Contingency E-Learning for Accounting: Effective Communication in the New Normal Era

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ABSTRACT

Objective - The purpose of this research article is to examine the structural aspects of the contingent variables from the user side and the provider side of e-learning in accounting education and to explore and develop insights on how it can be applied to the changing ways of communication today in the new normal era.

Methodology/Technique – We conducted research on e-learning users through 359 (three hundred and fifty nine) students majoring in accounting by using path analysis to obtain measurement results from 2 (two) structural equations.

Findings - From the expectations of students as users of e-learning, it showed, first, there are no significance from relevant learning-teaching methods, students self-interest, outcome- based education (OBE) curriculum base, towards implementation of contingency e-learning . Otherwise, engagement within regulatory compliance as the only variable that can be used as an antecedent to predict the implementation of contingency e-learning. Second, relevant learning - teaching methods, and OBE curriculum base play a role in predicting the achievement of learning outcomes effectiveness.

Novelty - This research provides insight and contribution to support the accounting education process that takes place in the new normal era after the Covid-19 crisis. Effective communication leads to the achievement of effective learning outcomes. This is explained by the role of engagement within regulatory compliance from students towards contingency e-learning in the accounting department as well as with the role of relevant teaching and learning, and the role of OBE curriculum as new insights from the facts of this research.

Type of Paper: Empirical.

JEL Classification: M40, M49.

Keywords: Accounting E-Learning; Effectiveness of Learning Outcomes; Engagement of Regulatory Compliance; Learning Teaching Method; OBE Curriculum Base; Student Self Interest

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1. Introduction

The Covid-19 pandemic crisis has brought about changes in many aspects of life (UNDESA, UN, 2020a) including on education in a global context (Onyema, 2020), UNESCO, 2020a). Therefore, for sustainable development, accountability priority is given to the option of restoring education with a policy of continuing the learning process (UNESCO, 2020b; Kippels & Impact, 2020).

In this context, policy makers have the opportunity to build tools, strategies and collaborations with the application of digital technology (UNDESA, UN, 2020b). There is evidence from various countries for the implementation of e-learning which is an important aspect that must be met by a country, as a challenge in carrying out teaching in the Covid-19 era (Jandrić et. al., 2020).Therefore, It can be accepted that e-learning becomes an important need to be implemented as an alternative delivery mode (Betts, 2011; Van des Ven & Ganco, 2013), as a capacity building to equip organization with knowledge and competencies in the implementation of e-learning in the new normal era (Callo & Yazon, 2020).

The implementation of the contingency e-learning model has its challenges (Ilias et. al., 2020) including the role of humans, social capacity, technical aspects, data capacity, for the fulfillment of effective communication in accounting education (Myring and Bott, n.d.). Therefore, a normative model reference is needed that refers to the organizational context as a user and provider of e-learning by referring to the innovation contingency model as the basic development model (Lüder, 1992) that meets the characteristics with aspects that determine the success of policy implementation in the field of education (Fullan, 2007; Payne, 2008; Cerna, 2013) as well as fulfilling the theory implementation through process model, and implementation frameworks (Nilsen, 2015).

The Covid-19 pandemic is far from over. Therefore, due to its impact, there is no doubt that online learning will continue to exist globally for many years to come (Jandrić et. al., 2020) with the application of blended learning in academic recovery during this disease outbreak which has become the concern of the entire nation, as a new reality or as a new paradigm throughout the world (Mahaye, 2020; Contreras Jennifer Lorena Gómez, 2008). There are advantages and disadvantages in implementing e-learning due to the various factors that play a role (Grabinski et. al., 2015) and factors that hinder implementation (Ilias et. al., 2020; Azzahra, 2020). However, this is not seen as a pros and cons contingent upon the need for implementation (Donaldson, 2001; Betts, 2011; Van de Ven and Ganco, 2013). The use of e-learning is needed for the protection of students, education staff, communities, societies, and the nation as a whole (Dhawan, 2020). Therefore, in this study, the effectiveness of learning communication in various countries, in organizations that provide accounting education in the new normal era, in general its implementation can be assessed by applying the contingency e-learning model.

A number of studies related to accounting education, as well as the context of e-learning in accounting education are presented with the challenges in accounting education (Conrad, 2019). Accounting academics need to adapt their teaching methods to meet the market expectations for accounting graduates (Handoyo & Anas, 2019). Student self-regulation is related to educational technology (Ngampornchai & Adams, 2016). The concept of e-learning as a technology-mediated learning model approach with great potential from an educational perspective (Berrocoso-Valverde et. al., 2020). Functionally there is a contingency e-learning model (Khazanchi, Deepak Adcock et. al., 2015), as part of a management information system in higher education (Karfaa et. al., 2015; Guerrero & Sierra, 2018). There are variables that affect the success of an information system and the achievement of system performance (DeLone & McLean, 2016).

Based on previous research with the theme of accounting education, the application of e-learning is a need that must be met due to the Covid-19 pandemic crisis. Its implementation depends on related determinant factors. However, previous empirical facts have not stated the identification of the determinant factors for implementation as a conditional aspect in the new normal era. Therefore, as needed, research questions are set by establishing contingency aspects (Betts, 2011; Van de Ven. and Ganco, 2013) related to educational theory and information systems theory within learning and teaching communication. First, is there any influence of contingent internal and external determinants (relevant learning teaching methods, student self-interest, engagement within regulatory compliance, OBE curriculum base) on the implementation of contingency e-learning? Second, is there any influence of contingent factors (relevant learning teaching methods, OBE curriculum base, and application of contingency e-learning) towards the effectiveness of learning outcomes?

This research is intended to provide benefits for policy makers in the field of education and teaching with input in the form of relevant information in the implementation of contingency e-learning and learning outcomes in the new normal era. As an insight in supporting stakeholder involvement related to the

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development of e-learning management for accounting higher education providers in the new normal era, including for Indonesia. This research article is presented in the order of introduction, literature review, research methodology, results, discussion, and conclusions.

2. Literature Review

2.1. Conceptual Framework

Referring to the needs in predicting the phenomenon (Imenda, 2014) with a theoretical framework, concomitantly grand theory is put forwards as the basis for reconstructed logic (Gregor, 2006) within the conceptual framework (Figure 1). With the phenomenon of the research problem, due to the COVID-19 pandemic towards accounting education, which, in turn accounting education requires continuity. Normally, the stakeholder theory is used for the benefits of student engagement, for the basis of fulfilling a closer relationship with stakeholder with using the relevant means of communication. As well as aspects of legitimacy theory that provide the basis for accountability for fulfilling organizational values with environmental values, with a social contract between agents and principals implicitly (Ratnatunga, Janek and Jones, 2012).
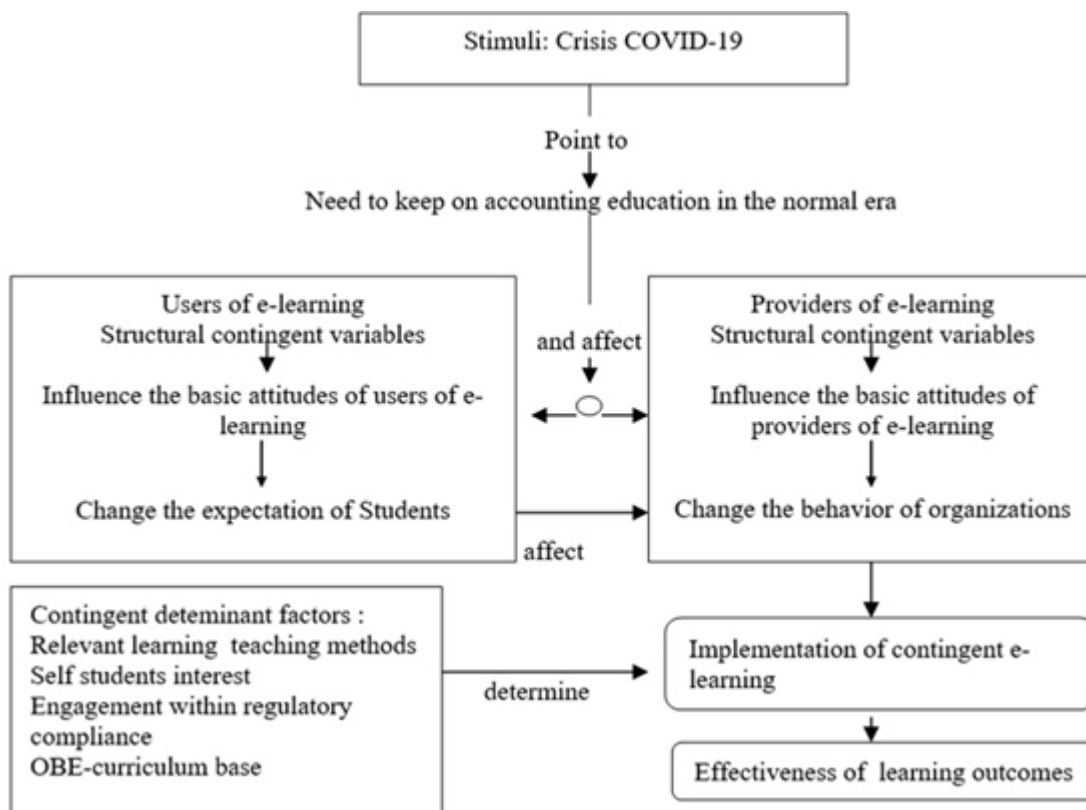

