ATLANTIS PRESS
Advances in Social Science, Education and Humanities Research, volume 501
Proceedings of the 6th International Conference on Education and Technology (ICET 2020)

Global Pandemic Outbreak Challenges How University Delivers Effective Online Courses

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Abstract: Global pandemic situation has changed the way learning experiences delivered to students. Online teaching learning is applied to fit the model with the critical pandemic condition. This study was conducted to explore how students perceive the effectiveness of online courses at a university. A group of 150 students was selected using convenience sampling technique to respond a set of survey questionnaire. The scales were developed and validated using a Confirmatory Factor Analysis. Path analysis was performed to examine effects of university responsibility, readiness, and student concern on student acceptance, motivation, and satisfaction. Results indicate the specified dependent variables of university responsibility and readiness in conducting online courses had significant impacts on student acceptance on online teaching and learning, motivation and satisfaction. Limitations and implications of the study are discussed.

Keywords: online learning, teaching, student, university, pandemic situation

1. INTRODUCTION

Covid-19 pandemic situation has changed the way worldwide universities deliver learning experiences to students. Such a situation has occurred since the spread of coronavirus experienced by many countries earlier this year (Code, Ralph, & Forde, 2020; World Economic Forum, 2020). Teaching learning models organized in universities have changed dramatically from conventional offline to e-learning based-model (Baran, Correia, & Thompson, 2011). Lecturers and students engaged in the learning system designed on digital platform (Code et al., 2020; Hollweck & Doucet, 2020; Swan, 2001). Rapid change of this system is confusing and wandering all educational institutions in the post-pandemic outbreak, and how this shift influences the whole education system (Neuhauser, 2002; World Economic Forum, 2020).

With regard to this phenomenon, research findings in the public service organizations indicate that the use of high technology and digital system of information for human communications are able to increase information retention, and more efficient in terms of time and other resources (Bartley & Golek, 2004). However, countries have reported various COVID-19 infection rates, and their differing capacities in responding to this pandemic effect (Joshi, Vinay, & Bhaskar, 2020). Statistic shows there are currently more than 1.2 billion children worldwide of 186 countries affected by school closures due to this unexpected global issue. In certain countries for example children up to the age of 11 are returning to nurseries and schools after initially closing on 12 March, but in some countries require students to join classes organized by their teachers online (World Economic Forum, 2020). Whether this trend will be found similarly within educational contexts in particular schools and universities, need to be investigated specifically. This paper highlights findings from a survey research of the implementation of online courses in a university. The main purpose is to examine the effectiveness of online learning models during pandemic situation.

2. LITERATURE REVIEW

a. Impact on the Changes of Academic Strategies

Ultimate changes of human living environment worldwide were influenced strongly by a sudden and critical pandemic situation. This eventually has resulted in transforming teaching learning management, from conventional to technology-based learning models (Baran et al., 2011; Code et al., 2020; Hollweck & Doucet, 2020). Unless using a distance communication, classes that are normally provided through offline sessions cannot be supported by the emerging environment (Neuhauser, 2002; Rasmitadila et al., 2020).

This condition forces university officials especially leaders to reorganize learning strategies, design, and make academic changes (Code et al., 2020; Dunn, Griggs, Olson, Beasley, & Gorman, 1995; Garrison & Cleveland-Innes, 2005; Hollweck & Doucet, 2020). Universities have to organize new teaching-learning strategies in responding to the new environment (Bartley & Golek, 2004; Rasmitadila et al., 2020) and student interests (Dunn et al., 1995; Smith & Renzulli, 1984). Online

learning barriers have to be anticipated properly. These could include social interaction issues, lack of time, learner motivation, and technical problems (Muilenburg & Berge, 2005; Swan, 2001). New initiatives of academic development strategies must be considered and prepared. These probably include some strategies as well as e-learning designs, online classroom management, and the models of electronic-instructional communication, student motivational techniques, interactions of teachers learners, engagement within the related or relevant e-learning systems, improve and empower online teachers or faculty in delivering online courses (Baran et al., 2011; Swan, 2001; Young, 2010). These new strategies are necessary to be prepared appropriately in order to anticipate such a critical situation, and ensure students' learning experiences can be sustained successfully (Bolliger & Wasilik, 2009; Garrison & Cleveland-Innes, 2005; Hollweck & Doucet, 2020; Rasmitadila et al., 2020).

