal learning, they have only recently been accepted as part of formal academic education (Hendriks, de Jong, Admiraal, & Reinders, 2020). MOOCs have been implemented as campus-like classes in a variety of settings, ranging from undergraduate to higher school (Yuan, Powell, & Olivier, 2014). Massive Open Online Courses (MOOCs) have grown in popularity in recent years as creative online learning resources that are accessible to a vast number of people without regard to time or place constraints (Jung & Lee, 2018; Kizilcec, Saltarelli, Reich, & Cohen, 2017). A multitude of MOOCs system management for education sustainability are available for global users from a range of businesses, universities, and websites (Kahl, 2015). MOOCs system management for education sustainability are also widely regarded as a significant breakthrough in higher education. MOOCs system management for education sustainability, which reflect the most recent stage in the development of open educational infrastructure, have a range of benefits over conventional educational methods. Firstly, MOOCs system management for education sustainability are much less expensive than conventional education methods, and consumers can quickly enroll in both formal and informal ways. Second, MOOCs system management for education sustainability can be reached by a vast number of people (from a wide variety of backgrounds) without the need for territorial boundaries or resource duplication. Thirdly, MOOCs system management for education sustainability are adaptable to context and time, allowing users to take control of their learning. Finally, MOOCs system management for education sustainability are distinguished by their digitization, since they present instructional opportunities through innovative information technology and various media platforms, allowing a broad variety of teaching and learning experiences to be performed digitally. MOOCs system management for education sustainability have long been known as having the ability to address issues such as boundary, race, gender, income, and logistical inconvenient (Kizilcec et al., 2017). Several researchers have used various hypotheses to investigate reasons explaining consumer adoption in online learning, with the Technology Acceptance Model (TAM) and its generalized versions being the most commonly used due to their simplicity and usefulness in explaining acceptance behaviour learning by smart technology (Davis, Bagozzi, & Warshaw, 1989; Al-Rahmi et al., 2020; Al-Rahmi et al., 2018; Mendoza, Jung, & Kobayashi, 2017; Ullah et al., 2021;Venkatesh, Morris, Davis, & Davis, 2003). By integrating TAM and social support theory, Hsu, Chen, and Ting (2018) investigated determinants of Taiwan learners' continued plan to use MOOCs system management for education sustainability. Centered on a revised version of TAM, i.e. the Unified Theory of Acceptance and Use of Technology, Fianu, Blewett, Ampong, and Ofori (2018) investigated factors that affected MOOCs system management for education sustainability adoption among business students. However, previous research has primarily concentrated on the functions of demographic and psychosocial influences in consumer adoption, such as gender, motivation, culture, personal inventiveness, and perceived behaviour control (Hsu et al., 2018; Yang & Su, 2017; Mendoza et al., 2017; Wu & Chen, 2017; Zhou, 2016; Al-Rahmi et al., 2019a; Moafa et al., 2018). Few of them offered substantial solutions to issues concerning business students' perceived behaviour control, all of which are linked to user interface and continued use of a strategy plans (Yang & Su, 2017; Venkatesh & Davis, 2000). This is a major problem because it keeps MOOCs system management for education sustainability programmers and administrators in the dark on how to increase user acceptance of MOOCs system management for education sustainability. Many scholars have also conducted research to see whether business students are ready to adopt MOOCs system management for education sustainability, which have become increasingly important for business students all over the world (Subramaniam et al., 2019). MOOCS system management for administration and sustainability is a big barrier; as a result, several universities are debating how to make MOOCs self-paced, such as restructuring MOOCS system management for education sustainability activities to eliminate instructor or facilitator involvement. Therefore, this study contributes to the literature on technology

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acceptance models (TAMs) by investigating the relationship between TAM variables' novelty and the invention diffusion theory (IDT) in a related model. Within the paradigm of IDT theory and TAM model, this research suggested a MOOCs system management for education sustainability acceptance model to investigate factors influencing business students' perceived behaviour control and actual use of MOOCs system management for education sustainability.

2. Theoretical Model and Hypothesis Development

The TAM model states that five variables influence new technology adoption: perceived enjoyment (PE), perceived ease of use (PEOU), perceived usefulness (PU), attitude toward use (ATU), and actual use MOOCs (AUM). In addition, the use of the innovation diffusion theory (IDT) is influenced by two factors: perceived compatibility (PC) and relative advantage (RA) to measure business students' perceived behaviour control (PBC). Researchers proposed the IDT and TAM combined models to take advantage of the advantages of both theoretical models when studying the invention adoption process since the ideas of IDT and TAM are so identical and complementary. As a result, the IDT and TAM combined paradigms have been used to assist business students in implementing new ideas in a variety of settings. Furthermore, previous experiments that combined the two hypotheses generated excellent results (Alenazy et al., 2019; Al-Rahmi et al., 2019b; Lee, Hsieh, & Hsu, 2011). As a result, this study incorporates two major theoretical models: the TAM (Davis, Bagozzi, & Warshaw, 1989) and the IDT (Rogers, 1995). See Figure 1.