Figure 1. Adapted from (Lüder, 1992): The Contingency e-learning model: Effective communication on accounting education in the new normal era

In Figure 1, Lüder (1992) shows structural contingent variables as a challenge to apply a system of model contingently. From a theoretical point of view, there is no one best way to design a system; it depends on the organizational context (Rankin, Michaela, Stanton, Patricial, McGowan, Susan, Ferlauto, Kimberly and Tilling, 2012). As with the context of implementation theory (Nilsen, 2015), a determinant framework is needed to determine the types of research variables. Payne and Charles (2008) suggest only looking for general

solutions because there is no 'one size fits all' policy. Thus, the important factors for policy implementation (Cerna, 2013) expressed by the fulfillment of conditions for implementation as dynamic process that involves interacting variables (Fullan, 2007; Payne and Charles, 2008). Therefore, Figure 1 shows the determinant factors that relates with systematic implementation of e-learning divided into the objectives and scope of the research in accordance with the conceptual framework of the study.

2.2. Theoretical Framework and Hypothesis Development

2.2.1. Theoretical Framework

Based on the conceptual framework, the theoretical framework is selected using educational theory associated with communication technology within e-learning implementation as a type of information system in higher education. Theoretically, the context of teaching and learning can be explained with a design approach that refers to the point of view in the world of education, such as being able to overcome the basic problems of impact, and according to conditions in the three domains of practice, policy and theory (Clements, 2014). Learning theory includes behaviorism, cognitivism and constructivism (Fulbrook, 2019). The implementation climate is related to the absorption and readiness of the organization. The delivery of essential courses meets alignment with the curriculum context, requiring conformance to the context of integrative curriculum requirements, accreditation requirements, and industry requirements (Woodside et. al., 2020; Kharbat & Muqattash, 2020). In turn, there is a need to refer to the development of a hybrid syllabus in the era of digitization (Kharbat & Muqattash, 2020) with the role of contingency e-learning as a tool and manner in learning and teaching in the new normal era.

The role of contingent theory (Van de Ven & Ganco, 2013) as a technology or as science (Betts, 2011) is used to explain the implementation of contingency e-learning. Theoretically, this matter is connected when we have an effort to overcome the basic problems of educational impact by reference to the conditions in the three domains of practice, policy, and theory (Clements, 2014). Based on a theoretical perspective in the education field, we reconstruct the logic (Gregor, 2006) with structural contingent variables (Lüder, 1992). We therefore put forward the determinant factors for system implementation in education policy within a virtual learning environment using structural contingent variables from the user side (student self-interest, engagement within regulatory compliance), and from the provider side (relevant learning teaching methods, and OBE curriculum base) (see Figure 1).

Effectiveness of learning outcomes (EoLO) is defined as student learning achievements in the criteria for mastering aspects of accounting field of knowledge, to ensure that graduates acquire the skill and competencies needed as well as the necessary professional attitudes. This includes indicators such as the ability to know and focus on key principles, concepts learned, focus on normative theory, criteria of knowledge, cognitive ability to memorize, ability to apply, focus on required outcomes, level of proficiency in competencies, actively engaged learning, testing application of knowledge and skills (Biggs, 2014; IAESB, 2013; IFAC, 2017; Taib, Salleh and Ngali, 2017; AICPA, 2018; Borgonovo, Alfred., Friedrich, Brian, and Wells, 2019).

Implementation of contingency e-learning (IoCeL) is define as a possible contingency (Betts, 2011; Van de Ven & Ganco, 2013) with fulfillment role e –learning as configuration, complementary design, suppressing complexity, creative design, performance diversity role e-learning Van de Ven & Ganco, 2013). It was formed within the items of the indicator, namely as asynchronous e-learning with personal IT systems, big data, WEB-based modules, internet of things, artificial intelligence, as synchronous e-learning, with using application options, such as: zoom cloud meeting, WhatsApp web, google hangouts web, GoToMeeting, Cisco WebEx (Mooghali & Azizi, 2008; Hrastinski, 2008; El-Bakry & Mastorakis, 2009; Kushida et. al., 2011; Grech, 2016; (Aldowah et. al., 2017; Sledgianowski, Deb, Gomaa, Mohamed & Tan, 2017; Ge et. al., 2018; Hughes, 2020).

Relevant learning teaching method (RLTM) is defined as planning teaching and learning with the choice of methods used by lecturers to inform teaching in communication of related content, planning of tasks, social support which empowers students in the learning process and using e-learning and to achieve effectiveness of

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learning outcomes. This aspect can be formed within the items of the indicator, such as conventional method, discussion method, lecture method plus discussion and assignment, recitation method, problem finding method, design method, discovery method, inquiry method, mind mapping method, peer teaching method (Hrastinski, 2008; Fry et. al., 2021; Al-rawi, 2013; Nind et. al., 2020; Hirsh et. al., 2020; Team UGCNETPAPER1, 2021).

Student self-interest (SSI) is defined as the need for students to motivate themselves, personal attention in fulfilling cognitive, affective, and conative aspects, as an achievement needed in the learning process and to enhance learning outcomes of accounting education with using contingency e-learning. This aspect be formed within the items of the indicator, such as students' needs to motivate themselves, personal attention in meeting cognitive needs, affective development needs, self-actualization, fulfillment of conative aspects, as ethics and aesthetics themselves with a virtual learning environment, as needs in the learning process with personal IT systems (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, 2001; Fry et. al., 2021 Heer, 2012; Reynolds, 2015; Alcaide-Herrador et. al., 2019; Hirsh et. al., 2020; Dhawan, 2020; DeAlwis et. al., 2020; Alshurafat et. al., 2021).

Engagement within regulatory compliance (EwRC) is defined as the involvement of lecturers and students in regulations related to the e-learning learning process with the aim of meeting health goals, economic-financial-efficiency considerations, technical considerations, behavioral-motivational aspects, social aspects, and academic goals. This aspect is formed within the items of the indicators, such as acceptance of physical distancing needs, social distancing rules, acceptance of relational values, understanding of the level of social values, as social contract compliance, consideration of the fulfillment of individual rights, compliance of universal academic ethics, reactive intelligence of environment, active intelligence to plan, being with onto intelligence in understanding, acceptance of campus environmental values (Belohlavek Peter, 2007; Fry et. al., 2021; Bakia, Shear, Toyama & Lasseter, 2012; Sousa, 2016; Chowdhury, 2016; (Bond et. al., 2020; Dhawan, 2020; Alshurafat et. al., 2021; Toth, 2021).

Outcome based education-curriculum base (OBE-CR) is defined as curricular alignment in the application of constructive alignment as an OBE process, with the elaboration of OBE principles, on the achievement of student knowledge and improvement of outcomes for competency purposes using e-learning and towards the effectiveness of outcomes study. This aspect is formed within the items of the indicators, such as clarity of focus for outcomes, backward design curriculum, student learning involvement, expanded opportunities, relevant learning, constructive alignment, program education objectives (PEO), Planning for learning outcomes (PLO), course learning outcomes (CLO), implementation of desired learning outcomes (Anderson Lorin, 2002; Davis, 2003; (Shuaib et. al., 2009; Biggs, 2014; Taib, Salleh &Ngali, 2017).