b. Impact on Higher Education Marketing

Percentage of local and international students that make up the domestic higher education market is predicted decreasing as a result of the impact of pandemic crisis worldwide. US as one of the countries that host the largest number of international students currently has 33.7 percent from Chinese country and 18.4 per cent from India. But, because of travel restrictions due to pandemic outbreak, those students have turned back to their home countries. Universities have also left overseas students stranded. Survey from Institute of International Education reported 830 Chinese students are unable to return to US to continue their studies. This is probably a small percentage of student population study overseas ("The impact of corona virus on higher education," 2020). The main question is how long this situation will end. If the pandemic crisis continuous unexpectedly, restrictions upon the conventional learning models will be remained to be applied to university learning systems. Higher education sector would face unexpected economic impacts in the future ("The impact of corona virus on higher education," 2020). This challenges how colleges and universities around the world adjust their learning models to retain their students' enrolment and deliver learning accessibility to all learners?

c. Economic Impacts on Universities and Students

During normal days, it has been recorded that higher education sector experienced a digital age. Most universities and colleges worldwide are able to provide students with better place in providing students with online learning access. However, with this critical environment today, probably not all universities and students are able to gain effective learning models that are delivered through high-technology-based learning models (Joshi et al., 2020). This is due to less economic sources of students to have better computers, and their universities also have limited financial support to furnish their online learning facilities with related hi-technological facilities ("The impact of corona virus on higher education," 2020).

d. Pandemic Crisis Challenges How Universities Manage Situation

World Health Organization reported that pandemic outbreak has hit almost all countries. People regarded it as a global human tragedy. The spread of novel coronavirus in recent weeks has not shown going down. This condition requires universities to ensure students and staff members are well protected while on campus and doing activities outside campus. Administrators, lecturers, students, and other community members involved in learning and various university activities must employ technical measures to stop the spread of the disease on their campus environment. Health protocols are necessary to be practiced including requesting people to do hand washing, covering coughs and sneezes with tissues or facial cosmetic wipe paper, and do not come to campus area when experiencing cold and flu symptoms. They also have to be aware of persons who have returned from trips during semester breaks, or remind those who have been abroad in heavily affected countries not directly returning to their campus before taking self-quarantine ("The impact of corona virus on higher education," 2020).

With regard to the uncertainty of pandemic condition, for the colleges and universities that have less experiences on online based-learning models need to explore information and observe practices from other universities or educational institutions that have implemented academic changes in responding to novel coronavirus globally. They have to learn and analyse how strategic steps employed by those universities in managing academic programs during the pandemic situation (Code et al., 2020; Garrison & Cleveland-Innes, 2005; Hollweck & Doucet, 2020; Oliver, 1999). Whether strategies implemented in improving teaching learning performance have worked and attained learning targets. Universities also need to see how this critical condition to be tackled effectively. Factors affecting satisfaction of faculty and learners must be considered in establishing conducive online learning environment (Bolliger & Wasilik, 2009; Garrison & Cleveland-Innes, 2005; Smith & Renzulli, 1984): With regard to the spread of pandemic disease unexpectedly to worsen before it is gone or becomes better, university leaders and line-administrators must concern on to safeguard their students, campuses and whole members in responding to class, departments, and unit closures. Interaction and human relation models among students and learners with teachers or faculty have to be developed appropriately (Bolliger & Wasilik, 2009).

Examine how effective online courses carried out in pandemic situation, this study designed a theoretical model figuring predictors and their effects on specified

criterion variables as illustrated in Figure 1. Based on this framework, this study proposed four alternative hypotheses (H_1) to be tested: (1) university responsibility has effects on student acceptance, motivation, and satisfaction; (2) university readiness has effects on student acceptance, motivation, and satisfaction; (3) student concern has effects on student acceptance, motivation, and satisfaction; and (4) student acceptance has an effect on student motivation.

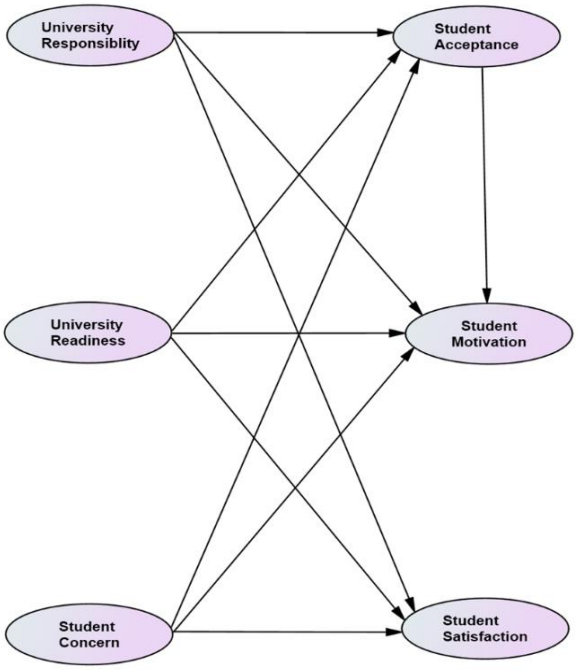

Figure1 The Hypothesized Structure of Predictor Effects on Each Criterion Variables