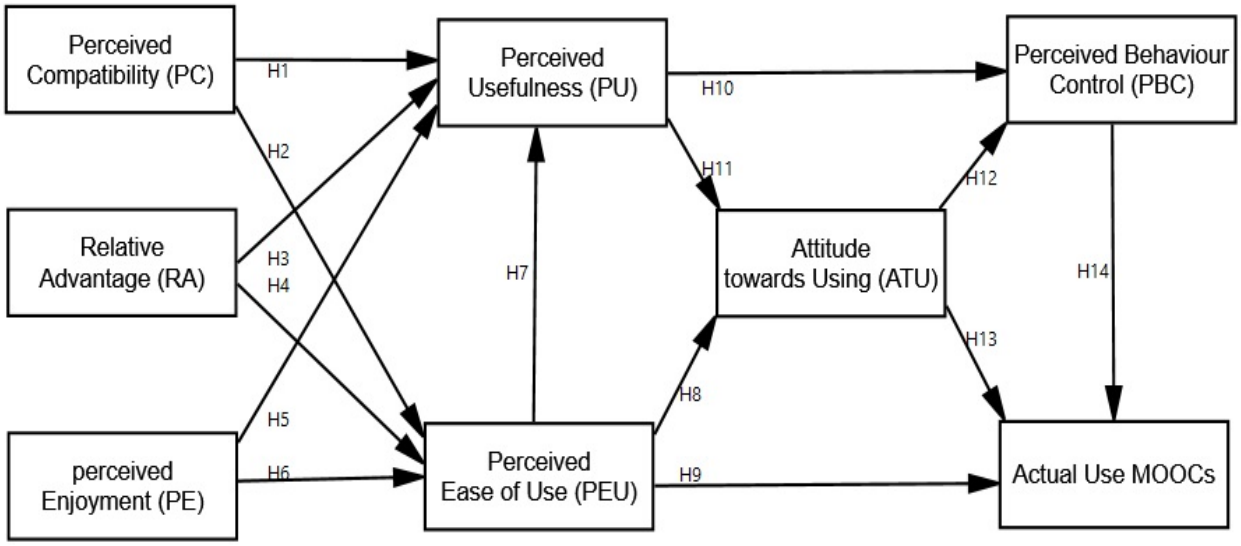

Figure 1. Research Model with Hypotheses
Source: Author

2.1 Perceived compatibility (PC)

Perceived compatibility is described as the degree to which a student believes that using a MOOCs system management for education sustainability system can enhance their learning efficiency. In the literature on MOOCs system management for education sustainability adoption, perceived compatibility has been used as a measure of attitude toward using MOOCs system management for education sustainability and behavioral intention to use (Venkatesh, Morris, Davis, & Davis, 2003). Furthermore, previous studies on perceived compatibility from different perspectives found that it influences perceived usefulness, perceived ease of use, attitude toward using the MOOCs system management for education sustainability, and behavioral purpose to use (Lee et al., 2011). The hypothesis proposed for this construct is that perceived compatibility on use MOOCs

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system management for education sustainability is positively influenced by perceived usefulness and perceived ease of use.

2.2 Relative Advantage (RA)

RA is a measure of how often people feel that creativity is superior to the status quo. As a result, relative advantage is described in this study as the degree to which a student believes that using the MOOCs system management for education sustainability method can improve their learning efficiency (Al-Maatouk et al., 2020). Business students' attitudes toward using MOOCs system management for education sustainability and intent to use (MOOCs) systems among diverse participants are favorably influenced by perceived relative advantages, according to research (Lee et al., 2011).

2.3 Perceived Enjoyment (PE)

Van der Heijden (2004) defines PE as the degree to which the learning management system's (LMS) operation or services are perceived to be enjoyable, regardless of any expected performance implications. As a result, in this study, perceived enjoyment is described as the degree to which a student believes that using MOOCs system management for education sustainability can improve their attitude toward MOOCs system management for education sustainability, perceived behaviour control, and actual MOOCs system management for education sustainability usage.

2.4 Perceived usefulness (PU)

TAM guided Davis (1989) to develop the concept of perceived usefulness. Users' belief that advanced technologies can help them learn more or work more effectively is known as perceived usefulness (Davis1989). Perceived usefulness is an antecedent that has been shown to influence attitudes toward MOOCs system management for education sustainability in many studies and has an important impact on actual MOOCs system management for education sustainability use (Alraimi et al., 2015). As a result, perceived usefulness is a critical variable that suggests ways to assist business students in understanding and improving their attitude toward use and actual use of MOOCs system management for education sustainability.

2.5 Perceived ease of use

People who believe that when technology is used, they are free from exerting effort are thought to have a normal degree of perceived ease of use (Scherer et al., 2019). In this research, perceived ease of use has an effect on business students' attitudes toward and actual use of MOOCs system management for education sustainability, either directly or indirectly. TAM has been used extensively in e-learning studies, and it has been discovered that perceived ease of use has a significant impact on attitude toward use and actual use. According to Wu and Chen (2017), perceived ease of using MOOCs system management for education sustainability influences business students' attitudes toward use and actual use indirectly through perceived usefulness in their research on MOOCs system management for education sustainability.