2.2.2. Hypothesis Development

The development of the hypothesis was built from the research phenomenon "to keep on accounting education in the new normal era". Where in accordance with the theoretical framework, contingent determinants are proposed that determine the implementation of contingency e-learning and the effectiveness of learning outcomes in accounting education and teaching. Hypothesis development is built from interrelated types of theory for explaining and predicting (Gregor, 2006). It refers to the middle range theory from empirical facts related to previous research (Figure 2).
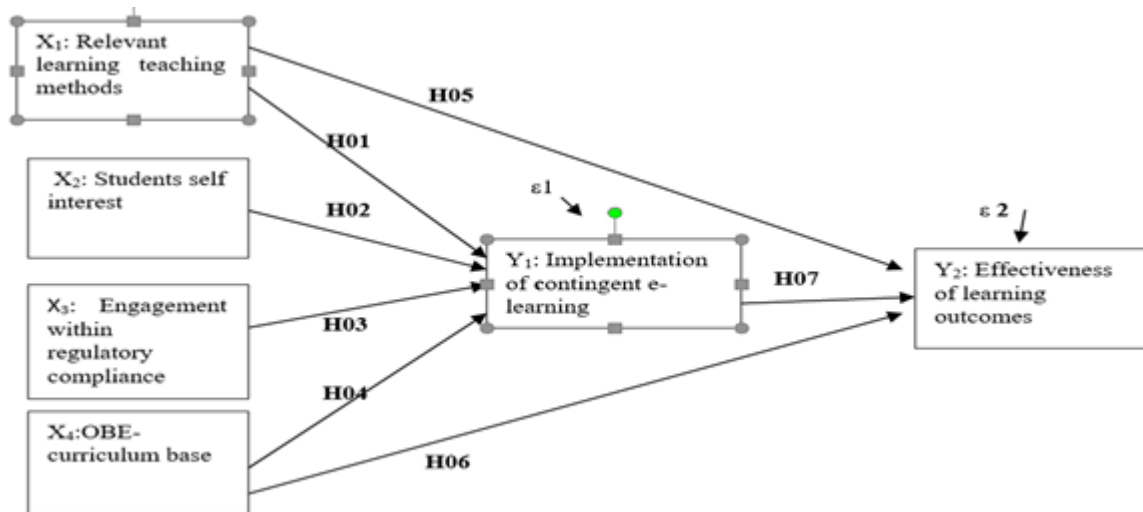
Figure 2. Research Model within 2 (two) structural equation

All of the hypotheses are constituted from propositions containing observables (Hassan & Lowry, 2015). Based on reconstructed logic, tentative answers to research problems are determined by referring to variables formed from the scientific aspect, or from the technological context (Betts, 2011) by presenting an explanation of the relationship between the variables into the research model, referring to the results of empirical facts related to previous studies.

2.2.2.1 Relevant Learning Teaching Methods Towards e-learning and Learning Outcomes

Several empirical facts from previous studies show the relationship between learning teaching methods and the implementation of e-learning (Khan Ahmad, Hussain Qureshi et. al., 2018; Kaur et. al., 2020; Callo & Yazon, 2020). Further, there is no relationship between these two aspects (Coman et. al., 2020). In studies investigating the effectiveness of using e-learning in university teaching in higher education institutions, the issue of using modern information and communication technologies for teaching and learning is very important (Arkorful, Valentina & Abaidoo, 2015). Empirical facts in relation to learning methods that are relevant to learning outcomes (Riley Jennifer; Kerry Ward, 2017; Tan, 2009; Astuti et. al., 2021; (Baber, 2020) are also important. Learning perception has no significant effect on learning performance (Yurdugul & Menzi, 2015).

2.2.2.2 Student Self-Interest Towards e-learning

The relationship between aspects within student self-interest towards e-learning (Maydiantoro et. al., 2020; Purnamasari et. al., 2021) with accessibility for ICT and confidence in the ability to use IT affect the readiness to implement e-learning (Callo & Yazon, 2020) shows that there is no relationship between student self-interests towards implementation of e-learning (Parkes et. al., 2015; Ilias et. al., 2020; Rahiem, 2020).

2.2.2.3 Engagement Within Regulatory Compliance Towards e-learning

There is a relationship between engagement within regulatory compliance towards e-learning (Melati & Harnanik, 2021; Zawacki-Richter et. al., 2019; Estévez et. al., 2021; Callo & Yazon, 2020). Meanwhile, from the other side, the facts of this study are different from the facts of previous studies (Ilias et. al., 2020; Coman et. al., 2020).

2.2.2.4 OBE-curriculum Base Towards e-learning and Learning Outcomes

There is a relationship between OBE-curriculum base and e-learning (Abbasi, 2014). However some research concludes that there is no such relationship (Ilias et. al., 2020). Furthermore, there is also a relationship between OBE-curriculum base towards effectiveness of learning outcomes (Kaliannan & Chandran, 2006), (Rhaffor et. al., 2017) however this too is the subject of some debate (Eng et. al., 2012; Reynolds, 2015).

2.2.2.5 Implementation of Contingency e-leaning Towards Learning Outcomes

Implementation of e-learning has an impact of learning outcomes (Potter & Johnston, 2006; Smith & Brame, 2014; Fathil et. al., 2016). Digital literacy within utilizing digital media has a relationship with learning quality improvement (Astuti et. al., 2021). However some studies conclude that students are not satisfied with their overall online class interaction and with lecturer's topic delivery (Maydiantoro et. al., 2020).

As shown in Figure 2, there are 2 (two) structural relationships between the variables, and since there exists a research gap, we put forward the research into 2 (two) major hypotheses.

H01: *There is no relationship between the contingent determinants factors (relevant learning teaching methods, student's self-interest, engagement within regulatory compliance, OBE curriculum base) and the implementation of contingency e-learning.*

H02: *There is no relationship between the contingent determinants factors (relevant learning teaching methods, OBE curriculum-base, and implementation of contingency e-learning) and the effectiveness of learning outcomes.*

After that, we describe these 2 (two) major hypotheses into 7 (seven) minor hypotheses (Figure 2).

3. Research Methodology

We used an explanatory research model with multivariate data analysis (Hair, 2011). The aspects of the research design consist of sampling and data collection, research participants, definitions of operational variables, and measurement approaches, analytical tools, and design specifications of the predictive model.

3.1. Sample of Research

The research sample is students majoring in accounting as e-learning users, in odd semester lectures (August - December, 2019) and even semester lectures (February - May 2020) for the 2019/2020 academic year at the Accounting Department – Faculty of Economics and Business, Lambung Mangkurat University. The sampling technique uses several stages, namely: (1) selecting students for lectures in odd semesters and even semesters according to level (Diploma 3 , Stara 1- undergraduate education, and strata 2 postgraduate education - Master of Accounting Program), and (2) selecting students at each level of accounting education in the subjects followed to be used as research samples. The sample selected was 359 (three hundred and fifty nine) students. Data was collected by sending a questionnaire in a Google form to selected students as a sample of the research.

3.2. Variables and Measurement

As depicted in the research model and hypothesis development, we use an independent variable, intervening variable, and dependent variables for this research (Table 1).