Initially there are three predictors named as university responsibility, university readiness, and student concern (Hollweck & Doucet, 2020). Criterion variables also consist of three factors including student acceptance, student motivation, and student satisfaction. The effectiveness of online classes depends on the extent of university responsibility in supporting the implementation of online system for learning activities (Bartley & Golek, 2004; Code et al., 2020; Neuhauser, 2002; Young, 2010). This could include the following essential elements: providing computer and internet facility, online learning modules, courses directory, and professional internet-support staff. University must be ready in providing free access to students and sufficient internet quota.

Internet-based learning model can achieve its objectives when university leaders seriously design online courses and encourage lecturers or faculty to improve strategies in enhancing student engagement in internet-based learning activities (Rasmitadila et al., 2020). Students' concern on pandemic situation also determines the achievement of learning results expected by university. How is their attitude towards this crisis and how they perceive covid-19 effects on human live as well as health issues and education? These determine students' performance in online class participation and their learning engagement. All of those elements are predicted to have strong effects on students' acceptance of the online classes, learning motivation, and satisfaction (Aragon, Johnson, & Shaik, 2002). They in turn fostering the online teaching learning strategy to achieve its objectives optimally.

3. METHOD

This study used a quantitative approach with a regression design. The investigation was conducted to reveal how online class learning models perceived by students during the pandemic outbreak. Specifically, it examined: (1) students concern on the pandemic situation; (2) students' acceptance on online learning models; (3) university readiness in implementing online learning classes; (4) university responsibility on online classes; (5) student motivation; and (6) student satisfaction. For the purpose of the study, 150 students were invited as participants in responding to the survey questionnaire administered online in this study. This group of sample was selected using convenience sampling technique (Cohen, Manion, & Morrison, 2018) to those who were available and accessible at online-classes organized by the researcher.

They were enrolled in the year of 2017, 2018, 2019 and who took Educational Management online courses (120 students) and Teaching Learning online courses (30 students) during second semester of 2020 State University of Malang Indonesia. The scales of the questionnaire were constructed based on factors or variables developed from supporting theories and to be tested using factor analysis to group the initial items into a fewer number of the variables or dimensions. These were then validated employing Confirmatory Factor Analysis following Structural Equation Modelling procedure (Burhanuddin & Supriyanto, 2019).

Based on this procedure, the measurement model was established involving five dimensions that being treated as scales including students concern (3 items); students' acceptance (4 items); (3) university readiness (4 items); university responsibility (3 items); student motivation (4 items); and (6) student satisfaction (5 items). Beside these closed question items, there is one open question with five given alternative statements as shown in Table 5. The questionnaire was constructed using five-point Likert scale with five options: Strongly Disagree, Not Agree, Somewhat Agree, Agree, and Strongly Agree. Sample items of the questionnaire are: I complete all the assignments administered in this class; I prefer online class to normal one; and Students in this group use their time optimally. Data were analysed in three stages: descriptive, multivariate, and path analysis to examine the effects of predictive variables on criterion variables designed in this study.

4. RESULTS

Descriptive results show from 150 participants invited in the survey questionnaire, there were 149 answered the questions or achieved almost 100 % rate of return. From this figure, variation of respondents is reported in term of gender and year of enrolment. As respectively shown in Table 1 and table 2, there are 125 female and 24 male students completed the questionnaire administered through online google form.

Table 1 Gender of Respondents

Gender	Frequency	Percent
Male	24	16.1
Female	125	83.9
Total	149	100.0

Table 2 Year of Student Enrolment

Year of enrolment	Frequency	Percent
2017	51	34.2
2018	79	53.0
2019	19	12.8
Total	149	100.0

Responses distribution is within accepted range of kurtosis (< 8) and skewness (< 3) indicating the data are normally distributed, so it can be used for further analysis. Kaiser-Meyer-Olkin Measure of Sampling Adequacy generated through factor analysis for the developed variables obtained acceptable values of KMO > 0.5 indicating a satisfactory factor analysis to proceed. Barlett's Test of Sphericity was significant (< 0.01) or it is small enough to reject the null hypothesis meaning the research variables are related and therefore suitable for structure detection.

The next step is to develop the measurement model using Confirmatory Factor Analysis. Based on this technique, this study built a three correlated-factor model for two groups of scales. First group is the scale that was used to measure university responsibility, university readiness, and student concern. This model is depicted in Figure 2. For the purpose of study, latent factors in this group are treated later as independent variables.