2.6 Attitude towards use

The degree to which a person perceives a positive or negative feeling in relation to MOOCs system management for education sustainability is referred to as attitude. The user frequently believes that they have influence over its use, which contributes to an increase in the intention to use it as a result of their perceived attitude. The actual use of technology is estimated by mindset, according to previous studies (Yang and Su, 2017). Perceptions in Using MOOCs, some researchers suggest that the classroom atmosphere (Fabunmi & Isaiah, 2007) or business students'

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attention and acceptance to assignments influence business students' attitudes toward learning (Riaz, Riaz, & Hussain, 2011). According to Liaw (2008), have a impact relationships between business students' attitudes and actual use of online learning systems such as MOOCs system management for education sustainability are influenced by perceived ease of use and perceived usefulness.

2.7 Perceived Behaviour Control (PBC)

Perceived behavior control refers to whether or not a person has sufficient means and opportunities to engage in a certain behavior, as well as how well that behavior can be controlled. When a person is more knowledgeable of using a device or has more associated means, they have a greater behavioral intention to use it, resulting in more control or pleasant experiences, or both (Taylor & Todd, 1995). The constructs of perceived behavior control and attitude toward behavior were introduced by Ajzen (1985). The smaller the predicted detriment, the greater the behavioral goal of an individual, suggesting that they are more likely to conduct the behavior and indicating that their perceived behavior control is stronger (Fishbein & Ajzen, 1975). Most of the previous research has focused on the direct effect of attitude on the use of behavioural intention, perceived behavior control to see how behavioural intention influenced the mediating factors of actual behavior (Yang & Su, 2017). While the present research used perceived behavior control to see if the mediating factors in actual use were affected. Business students' perceived behaviour control in using MOOCs system management for education sustainability structures is favorably affected by perceived usefulness, and attitude towards use MOOCs system management for education sustainability, according to the theory suggested for this construct.

2.8 Actual Use Moocs System Management for Education Sustainability

MOOCs system management for education sustainability have grown in popularity since 2012, and they are one of the best platforms because they are free, and they can be used by users of all generations to study at any time, in any place, and they can learn on their own using the modules that are available (Khan et al., 2018). Although each person who completes the modules will receive a certificate for a reasonable cost (Joo et al., 2018). This is shown by the fact that in the year 2012, a total of 160000 students participated in the courses. However, it is unknown how much students' perceived behaviour control, attitude toward using MOOCs, and actual use of MOOCs in terms of learning have progressed (Deng et al., 2019; Yang & Su, 2017). It's been 13 years since MOOCs system management for education sustainability were first unveiled to the general public, and it's been 9 years since they've been popular all over the world. In terms of the number of subjects available to business students, the number of MOOCs system management for education sustainability is rapidly growing from 2012 to 2020.

3. Research Methodology

The aim of this research was to understand more about business students' perceived behaviour control and their use of MOOCs system management for education sustainability. MOOCs system management for education sustainability have been a part of the education movement since their introduction in 2012, drawing a significant number of participants. As a result, in this study, we circulated questionnaires to business students who participated in MOOCs system management for education sustainability. Users of the MOOCs system management for education sustainability from both postgraduate and undergraduate business students were selected as the study's sample. The item's survey was measured on a 5-point Likert scale. Innovation Diffusion Theory (IDT), Technology Acceptance Model (TAM), and demographic are analysis the items. The data was analyzed using the Statistical Package for the Social Sciences (SPSS). According to Hair, Sarstedt, Ringle, and Mena (2017), Structural Equation Modeling (SEM- Smart-PLS) was used as the statistical technique in the study in two stages. The first step was to construct, converge, and discriminate the measurement model's validity, while the second step was to analyze the structural model. As recommended by Hair et al. (2017) factor loadings were

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used to ensure construct validity, composite reliability, Cronbach's alpha, and convergence validity for the model's goodness of fit. Cronbach's alpha was determined to be 0.901 based on standardized items. All variables were accepted in the reliability coefficient (Cronbach's alpha) for both the pilot and final test constructs, as seen in Table 1.

Table 1. Pilot Test and Final Test for All Variables

Factors	Code	Pilot Test	Final Test
Perceived Compatibility	PC	0.801	0.921
Relative Advantage	RA	0.832	0.936
Perceived Enjoyment	PE	0.793	0.931
Perceived Ease of Use	PEU	0.739	0.903
Perceived Usefulness	PU	0.807	0.942
Attitude towards Use	ATU	0.772	0.899
Perceived Behaviour Control	PBC	0.807	0.911
Actual Use MOOCs	AUM	0.821	0.932

Source: Author

3.1 Data Collection and Sample Characteristics

From October 2020 to February 2021, when colleges were suspended due to the COVID-19 pandemic, this research was performed online. A survey instrument was developed and validated prior to the key data collection to assess variables predicting student use of MOOCs system management for education sustainability. After the normality test, 12 participants' responses were omitted; such exclusions were suggested by (Hair et al., 2017), who suggested that outliers would contribute to inaccurate statistical effects and must be excluded. As a result, the responses of 235 participants were entered into the SPSS kit program. During the COVID-19 pandemic, this research focuses on postgraduate and undergraduate business students who are active users of MOOCs system management for education sustainability. Confirmatory factor analysis is used to ensure the model's validity.