Table 1. Variables and indicators

Types of variable	Variables and indicators
Independent	Relevant learning teaching method (RLTM), be measured within 10 (ten) items of indicator (Hrastinski, 2008; Fry et. al., 2021; Al-rawi, 2013; Nind et. al., 2020; Hirsh et. al., 2020; Team UGCNETPAPER1, 2021).
	Student self-interests (SSI), be measured within 7 (seven) items of indicator (Anderson et. al., 2001; Fry et. al., 2021; Heer, 2012; Reynolds, 2015; Alcaide-Herrador et. al., 2019; Hirsh et. al., 2020; Dhawan, 2020; DeAlwis et. al., 2020; Alshurafat et. al., 2021).
	Engagement within regulatory compliance (EwRC), be measured within 11 (eleven) items of indicator (Belohlavek Peter, 2007; Fry et. al., 2021; Bakia, Shear, Toyama & Lasseter, 2012; Sousa, 2016; Chowdhury, 2016; Bond et. al., 2020; Dhawan, 2020; Alshurafat et. al., 2021; Toth, 2021).
	Outcome- based education (OBE) - curriculum base (CB), be measured within 10 (ten) items of indicator (Anderson Lorin, 2002; Davis, 2003; Shuaib et. al., 2009; Biggs, 2014; Taib, et. al, 2017).
Intervening	Implementation of contingency e-learning (IoCeL), be measured within 9 (nine) items of indicator (Mooghali & Azizi, 2008; Hrastinski, 2008; El-Bakry & Mastorakis, 2009; Kushida et. al., 2011; Grech, 2016; Aldowah et. al., 2017; Sledgianowski et. al., 2017; Ge et. al., 2018; Hughes, 2020).
Dependent	Effectiveness of learning outcomes (EoLO), be measured within 10 (ten) items of indicator (Biggs, 2014; IAESB, 2013; IFAC, 2017; Taib et. al., 2017; AICPA, 2018; Borgonovo, Friedrich, & Wells, 2019).

(Source: formed according to theoretical sources, 2021)

The adequacy of the research data is based on the criteria for the number of observations at least 5-10 times the number of research item indicators (Table 1). Therefore, based on the 57 (fifty seven) indicator items that used in this study, there is a relevant range of sample units ranging from 285-570 sample units (Hair, 2011; Wolf, Harrington & Clark, 2013). The measurement process for all variables within items of indicators used an interval scale, to fulfill the normal data distribution (Edwards & Gonzalez, 1993). The data for the model specification is set to be tested previously with the fulfillment of validity and reliability test stage.

3.3. Data Analysis and Model Specifications

We use the path analysis method as the approach used in assessing the correlation of causal relationships between research variables (Streiner, 2005). Furthermore, as showon in Figure 2, the predictive model is formed into the following 2 (two) structural relationships: (i) IoCeL (Y1) = pY1 X1 RLTM + pY1 X2 SSI + pY1 X3 EwRC+ pY1 X4 OBE-CB+ ε1: and, (ii) EoLO (Y2) = pY2 Y1 IoCeL + pY2 X1 RLTM + pY2 X4 OBE-CB + ε2

4. Results

In this section, a statistical description of the test results of the validity and reliability of the research data is presented. Then, the results of testing the research hypothesis are presented according to the first structural equation and the second structural equation.

4.1. Validity and Reliability Test Results

Table 2. Validity and reliability of data

Variables	Validity of items of indicator (rcount)	Reliability of variables (rcount)	rtabel
X1	X1.1 =0.4490, X1..2=0.6470, X1.3=0.3520, X1.4=0.5530, X1.5=0.7750, X1.6 =0.8140, X1..7=0.7990, X1.8=0.7580, X1.9=0.7340, X1.10=0.7700	0.8200	0.1035
X2	X2.1 =0.3590, X2..2=0.5260, X2.3=0.6220, X2.4=0.5570, X2.5=0.6050, X2.6 =0.5270, X2..7=0.4470	0.3700	0.1035
X3	X3.1 =4790, X3..2=0.4300, X3.3=0.4690, X3.4=0.4740, X3.5=0.4990, X3.6 =4990, X3..7=0.5030, X3.8=0.4840, X3.9=0.4210, X3.10=0.4390, X3.11 = 0.4530	0.5670	0.1035
X4	X4.1 =0.7270, X4..2=0.7630, X4.3=0.7840, X4.4=0.7710, X4.5=0.8100 X4.6 =0.7920, X4..7=0.7750, X4.8=0.7800, X4.9=0.7760, X4.10=0.7830	0.8880	0.1035
Y1	Y1.1 =0.6750, Y1..2=0.7720, Y1.3=0.6680, Y1.4=0.6920, Y1.5=0.6860, Y1.6 =0.6060, Y1..7=0.6290, Y1.8=0.6050, Y1.9=0.6080	0.7090	0.1035
Y2	X2.1 =0.3890, X2..2=0.4850, X2.3=0.3590, X2.4=0.8170, X2.5=0.8490, X2.6 =0.8890, X2..7=0.8220, X2.8=0.8390, X2.9=0.8670, X2.10=0.8550	0.8270	0.1035

(Sources, Primary Data, 2020)

Table 2 presents the result of validity and reliability test results. The results of the validity test for df of 359 with a significance level of 0.05 showed that all items indicator were valid because each rcount value > rtable with a value of 0.1035. For the Guttman Split-Half coefficient reliability test, it showed that all variables meet reliability, which has a coefficient value (rcount) > rtable with a value of 0.1035.

4.2. Hypothesis Testing Results

This section presents 2 (two) of the main results of research, first for 4 (four) hypothesis testing in the first structural equation (Table 3), and second for 3 (three) hypothesis testing in the second structural equation (Table 4).

4.2.1 First Structural Equation

Table 3. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,490	6,174		2,023	0,044
	RLTM_X1	-0,118	0,085	-0,090	-1,397	0,163
	SSI_X2	-0,254	0,158	-0,092	-1,603	0,110
	EwRC_X3	0,378	0,128	0,170	2,954	0,003
	OBE-CB_X4	0,056	0,103	0,036	0,550	0,583

a. Dependent Variable: IoCeL_Y1

(Source: Table 3, restated from primary data processing results, 2021)

Error variance (ε1) from the first structural equation that is obtained $\sqrt{1-0,030}=0.984886$. Furthermore, referring to Table 3, the testing results show the form of the first structural equation which can be expressed in the equation model: IoCeL= -0.090*RLTM - 0.092*SSI + 0.170*EwRC + 0.036*OBE-CB+ Errorvar.

For the significance relationship between the variables in the first structural equation, the variable X1, variable X2, and variable X4 do not have a significant effect because their values are more than 0.05. Whilst variable X3 has a significant effect because the value is less than 0.05. Therefore, according to the hypotheses testing results, it can be concluded that:

1. Relevant learning-teaching methods has no influence towards implementation of contingency e-learning.
2. Student's self-interest has no influence towards implementation of contingency e-learning.
3. Engagement within regulatory compliance has influence towards implementation of contingency e-learning.
4. OBE curriculum-base has no influence towards implementation of contingency e-learning.

4.2.2. Second Structural Equation

Table 4. Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	T	Sig.
1	(Constant)	6,319	2,538		2,489	0,013
	RLTM_X1	1,314	0,375	0,167	3,502	0,001
	OBE-CB_X4	0,551	0,058	0,449	9,543	0,000
	IoCeL_Y1	0,005	0,036	0,007	0,145	0,885

a. Dependent Variable: EoLO_Y2

(Source: Table 4, restated from primary data processing results, 2021)

Error variance (ε2) of the second structural equation is obtained $\sqrt{1-0,267}=0.856154$. The form of the second structural equation can be expressed in the equation model: EoLO = 0.167*RLTM + 0.449*OBE-CB + 0.007*IoCeL + Errorvar.

For the significance relationship between the variables in the first structural equation, the variables X1 and X4 have a significant effect because their values are less than 0.05. Whilst variable Y1 does not have a significant effect because the value is more than 0.05. Therefore, according to the hypotheses testing results, it can be concluded that:

1. Relevant learning and teaching methods has influence towards effectiveness of learning outcomes.
2. OBE curriculum-base has influence towards effectiveness of learning outcomes.
3. Implementation of contingency e-learning model has no influence towards effectiveness of learning outcomes.

5. Discussion

In this section, the main results of the research are presented to be discussed respectively in sub-sections 5.1 and 5.2.

5.1. Implementation of Contingency e-learning

Based on the testing results with used 4 (four) aspects as a possible contingency for e-learning implementation. Only engagement within regulatory compliance meets the suitability as a determinant factor towards the implementation of contingency e-learning.