3.2 Instruments of Measurement

The content validity of the measuring scales was verified by the build items used in previous studies. The study questionnaire was divided into two sections: Basic demographic data (gender, age, educational degree, and specialization) were measurement using questionnaire elements and questionnaire variables perceived compatibility, relative advantage adapted from (Karahanna, Straub, & Chervany, 1999), perceived enjoyment, perceived ease of use, perceived usefulness, attitude towards use, and actual use adapted from (Davis et al., 1989), perceived behaviour control adapted from (Pintrich and De Groot, 1990). Table 2 shows the objects and their loadings that must be loaded into the build they were created to evaluate (Chow and Teicher, 2012).

Table 2. Loadings of Items

Factors	Items	ATU	PBC	PE	PEU	PU	AUM	PC	RA
Attitude towards Using	ATU1	**0.902**	0.596	0.636	0.417	0.420	0.494	0.360	0.405
	ATU2	**0.875**	0.512	0.587	0.405	0.417	0.422	0.357	0.391
	ATU3	**0.720**	0.311	0.472	0.425	0.416	0.313	0.303	0.348
Perceived behaviour control	PBC1	0.374	**0.785**	0.393	0.534	0.535	0.437	0.263	0.460
	PBC2	0.477	**0.853**	0.509	0.561	0.554	0.540	0.393	0.460
	PBC3	0.533	**0.833**	0.527	0.495	0.462	0.443	0.281	0.359
	ASE4	0.510	**0.785**	0.455	0.429	0.442	0.380	0.370	0.338
Perceived Enjoyment	PE1	0.534	0.479	**0.857**	0.389	0.323	0.426	0.240	0.291
	PE2	0.590	0.531	**0.898**	0.464	0.449	0.504	0.369	0.429
	PE3	0.637	0.500	**0.898**	0.451	0.427	0.425	0.321	0.392
	PE4	0.638	0.534	**0.879**	0.451	0.455	0.391	0.318	0.396
Perceived Ease of Use	PEU1	0.404	0.518	0.409	**0.849**	0.607	0.422	0.449	0.560
	PEU2	0.456	0.568	0.447	**0.857**	0.620	0.494	0.392	0.523

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	PEU3	0.332	0.359	0.348	**0.711**	0.421	0.371	0.334	0.319
	PEU4	0.401	0.551	0.414	**0.830**	0.686	0.475	0.428	0.541
Perceived Usefulness	PU1	0.461	0.572	0.457	0.578	**0.825**	0.491	0.506	0.550
	PU2	0.428	0.515	0.431	0.619	**0.866**	0.428	0.396	0.502
	PU3	0.429	0.534	0.364	0.689	**0.886**	0.428	0.411	0.580
	PU4	0.393	0.496	0.384	0.629	**0.883**	0.381	0.388	0.526
Actual Use MOOCs	AUM1	0.374	0.463	0.350	0.420	0.434	**0.739**	0.406	0.414
	AUM2	0.452	0.452	0.449	0.430	0.416	**0.848**	0.451	0.419
	AUM3	0.365	0.479	0.385	0.446	0.381	**0.836**	0.408	0.359
	AUM4	0.385	0.439	0.399	0.443	0.428	**0.796**	0.493	0.431
	AUM5	0.399	0.368	0.373	0.417	0.321	**0.739**	0.408	0.306
Perceived compatibility	PC1	0.340	0.355	0.310	0.424	0.437	0.459	**0.864**	0.393
	PC2	0.382	0.339	0.290	0.422	0.410	0.437	**0.852**	0.371
	PC3	0.324	0.337	0.316	0.423	0.418	0.507	**0.850**	0.367
Relative Advantage	RA1	0.343	0.430	0.343	0.529	0.525	0.396	0.387	**0.896**
	RA2	0.447	0.508	0.412	0.568	0.594	0.450	0.423	**0.926**
	RA3	0.442	0.409	0.412	0.549	0.571	0.473	0.384	**0.888**

Source: Author

4. Results and Analysis

The study uses the SmartPLS software to test the developed theoretical model using partial least squares structural equation modelling (PLS-SEM) (Hair et al., 2017). The fact that PLS-SEM can do simultaneous analysis on both structural and measurement models, resulting in more reliable tests, allows it an effective tool to use in this research. The demographic information is presented in Table 3. There were 112 female respondents (47.7) and 123 male respondents (52.3). Age 113 (48.1) from18-22 years old, 89 (37.9) from 23-26 years old, 13 (5.5) from 27-30 years old, 9 (8.3) from 31-33, and 11 (4.7) more than 34 years old. Using MOOCs system management for education sustainability 199 (84.7) business students they use, and 36 (15.3) they not' use MOOCs system management for education sustainability. Specialization 48 (20.4) from social science, 123 (52.3) from technology, and 64 (27.2) from engineering area. Finally, education level 45 (19.1) postgraduate business students, and 190 (80.9) undergraduate business students.

Table 3. Demographic information

Factors	**Frequency**	**Percentage**	**Factors**	**Frequency**	**Percentage**
Famel	112	47.7	Use MOOCs	199	84.7
Male	123	52.3	Not Use MOOCs	36	15.3
18-22	113	48.1	Social Science	48	20.4
23-26	89	37.9	Technology	123	52.3
27-30	13	5.5	Engineering	64	27.2
31-33	9	3.8	Postgraduate	45	19.1
<34	11	4.7	Undergraduate	190	80.9

Source: Author

4.1 Measurement Model Assessment

The measurement model was evaluated based on two factors: reliability and validity. The tests of composite reliability (CR) and Cronbach's alpha were used to conduct reliability testing. Any of these measures should be less than 0.70 (Hair et al., 2017). Table 2 shows that both measures' values are considered acceptable, indicating that reliability has been developed. According to (Hair et al., 2017), two validities, convergent and discriminant, were evaluated for validity analysis. Factor loadings and the average variance extracted (AVE) were checked for convergent validity, with acceptable values of 0.70 and 0.50, respectively (Hair et al., 2017). Table 4 shows that both measurements fulfil the acceptance criterion, indicating that convergent validity has been developed. The

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discriminant validity can be tested through correlations with an acceptable value of 0.85, according to (Henseler et al.). The results in Table 5 indicate that all of the values are acceptable, showing that the discriminant validity has been developed.

Table 4. Factor Loading and measurement model

Factors	Items	Factor loading	Composite Reliability	Cronbachs Alpha	AVE	R Square
Attitude towards Using	ATU1	0.902	0.874	0.782	0.699	0.282
	ATU2	0.875				
	ATU3	0.720				
Perceived behaviour control	PBC1	0.785	0.887	0.831	0.663	0.478
	PBC2	0.853				
	PBC3	0.833				
	PBC4	0.785				
Perceived Enjoyment	PE1	0.857	0.934	0.907	0.781	0.000
	PE2	0.898				
	PE3	0.898				
	PE4	0.879				
Perceived Ease of Use	PEU1	0.849	0.887	0.830	0.663	0.480
	PEU2	0.857				
	PEU3	0.711				
	PEU4	0.830				
Perceived Usefulness	PU1	0.825	0.922	0.888	0.749	0.600
	PU2	0.866				
	PU3	0.886				
	PU4	0.883				
Actual Use MOOCs	AUM1	0.739	0.894	0.851	0.629	0.402
	AUM2	0.848				
	AUM3	0.836				
	AUM4	0.796				
	AUM5	0.739				
Perceived compatibility	PC1	0.864	0.891	0.817	0.732	0.000
	PC2	0.852				
	PC3	0.850				
Relative Advantage	RA1	0.896	0.930	0.887	0.816	0.000
	RA2	0.926				
	RA3	0.888				

Source: Author

Table 5. Discriminant validity

Factors	Code	PBC	AUM	ATU	PEU	PE	PU	PC	RA
Perceived Behaviour Control	PBC	0.882							
Actual Use MOOCs	AUM	0.557	0.909						
Attitude towards Using	ATU	0.581	0.499	0.871					
Perceived Ease of Use	PEU	0.622	0.544	0.492	0.814				
Perceived Enjoyment	PE	0.580	0.494	0.682	0.499	0.893			
Perceived Usefulness	PU	0.613	0.500	0.495	0.727	0.473	0.897		
Perceived compatibility	PC	0.402	0.546	0.407	0.495	0.357	0.493	0.912	
Relative Advantage	RA	0.498	0.488	0.456	0.608	0.432	0.625	0.441	0.932

Source: Author

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4.2 Structural Model's Analysis

The structural equation model was used to measure the interdependence of the structural model's different theoretical structures, in addition to the Smart PLS with maximum likelihood estimation (Alamri et al., 2020a; Almaiah et al., 2019; Alshurideh et al., 2020). Smart PLS was used to test the study theories and develop relationships. As a result, these constructs seem to have a lot of predictive validity (Liu et al., 2005). In general, the evidence supported all of the hypotheses. Figure 1 shows the hypothesis, Figure 2 shows the path coefficients, and Figure 3 shows the path T-Values.