This empirical fact is in accordance with the process model (Nilsen, 2015), with engagement e-learning users within regulatory compliance for the education system. In line with the engagement factor (Payne & Charles, 2008) as aspects that determine in the implementation of education policies meet the suitability if they possess changing characteristics, such as the need for role clarity of internal and external parties, complexity and quality requirements (Fullan, 2007) in implementing e-learning. The engagement aspect is required to fulfil the implementation requirements in terms of implementation theory (Nilsen, 2015). The research also shows their alignment with the theoretical perspective of education (Clements, 2014; Fulbrook, 2019; Woodside et. al., 2020) and learning communication in the context of the digital era (Kharbat & Muqattash, 2020).

The empirical facts of this study represent the role of student involvement in the implementation of e-learning. It is accepted that e-learning is needed because of the consideration of the continuity of learning and teaching activities in the accounting education process in the new normal era. Where the implementation of e-learning has the consequence that this is an event or situation in the future that may occur but cannot be predicted with certainty. Therefore, the role of involvement in regulatory compliance from the user's side can strengthen the implementation of e-learning by referring to the use of design according to the features of asynchronous e-learning or synchronous e-learning. Of the two types of e-learning, e-learning can be implemented as an educational technology with the role of e-learning as a configuration, complementary role, the role of suppressing complexity, the role of creative design, and the role of diversity Van de Ven & Ganco, 2013) in learning activities towards the achievement of learning outcomes.

Contingent theory can be accepted between the context of the existence of this theory as science or as technology (Betts, 2011), with emphasis on the role of technology in organizational management. Therefore, the results of this study are in line with changing expectations from the user's side. In this case, it is necessary to change behavior from the provider side in the implementation of contingency e-learning. Functionally, in terms of technology, it is necessary to fulfill the appropriate 'PLUMS' model. As for implementation that requires the fulfillment of the provider role, with a layer with the infrastructure, platform, and application values covered followed by the user interaction (lecturers and students), and modalities and scope of e-learning (Kushida et. al., 2011). Furthermore, the facts of this study in relation to the literature can be discussed in the context of similarities with the facts of previous studies (Melati & Harnanik, 2021; Zawacki-Richter et. al., 2019; Estévez et. al., 2021; Callo & Yazon, 2020). Further, it can be discussed in terms of its differences with other research facts (Ilias et. al., 2020; Coman et. al., 2020).

Referring to the results of the first structural equation test, there are 3 (three) other aspects which do not affect the implementation of contingency e-learning.

First, relevant learning teaching methods do not play a significant role. This result is in contrast with empirical facts previously found (Arkorful, Valentina & Abaidoo, 2015; Khan Ahmad, Hussain Qureshi et. al., 2018; Kaur et. al., 2020; Callo & Yazon, 2020). Otherwise, it is in line with other empirical studies (Coman et. al., 2020).

Second, student's self-interest plays no significant role. This is inconsistent with some previous research (Maydiantoro et. al., 2020; Purnamasari et. al., 2021; Callo & Yazon, 2020). However, it is consistent with some previous studies (Parkes et. al., 2015; Ilias et. al., 2020; Rahiem, 2020).

Third, OBE curriculum base does not have a significant role in the implementation of contingency e-learning. This is inconsistent with some research (Abbasi, 2014) but consistent with other research (Ilias et. al., 2020).

5.2. Effectiveness of Learning Outcomes

The second structural equation shows 3 (three) aspects used in the research model as a determinant of the effectiveness of learning outcomes. Based on the results of the second structural equation test, relevant learning methods and OBE-based curriculum play a role in achieving the effectiveness of learning outcomes. Hence, the implementation of e-learning has no relationship with the effectiveness of learning outcomes.

Functionally, there is evidence that both variables play a role. It can be formed into the process model (Nilsen, 2015). First, through the relevance of fulfilling the communication of learning content, and supporting for planning of learning tasks, with facilitation and support for students (Hrastinski, 2008) from the teaching team. Then, with the context of the OBE curriculum base that is embedded in the basic principles of the OBE curriculum (Davis, 2003; Biggs, 2014). Both of these aspects have a relationship with student empowerment to meet the effectiveness of the desired learning outcomes.

First, the role of the relevant learning teaching methods that give strength to the effectiveness of learning outcomes. This aspect can be performed by the criteria of relevance of communication media support accordingly referring to the achievement of learning objectives (Hrastinski, 2008; Fry et. al., 2021) by using various mixed techniques for teaching and learning methods (Al-rawi, 2013). In the selection of teaching methods or artifacts, it refers to teachers who understand the teaching and learning process (Hirsh et. al., 2020). This implies that teachers and supervisors should pay more attention to the social, emotional, active and reflective nature of learning methods (Nind et. al., 2020). This result has almost the same facts as the previous facts from (Riley Jennifer; Kerry Ward, 2017; Tan, 2009; Astuti et. al., 2021; Baber, 2020). However, this is different from some previous research (Yurdugül & Çetin, 2015).

Second, OBE-curriculum base has a relationship with the effectiveness of learning outcomes. The OBE curriculum base is related to the university's vision and mission, becoming a reference for institutions to gradually determine the desired learning outcomes (Taib, Salleh & Ngali, 2017). as the context of constructive alignment of the OBE -curriculum base within an OBE process related to the basic principles of OBE (Davis, 2003) as a curricular alignment activity (Anderson Lorin, 2002; Biggs, 2014) which gives an evaluative role to the learning planning which implementation has been determined (Shuaib et. al., 2009). The empirical facts of this aspect are in line with previous research (Kaliannan & Chandran, 2006; Rhaffor et. al., 2017) but is also inconsistent with some previous studies (Eng et. al., 2012).

Third, the implementation of contingency e-learning has no significant effect on the effectiveness of learning outcomes. This facts is different from the facts of previous research (Potter & Johnston, 2006; Smith & Brame, 2014; Fathil et. al., 2016; Astuti et. al., 2021). However, students are not satisfied with their overall online class interaction or with lecturers' topic delivery (Maydiantoro et. al., 2020).

Grand theory, such as stakeholder theory and legitimacy theory, is relevant (Rankin, Michaela, Stanton, Patricial, McGowan, Susan, Ferlauto, Kimberly & Tilling, 2012) to explaining accounting education events in the new normal era such as perspective on the role of legitimacy theory related to the relevant learning teaching methods, and OBE-based curriculum which creating values of internal organizational towards organizational external values as a tool and method that is applied in the education system to fulfill the criteria for environmental needs as external values on the quality of education graduates. There is a new organization relationship between stakeholders in accordance with the perspective of engagement within regulatory compliance towards the implementation of e-learning.

6. Conclusion

In this section, we put forward 3 (three) conclusions. The first relates to the objectives and benefits of this research, then to the facts of the measurement results through the first structural equation and the second structural equation. Third, the research implications related to the existing research boundaries are discussed according to the research process carried out.

First, the results of this study provide insight into the variable of engagement within regulatory compliance that has influence towards the implementation of contingency e-learning as well as relevant learning and teaching methods and OBE curriculum-base that has influence towards the effectiveness of learning outcomes. The results of the study show meaning related to online lectures in the new normal period whose implementation is contingent. With engagement within regulatory compliance, it provides an alternative choice of suitable contingency e-learning designs. Meanwhile, with the fulfillment of the relevance of teaching and learning methods as well as the fulfillment of the OBE curriculum base, without the role of implementing e-learning, it is still able to provide a role for students in achieving effective learning outcomes.

Second, based on the results of this study, where the variable engagement within regulatory compliance has an influence on the implementation of contingency e-learning, the low role of the OBE curriculum base, the non-unidirectional role of relevant learning and teaching methods, as well as students' self-interest all play a role. This implies that although the design of e-learning in a virtual learning environment has been formally provided by the institution, it still needs to be developed to provide adaptation reinforcement in students' efforts to achieve effective learning outcomes. Simultaneous implementation of e-learning is required, in addition to basic engagement within regulatory compliance due to changes in policies that have recently occurred (Cerna, 2013), in line with the implementation of e-learning. Furthermore, it is necessary to strengthen the role of the relevance of teaching and learning methods and the role of this OBE curriculum base in achieving effective learning outcomes in the new normal era. There is an increasing need for achievement of learning outcomes as a reason for improvement, where policy implementation is required through strengthening the role of institutions on a bottom-up basis through the accounting department to fulfill a strategic role, because the global environment is increasingly demanding the quality of accounting education graduates. Functionally, it is necessary to increase the role of a virtual learning environment designed at the university level with a top-down approach, be adapted with bottom-up approach into contingency e-learning for the needs of accounting majors to meet the needs of contingency e-learning that meet the suitability of communication in scientific characteristics for the accounting field.