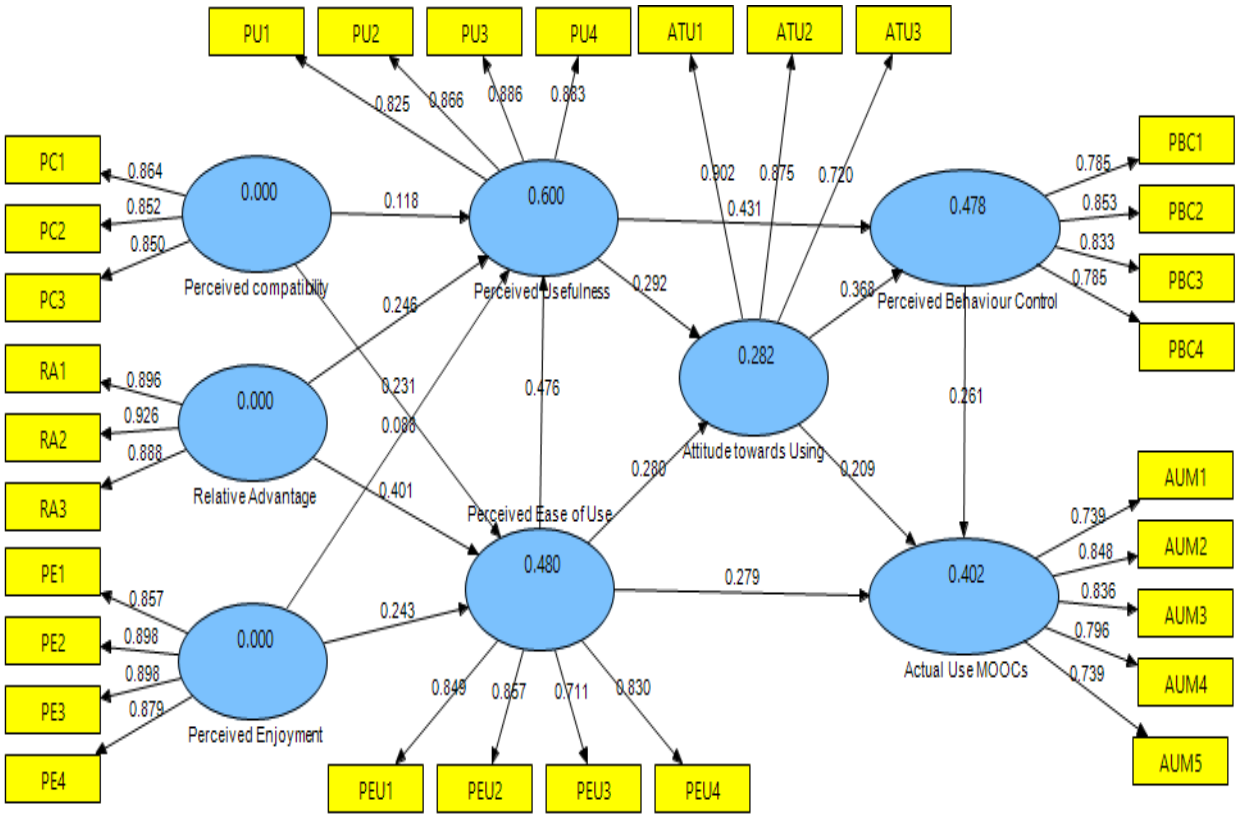

Figure 2. Path coefficients
Source: Author

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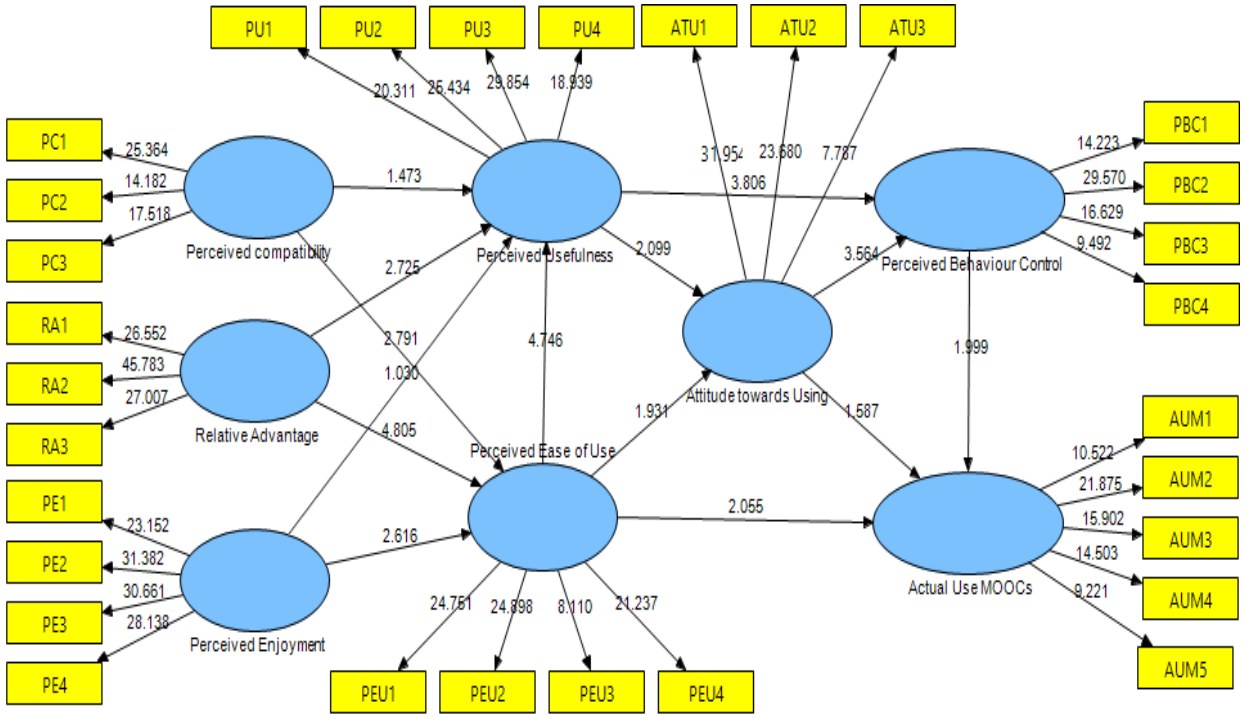