Third, this study has limitations, in the context of building a predictive model for the effectiveness of learning outcomes by applying the contingency e-learning model because the measurement results which show the magnitude of the error variance ($\varepsilon 1$) in the first structural equation also allow for error variance ($\varepsilon 2$) in the second structural equation. Therefore, it is important that further research be conducted with more varied variables and a more diverse sample coverage relating to the theme of this research.

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References

Abbasi, N. (2014). Competency approach to accounting education: A global view. *Journal of Finance and Accountancy*, *13*(1), 1–18. http://www.aabri.com/copyright.html.

AICPA. (2018). *AICPA Pre-Certification Core Competency Framework*. https://www.aicpa.org/interestareas/accountingeducation/resources/corecompetency.html

Al-rawi, I. (2013). *Teaching Methodology and its Effects on Quality Learning* . *4*(6), 100–106.

Alcaide-Herrador, T. C., Hernández-Solís, M., & Sanguino Galván, R. (2019). Feelings of satisfaction in mature students of financial accounting in a virtual learning environment: an experience of measurement in higher education. *International Journal of Educational Technology in Higher Education*, *16*(1). https://doi.org/10.1186/s41239-019-0148-z

Aldowah, H., Ul Rehman, S., Ghazal, S., & Naufal Umar, I. (2017). Internet of Things in Higher Education: A Study on

Future Learning. *Journal of Physics: Conference Series*, 892(1). https://doi.org/10.1088/1742-6596/892/1/012017

Alshurafat, H., Al Shbail, M. O., Masadeh, W. M., Dahmash, F., & Al-Msiedeen, J. M. (2021). Factors affecting online accounting education during the COVID-19 pandemic: an integrated perspective of social capital theory, the theory of reasoned action and the technology acceptance model. *Education and Information Technologies*, 26(6), 6995–7013. https://doi.org/10.1007/s10639-021-10550-y

Anderson, LW., Krathwohl, DR., Airasian, PW., Cruikshank, KR., Mayer, RE., Pintrich, PR., Raths, J, W. (2001). *A taxonomy for learning, teaching, and assessing : a revision of Bloom's taxonomy of educational objectives* (Complete E). Longman Newyork.

Anderson Lorin W. (2002). *Curricular Alignment: A Re-Examination,Theori Into Practice* (pp. 255–260). https://doi.org/https://doi.org/10.1207/s15430421tip4104_9

Andrew, H. Van de Ven., Martin Ganco., & C. R. (Bob) H. (2013). Returning to the Frontier of Contingency Theory of Organizational and Institutional Designs. *Academy of Management Annals*, 7(1), 393–440. https://doi.org/10.5465/19416520.2013.774981

Arkorful, Valentina and Abaidoo, N. (2015). The role of e-learning, the advantages and disadvantages of its adoption in Higher Education. *International Journal of Instructional Technology and Distance Learning*, 7.

Astuti, D., Kardiyem, K., Rachmadani, W., & Mudrikah, S. (2021). *The Effect of Students' Digital Literacy Skill to the Quality of Accounting Learning in Self-Directed Learning as Moderating Variables*. https://doi.org/10.4108/eai.22-7-2020.2307888

Azzahra, N. F. (2020). Addressing Distance Learning Barriers in Indonesia Amid the Covid-19 Pandemic. *Policy Brief*, 2, 1–8.

Baber, H. (2020). Determinants of students' perceived learning outcome and satisfaction in online learning during the pandemic of COVID19. *Journal of Education and E-Learning Research*, 7(3), 285–292. https://doi.org/10.20448/JOURNAL.509.2020.73.285.292

Bakia, M., Shear, L., Toyama, Y., & Lasseter, A. (2012). *Understanding the Implications of Online Learning for Educational Productivity. Washington, DC: U.S. Department of Education, Office of Educational Technology*. https://www.sri.com/publication/understanding-the-implications-of-online-learning-for-educational-productivity/

Belohlavek Peter. (2007). *The Unicist Ontology of Ethical Intelligence*. Blue Eagle Group. https://www.amazon.com/Unicist-Ontology-Language-Theory-Nature-ebook/dp/B00UZP7GB6

Berrocoso-Valverde, J., del Carmen Garrido-Arroyo, M., Burgos-Videla, C., & Morales-Cevallos, M. B. (2020). Trends in educational research about e-Learning: A systematic literature review (2009-2018). *Sustainability (Switzerland)*, 12(12). https://doi.org/10.3390/su12125153

Betts, S. C. (2011). Contingency Theory: Science Or Technology? *Journal of Business & Economics Research (JBER)*, 1(8). https://doi.org/10.19030/jber.v1i8.3044

Biggs, J. (2014). Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1. https://www.herdsa.org.au/herdsa-review-higher-education-vol-1

Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: a systematic evidence map. *International Journal of Educational Technology in Higher Education*, 17(1). https://doi.org/10.1186/s41239-019-0176-8

Borgonovo, Alfred., Friedrich, Brian., and Wells, M. (2019). *Competency-Based Accounting Education, Training, and Certification, An Implementation Guide*. https://books.google.com.pk/books?hl=en&lr=&id=Yf6jDwAAQBAJ&oi=fnd&pg=PP1&dq=Borgonovo,+Alfred.,+Friedrich,+Brian.,+and+Wells,+Michael.+(2019).+Competency-Based+Accounting+Education,+Training,+and+Certification,+An+Implementation+Guide%3B+World+Bank+Group,International+Development+in+Practice,+https://openknowledge.worldbank.org/bits&ots=85hAe3piJh&sig=4L9-XweZ_JFNr-HNA3elblYHL3M&redir_esc=y#v=onepage&q&f=false

Callo, E. C., & Yazon, A. D. (2020). Exploring the factors influencing the readiness of faculty and students on online teaching and learning as an alternative delivery mode for the new normal. *Universal Journal of Educational Research*, 8(8), 3509–3518. https://doi.org/10.13189/ujer.2020.080826

Cerna, L. (2013). The Nature of Policy Change and Implementation : A Review of Different Theoretical Approaches, Organization For Economic Cooperation and Development, OECD. *Krankenpflege Journal*, 23(11), 8–11. https://doi.org/10.1016/b978-343741510-4.50012-2

Chowdhury, M. (2016). Emphasizing Morals, Values, Ethics, and Character Education in Science Education and Science Teaching. *The Malaysian Online Journal of Educational Sciences (MOJES)*, 4(2), 1–16.

Clements, D. H. (2014). *Curriculum Research : " Research-based Curricula ." May*. https://doi.org/10.2307/30034927

Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. *Sustainability (Switzerland)*, 12(24), 1–22. https://doi.org/10.3390/su122410367

Contreras Jennifer Lorena Gómez., M. D. A. C. (2008). Virtual Learning Environments in Higher Education. *Linköpings Universitet*.

Conrad, Andrew. (2019). The 4 Biggest Challenges Facing the Accounting Profession Today and How to Keep Them From Derailing Your Business, Published Oct. 28, 2019, https://blog.capterra.com/biggest- challenges-facing-accounting-profession-today; [CrossRef]

Davis, M. H. (2003). Outcome-Based Education. *Journal of Veterinary Medical Education*, *30*(3), 258–263. https://doi.org/10.3138/jvme.30.3.258

DeAlwis, C., Khemlani David, M., & Author, C.-A. (2020). *Pennywise Rips Your Arms Off, You Still Won't Be Able to Wipe, So Keep Walking: Teaching During COVID-19 Lockdown Article history*. *2*(April), 145–158. https://doi.org/10.37534/bp.jhssr.2020.v2.nS.id1050.p145

DeLone, W. H., & McLean, E. R. (2016). Information Systems Success Measurement. In *Foundations and Trends® in Information Systems* (Vol. 2, Issue 1). https://doi.org/10.1561/2900000005

Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, *49*(1), 5–22. https://doi.org/10.1177/0047239520934018

Edwards, A. L., & Gonzalez, R. (1993). Simplified Successive Intervals Scaling. *Applied Psychological Measurement*, *17*(1), 21–27. https://doi.org/10.1177/014662169301700106

El-Bakry, H. M., & Mastorakis, N. (2009). E-Learning and Management Information Systems for E-Universities. *Proceedings of the 13th WSEAS International Conference on Computers - Held as Part of the 13th WSEAS CSCC Multiconference*, *April*, 555–565.