Figure 3. Path T-Values
Source: Author

Table 6. Path Hypotheses Testing

Path Hypotheses	Path Coefficients	Standard Error	T Statistics
Perceived compatibility -> Perceived Usefulness (H1)	0.118170	0.085903	1.473329
Perceived compatibility -> Perceived Ease of Use (H2)	0.231035	0.086690	2.791051
Relative Advantage -> Perceived Usefulness (H3)	0.245641	0.114250	2.724815
Relative Advantage -> Perceived Ease of Use (H4)	0.400974	0.087139	4.804870
Perceived Enjoyment -> Perceived Usefulness (H5)	0.087702	0.082855	1.029717
Perceived Enjoyment -> Perceived Ease of Use (H6)	0.243410	0.095937	2.615583
Perceived Ease of Use -> Perceived Usefulness (H7)	0.475930	0.112282	4.746353
Perceived Ease of Use -> Attitude towards Using (H8)	0.279878	0.148255	1.930887
Perceived Ease of Use -> Actual Use MOOCs (H9)	0.278507	0.141209	2.055294
Perceived Usefulness -> Attitude towards Using (H10)	0.291802	0.150115	2.098877
Perceived Usefulness -> Perceived behaviour control (H11)	0.431222	0.100184	3.805979
Attitude towards Using -> Perceived behaviour control (H12)	0.367513	0.099380	3.564498
Attitude towards Using -> Actual Use MOOCs (H13)	0.209497	0.129200	1.587432
Perceived Behaviour Control -> Actual Use MOOCs (H14)	0.261483	0.128043	1.999481

Source: Author

Table 6 shows the findings of the analysis relationship between Perceived compatibility -> Perceived Usefulness (H1) (β=0.118170, T= 1.375628, P<0.001), hypothesis was supported. Also, the relationship between Perceived compatibility -> Perceived Ease of Use (H2) (β=0.231035, T= 2.665057, P<0.001), hypothesis was supported. In addition, relationship between Relative Advantage -> Perceived Usefulness (H3) (β=0.245641, T= 2.150028, P<0.001), hypothesis was supported. The relationship between Relative Advantage -> Perceived Ease of Use (H4) (β=0.400974, T= 4.601560, P<0.001), hypothesis was supported. The relationship between Perceived Enjoyment -> Perceived Usefulness (H5) (β=0.087702, T= 1.584981, P<0.001), hypothesis was supported. Similarly, relationship between Perceived Enjoyment -> Perceived Ease of Use (H6) (β=0.243410, T= 2.537186, P<0.001), hypothesis was supported. Moreover, the relationship between Perceived Ease of Use -> Perceived Usefulness

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(H7) (β=0.475930, T= 4.238691, P<0.001), hypothesis was supported. Also, rrelationship between Perceived Ease of Use -> Attitude towards Using (H8) (β=0.279878, T= 1.887814, P<0.001), hypothesis was supported. Similarly, rrelationship between Perceived Ease of Use -> Actual Use MOOCs system management for education sustainability (H9) (β=0.278507, T= 1.972298, P<0.001), hypothesis was supported. Additional, relationship between Perceived Usefulness -> Attitude towards Using (H10) (β=0.291802, T= 1.943852, P<0.001), hypothesis was supported. And the relationship between Perceived Usefulness -> Perceived behaviour control (H11) (β=0.431222, T= 4.304321, P<0.001), hypothesis was supported. Furthermore, relationship between Attitude towards Using -> Perceived behaviour control (H12) (β=0.367513, T= 3.698041, P<0.001), hypothesis was supported. Similarly, the relationship between Attitude towards Using -> Actual Use MOOCs system management for education sustainability (H13) (β=0.209497, T= 1.621486, P<0.001), hypothesis was supported. Finally, the relationship between Perceived behaviour control -> Actual Use MOOCs system management for education sustainability (H14) (β=0.261483, T= 2.042158, P<0.001), hypothesis was supported.