Eng, T. H., Akir, O., & Malie, S. (2012). Implementation of Outcome-based Education Incorporating Technology Innovation. *Procedia - Social and Behavioral Sciences*, *62*(2000), 649–655. https://doi.org/10.1016/j.sbspro.2012.09.108

Erika J. Wolf, Kelly M. Harrington, Shaunna L. Clark, M. W. M. (2013). Sample Size Requirements for Structural Equation Models: An Evaluation of Power, Bias, and Solution Propriety. *Educ Psychol Meas*, *76*(6), 913–934. https://doi.org/doi: 10.1177/0013164413495237

Estévez, I., Rodríguez-Llorente, C., Piñeiro, I., González-Suárez, R., & Valle, A. (2021). School engagement, academic achievement, and self-regulated learning. *Sustainability (Switzerland)*, *13*(6). https://doi.org/10.3390/su13063011

Fathil, N. F., Osman, S. Z. M., & Jamaludin, R. (2016). An Analysis of Using Online Video Lecture on Learning Outcome: The Mediating Role of Student Interaction and Student Engagement. *Journal of Education and E-Learning Research*, *3*(2), 57–64. https://doi.org/DOI: ,

Fry, H., Ketteridge, S., & Marshall, S. (2021). Key aspects of teaching and learning: Enhancing learning in legal education. In *A Handbook for Teaching and Learning in Higher Education*. https://doi.org/10.4324/9780203891414-32

Fulbrook, P. S. (2019). *15 Learning Theories in Education*. https://teacherofsci.com/learning-theories-in-education/

Fullan, M. (2007). *The new meaning of educational change* (Fourth Edi). Teachers College Press. https://michaelfullan.ca/books/new-meaning-educational-change/

Ge, M., Bangui, H., & Buhnova, B. (2018). Big Data for Internet of Things: A Survey. *Future Generation Computer Systems*, *87*, 601–614. https://doi.org/10.1016/j.future.2018.04.053

Grabinski, K., Kedzior, M., & Krasodomska, J. (2015). Blended Learning in Tertiary Accounting Education in the CEE Region – A Polish Perspective. *Journal of Accounting and Management Information Systems*, *14*(2), 378–397.

Grech, M. (2016). *Top 8 Free Web Conferencing Apps With Screen Sharing*. https://getvoip.com/blog/2016/11/21/free-web-conferencing

Gregor, S. (2006). The Nature of Theory in Information Systems. *MIS Quarterly*, *30*(3), 611–642. https://doi.org/10.2307/25148742

Guerrero, C., & Sierra, J. E. (2018). Impact of the Implementation of a New Information System in the Management of Higher Education Institutions. *International Journal of Applied Engineering Research*, *13*(5), 2523–2532. http://www.ripublication.com

Hair, J. F. (2011). *Multivariate Data Analysis: An Overview BT - International Encyclopedia of Statistical Science* (M. Lovric (ed.); pp. 904–907). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-04898-2_395

Handoyo, S., & Anas, S. (2019). Accounting Education Challenges in the New Millennium Era. *Journal of Accounting Auditing and Business*, *2*(1), 25.

Heer, R. (2012). A model of learning objectives -based on A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of Educational Objectives. *Contemporary Theories of Learning, Iowa State University*, 97–113.

Hirsh, Å., Nilholm, C., Roman, H., Forsberg, E., & Sundberg, D. (2020). Reviews of teaching methods–which fundamental issues are identified? *Education Inquiry*, *00*(00), 1–20. https://doi.org/10.1080/20004508.2020.1839232

Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *Educause Quarterly*, *4*.

Hughes, O. (2020). *Zoom vs Microsoft Teams, Google Meet, Cisco Webex and Skype*. https://www.techrepublic.com/article/zoom-vs-microsoft-

IAESB. (2013). *ENHANCING PROFESSIONAL About the IAESB* ^{TM}.

IFAC. (2017). *HANDBOOK OF INTERNATIONAL EDUCATION PRONOUNCEMENTS*. https://www.iaesb.org/publications/2017-handbook-international-education-pronouncements

Ilias, A., Baidi, N., Ghani, E. K., & Razali, F. M. (2020). Issues on the use of online learning: An exploratory study among university students during the COVID-19 pandemic. *Universal Journal of Educational Research*, *8*(11), 5092–5105. https://doi.org/10.13189/ujer.2020.081109

Imenda, S. (2014). Is There a Conceptual Difference between Theoretical and Conceptual Frameworks? *Journal of Social Sciences*, *38*(2), 185–195. https://doi.org/10.1080/09718923.2014.11893249

Jandrić, P., Hayes, D., Truelove, I., Levinson, P., Mayo, P., Ryberg, T., & Monzó, L. D. (2020). Teaching in the Age of Covid-19. *Postdigital Science and Education*, *2*, 1069 –1230. https://doi.org/doi: 10.1007/s42438-020-00169-6

Kaliannan, M., & Chandran, S. D. (2006). *Empowering students through outcome-based education (OBE)*.

Karfaa, Y. M., Sulaiman, H. B., & Yussof, S. (2015). Management Information Systems for Supporting Educational Organizations : A Case Study through One. *International Journal of Scientific and Research Publications*, *5*(10), 1–9.

Kaur, K., Kunasegaran, M., Singh, J., Salome, S., & Sandhu, sukjeet K. (2020). Impact of the First Phase of Movement Control Order during the COVID-19 pandemic in Malaysia on purchasing behavior of Malaysian Consumers. *Research Journal of Humanities and Social Sciences*, *2*(S), 131–144. https://doi.org/10.37534/bp.jhssr.2020.v2.nS.id1038.p131

Khan Ahmad, Hussain Qureshi, I., Khan, R., Nadeem, A., Siddiqui, S., Rahman, A., & Professor, A. (2018). *Outcome Based Education (OBE) Tools: Learning Management Systems*. 6(2), 2320–2882. www.ijcrt.org

Kharbat, F. F., & Muqattash, R. (2020). Accounting information system courses: Developing a hybrid syllabus in the era of digitization. *International Journal of Digital Accounting Research*, *20*(April), 135–167. https://doi.org/10.4192/1577-8517-v20_6

Khazanchi, Deepak Adcock, P., Andersen, R., Auby, C., Barstad, V., Bjørke, S. Å., Conway, D. F., Hillen, S., Isabwe, G. M. N., Landis, M., Lipschultz, J. H., Mayende, G., Munkvold, B. E., Muyinda, P. B., Prinz, A., Redden, R. J., Schlegelmilch, M. T., Surface, J., Vliet, P. J. A. Van, Wolcott, P., … Landis, M. (2015). *Digital Media in Teaching and its Added Value*. 236. https://books.google.com/books?hl=en&lr=&id=LQo0CwAAQBAJ&pgis=1

Kippels, S., & Impact, T. (2020). *Reopening Schools: Policies, Procedures, and Practices*. *May*.

Kushida, K. E., Murray, J., & Zysman, J. (2011). Diffusing the Cloud: Cloud Computing and Implications for Public policy. *Journal of Industry, Competition and Trade*, *11*(3), 209–237. https://doi.org/10.1007/s10842-011-0106-5

Lüder, K. G. (1992). A Contingency Model of Governmental Accounting Innovations in the Political- Administrative Environment. *Research in Governmental and Nonprofit Accounting*, *7*, 99–127.

Mahaye, N. E. (2020). The Impact of COVID-19 Pandemic on Education : Navigating Forward the Pedagogy of Blended Learning. *The Impact of Covid-19 Pandemic on Education: Navigating Forward the Pedagogy of Blended Learning*, *April*, 3.