5. Discussion and Implications

Theoretically, this analysis contributed to the existing of information by improving understanding of how to use MOOCs system management for education sustainability by proposing a research paradigm based on business students' perceived behaviour control and actual use of MOOCs system management for education sustainability. Perceived compatibility, relative advantage, perceived enjoyment, perceived ease of use, perceived usefulness, attitude toward MOOCs system management for education sustainability, perceived behaviour control, and actual use MOOCs system management for education sustainability are all determinant TAM and IDT variables in the research model. As a result, the research model identifies TAM and IDT variables as having the greatest influence on business students' perceived behaviour control and actual use MOOCs system management for education sustainability. This comes as no surprise for a widely accepted acceptance model. Our findings are similar to those of previous research, which found that perceived usefulness was a stronger indicator of students' attitude towards use and actual use MOOCs system management for education sustainability (Hakami et al., 2017; Alyoussef et al., 2019; Zhou, 2017). The findings are also consistent with previous research (Hakami et al., 2017; Wu and Chen, 2017; Ing et al., 2020; Yang and Su, 2017), which found perceived ease of use to be a key predictor of students' attitudes toward MOOCs system management for education sustainability use. Our findings support previous research and online learning (Abuhassna et al., 2020; Alalwan et al., 2019; Azami and Ibrahim, 2018), which showed that attitude toward MOOCs system management for education sustainability use has a strong positive correlation with actual use of MOOCs system management for education sustainability. The same findings were observed in studies by Wu and Chen (2017) and Yang and Su (2017), both of which concluded that business students' attitude is a major determinant of their intention to continue use MOOCs system management for education sustainability. As a result, the hypotheses in our suggested model supported. This research attempt to combine the TAM model, the IDT theory, and business students' perceived behaviour control and actual use MOOCs system management for education sustainability. Thus, the findings show that technical variables including perceived ease of use and perceived usefulness are important predictors of business students' attitudes toward MOOCs system management for education sustainability use. The results show that the proposed theoretical model is very good at explaining the variables that influence university business students' perceived behaviour control and MOOCs system management for education sustainability use. Overall, the above findings are consistent with previous MOOCs system management for education sustainability research, demonstrating that the TAM and IDT are appropriate for business students' attitudes toward use, perceived behaviour control, and actual MOOCs system management for education sustainability use. First, perceived enjoyment, perceived ease of use, and perceived usefulness might have a high effect in the current study since the same fundamental factors were influencing business students' attitudes toward MOOCs system management for education sustainability and actual MOOCs system management for education sustainability use. Second, how business students' attitudes were assessed in this research was linked to the high correlation between perceived compatibility, relative advantage, and perceived enjoyment with perceived ease of use and perceived usefulness.

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Finally, there is a strong connection between business students' attitudes toward MOOCs system management for education sustainability and their perceived behaviour control, as well as actual MOOCs system management for education sustainability use. This is consistent with results achieved by modifying Davis et al. (1989) and Taylor and Todd's scale designs (1995). As a result, as recommended by Alzaghoul (2012), the following must be noted when planning instructional content: business students must be aware of the online course's learning outcomes, the online lesson must have tests at specific sections to verify the learner's level of understanding of the material, the learning materials must be sequenced correctly to facilitate learning, and the online lesson must have tests at specific sections to check the learner's level of understanding of the material. Finally, business students must be given feedback so that they can monitor their success and, if necessary, guide future steps (Alzaghoul, 2012). All hypotheses were supported and positively linked to actual use smart learning and MOOCs system management for education sustainability, according to (Ullah et al., 2020; Alamri et al., 2020b; Alhussain et al.,2020), confirming significant ties between perceived ease of use and perceived usefulness. Business students' attitudes toward using MOOCs system management for education sustainability are influenced indirectly by factors such as perceived compatibility, relative advantage, and perceived enjoyment. The study's consequences include reinforcing and influencing business students' perceived behaviour control, as well as real MOOCs system management for education sustainability use in Saudi higher education. The findings also revealed faculty's role in demonstrating how business students can use MOOCs system management for education sustainability to learn content, as well as business students' attitudes toward using MOOCs system management for education sustainability systems for perceived behaviour control and actual use of MOOCs system management for education sustainability.

Conclusion and future work

In this article, we propose a research model based on determinant factors on TAM and IDT variables that affect business students' perceived behaviour control and actual use MOOCs system management for education sustainability. Perceived compatibility, relative advantage, perceived enjoyment, perceived ease of use, perceived usefulness, and attitude toward using MOOCs system management for education sustainability are among the variables covered. A comprehensive literature review was conducted to determine business students' perceived behaviour control and actual use MOOCs system management for education sustainability. The proposed model would, add to the current literature on MOOCs system management for education sustainability' long-term goals and serve as a guide for higher education institutions and MOOCs system management for education sustainability designers in creating good MOOCs system management for education sustainability. However, other considerations should be considered in order to gain a more systematic understanding of business students' perceived behaviour control and MOOCs system management for education sustainability use. The following are some of the limitations of our research that should be addressed in the future. This study only includes university business students who use MOOCs system management for education sustainability. As a result, our study can have a certain degree of limitation, making it difficult to generalize to other districts or areas (Yang et al., 2017). Future researchers should be able to gather information and data from various places and compare it to this study and see if there are any differences. Furthermore, the completeness of MOOCs system management for education sustainability differs by major, and the MOOCs system management for education sustainability courses that business students can take can differ, both of which may influence the business students' responses. As a result of the above, variations in majors and course characteristics can have a positive or negative impact on business students' perceived behaviour control and actual use of MOOCs system management for education sustainability. Future studies should consider these two considerations into account and use them in the best research model imaginable.

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Dr. Aida Ahmed ZAHRANI
ORCID ID: https://orcid.org/0000-0002-8045-930X