Maydiantoro, A., Winatha, I. K., Riadi, B., Hidayatullah, R., Putrawan, G. E., & Dzakiria, H. (2020). (Emergency) Online Remote Learning in Higher Education Institutions during COVID-19 Crisis: Students' Perception of the Situation. *Universal Journal of Educational Research*, *8*(12), 6445–6463. https://doi.org/10.13189/ujer.2020.081210

Melati, I., & Harnanik, H. (2021). *Learning Microeconomics during the Pandemic: Does Digital Platform Management Matter?* https://doi.org/10.4108/eai.22-7-2020.2307876

Mooghali, A. R., & Azizi, A. R. (2008). Relation between organizational intelligence and organizational knowledge management development. In *World Applied Sciences Journal* (Vol. 4, Issue 1, pp. 1–8).

Myring, Mark., Bott Jennifer P., E. R. (n.d.). *New Approaches to Online Accounting Education*.

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), 34. https://doi.org/10.1186/s41239-016-0034-x

Nilsen, P. (2015). Making sense of implementation theories, models and frameworks. *Implementation Science*, *10*(1), 53. https://doi.org/10.1186/s13012-015-0242-0

Nind, M., Holmes, M., Insenga, M., Lewthwaite, S., & Sutton, C. (2020). Student perspectives on learning research methods in the social sciences. *Teaching in Higher Education*, *25*(7), 797–811. https://doi.org/10.1080/13562517.2019.1592150

Onyema, E. M. (2020). Impact of Coronavirus Pandemic on Education. *Journal of Education and Practice*, *11*(13), 108–121. https://doi.org/10.7176/jep/11-13-12

Parkes, M., Stein, S., & Reading, C. (2015). Student preparedness for university e-learning environments. *Internet and Higher Education*, *25*(January 2019), 1–10. https://doi.org/10.1016/j.iheduc.2014.10.002

Payne, Charles, M. (2008). *So much reform, so little change: the persistence of failure in urban schools*. Harvard Education Press.

Potter, B. N., & Johnston, C. G. (2006). The effect of interactive on-line learning systems on student learning outcomes in accounting. *Journal of Accounting Education*, *24*(1), 16–34. https://doi.org/10.1016/j.jaccedu.2006.04.003

Purnamasari, F., Putri, D., Narullia, D., Putri, S., & Palil, M. (2021). *Web-based Internship as a New Normal Learning Requirement for Accounting Students. May.* https://doi.org/10.4108/eai.22-7-2020.2307874

Rahiem, M. D. H. (2020). Technological barriers and challenges in the use of ICT during the COVID-19 emergency remote learning. *Universal Journal of Educational Research*, *8*(11B), 6124–6133. https://doi.org/10.13189/ujer.2020.082248

Rankin, Michaela, Stanton, Patricial, McGowan, Susan, Ferlauto, Kimberly; Tilling, M. (2012). *Contemporary issues in accounting*. Jhon Wiley & sons Australia.

Ratnatunga, Janek; Jones, S. (2012). *A Methodology to rank the Quality and Comprehensiveness of Sustainabilty Information* (First Edit). https://books.google.com.pk/books?hl=en&lr=&id=MCmc7oirS3UC&oi=fnd&pg=PA227&dq=Ratnatunga,+Jane k%3B+Jones,+Stewart,+2012%3B+A+Methodology+to+rank+the+Quality+and+Comprehensiveness+of+Sustain abilty++Information,+Chapter+10,+Contemporary+Issues+in+Sustainability+Accounting,+Assurance+and+Repo rting,+First+Edition,+ISBN+978-1-78052-020-9%5BCro&ots=hAI5sEgKcj&sig=JL6tcWyO3dbKhUiu_DUE6xy66tQ&redir_esc=y#v=onepage&q&f=false

Reynolds W, G. (2015). Ethics in information science. In *Cengage Learning* (Vol. 1, Issue 5). https://doi.org/10.1177/016555157900100505

Rhaffor, K. A., Radzak, M. Y., & Abdullah, C. H. (2017). (PDF) Students' Perception on Outcome-Based Education (OBE) Implementation: A Preliminary Study in UniKL MSI. *Universiti Kuala Lumpur Malaysian Spanish Institute, Kulim Hi-Tech Park, 09000 Kulim, Kedah, Malaysia, November.* https://www.researchgate.net/publication/322384048_Students'_Perception_on_Outcome-Based_Education_OBE_Implementation_A_Preliminary_Study_in_UniKL_MSI

Riley Jennifer; Kerry Ward. (2017). Active Learning, Cooperative Active Learning, and Passive Learning Methods in an Accounting Information Systems Course. *Issues in Accounting Education*, *32*(2), 1–16. https://doi.org/https://doi.org/10.2308/iace-51366

Shuaib, N. H., Anuar, A., Singh, R., & Yusoff, M. Z. (2009). Implementing Continual Quality Improvement (CQI) Process in an Outcome-Based Education (OBE) Approach. *Proceedings of the 2nd International Conference of Teaching and Learning (ICTL 2009, ICTL*, 1–8.

Sledgianowski, Deb., Gomaa, Mohamed., and Tan, C. (2017). Toward integration of Big Data, technology and information systems competencies into the accounting curriculum. *Journal of Accounting Education*, *38*, 81–93. https://doi.org/https://doi.org/10.1016/j.jaccedu.2016.12.008

Smith, B., & Brame, C. (2014). Blended and Online Learning. *Vanderbilt University Center for Teaching*. https://cft.vanderbilt.edu/guides-sub-pages/blended-and-online-learning/

Sousa, D. A. (2016). *Engaging the Rewired Brain*. https://www.learningsciences.com/product/engaging-the-rewired-brain/

Streiner, D. L. (2005). Finding our way: An introduction to path analysis. *Canadian Journal of Psychiatry*, *50*(2), 115–122. https://doi.org/10.1177/070674370505000207

Taib, H., S M Salleh. M.S;…. Ngali, Z. (2017). Programme Learning Outcomes Assessment and Continuous Quality Improvement in Faculty of Mechanical and Manufacturing. *Journal of Physics: Conference Series*, *755*(1). https://doi.org/10.1088/1742-6596/755/1/011001

Tan, C. H. (2009). Using a structured collaborative learning approach in a case-based management accounting course. *Journal of Accounting Education*, *49*. https://doi.org/https://doi.org/10.1016/j.jaccedu.2019.100638

Team UGCNETPAPER1 (2021). Notes Different Teaching Techniques for UGC NET EXAM, Teaching Methodology-Different Types of Teaching Methods, https://ugcnetpaper1.com/teaching-methodology/[CrossRef]

Toth, M. D. (2021). *Why Student Engagement is Important in a Post-COVID World – and 5 Strategies to Improve It, How will engaging students in a post-COVID world be different?,.* Learning Sciences International. https://www.learningsciences.com/blog/why-is-student-engagement-important/

UNDESA, UN. (2020a). everyone included: protecting vulnerable groups in times of a global pandemic; United Nations, Department of Economic and Social Affairs; https://www.un.org/development/desa/undesavoice/highlights/2020/04#49113 [CrossRef]

………………. (2020b). Digital technologies critical in facing COVID-19 pandemic; United Nations, Department of Economic and Social Affairs;https://www.un.org/development/desa/en/news/policy/digital-technologies-[CrossRef]

UNESCO (2020a). Covid-19   Educational Disruption and Response, https://en.unesco.org/news/covid-19-educational-disruption-and-response [CrossRef]

…………..(2020b). Education: From disruption to recovery, https://en.unesco.org/covid19/educationresponse [CrossRef]

Woodside, J. M., Augustine, F. K., Chambers, V., & Mendoza, M. (2020). Integrative learning and interdisciplinary information systems curriculum development in accounting analytics. *Journal of Information Systems Education*,

153

31(2), 147–156.

Yurdugül, H., & Çetin, N. M. (2015). Investigation of the Relationship between Learning Process and Learning Outcomes in E-Learning Environments. *Eurasian Journal of Educational Research*, *15*(59), 57–74. https://doi.org/10.14689/ejer.2015.59.4

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? *International Journal of Educational Technology in Higher Education*, *16*(1), 39. https://doi.org/10.1186/s41239-019-0171-0