Estimates from Table 3 show that all items in each respective scale have significant and sufficient loadings. These indicate significant indicators explaining the scales. Their r^2 values are also higher demonstrating items' capacity in explaining each factor or latent variable in the measurement model. Figure 3 illustrates the second scale that scale was used to measure student acceptance, motivation, and satisfaction. Latent factors in the scale are treated as dependent variables.

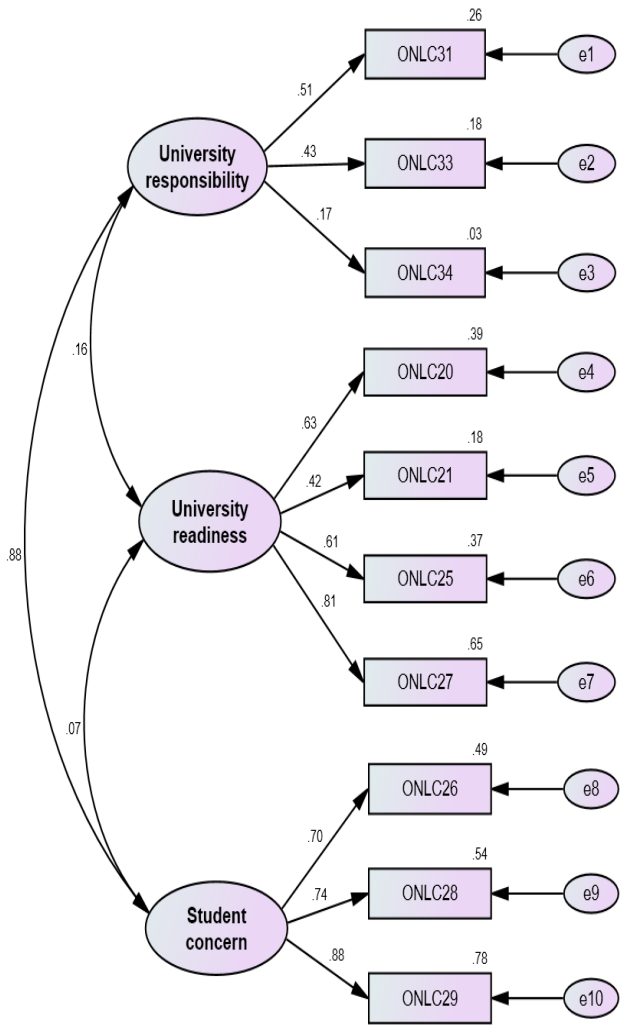

Figure 2 Three Correlated Factor Model of University Responsibility, Readiness, and Student Concern

Table 3 Scale Regression Weights of University Responsibility, Readiness, and Student Concern

Indicators		Scales	Std. Estimate	Unstd. Estimate	S.E.	C.R.	P
ONLC31	<---	University_responsibility	.509	1.000			
ONLC33	<---	University_responsibility	.427	.903	.246	3.671	***
ONLC34	<---	University_responsibility	.167	.361	.216	1.667	.096
ONLC20	<---	University_readiness	.626	1.000			
ONLC21	<---	University_readiness	.423	.711	.170	4.173	***
ONLC25	<---	University_readiness	.606	.692	.125	5.534	***
ONLC27	<---	University_readiness	.807	1.019	.178	5.719	***
ONLC26	<---	Student_concern	.703	1.000			
ONLC28	<---	Student_concern	.735	1.078	.136	7.931	***
ONLC29	<---	Student_concern	.882	1.276	.151	8.453	***

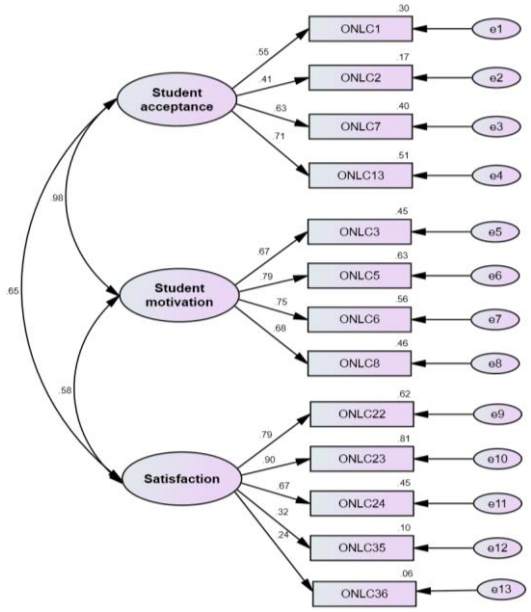

Figure 3 Three Correlated Factor Model of Student Acceptance, Motivation, and Satisfaction

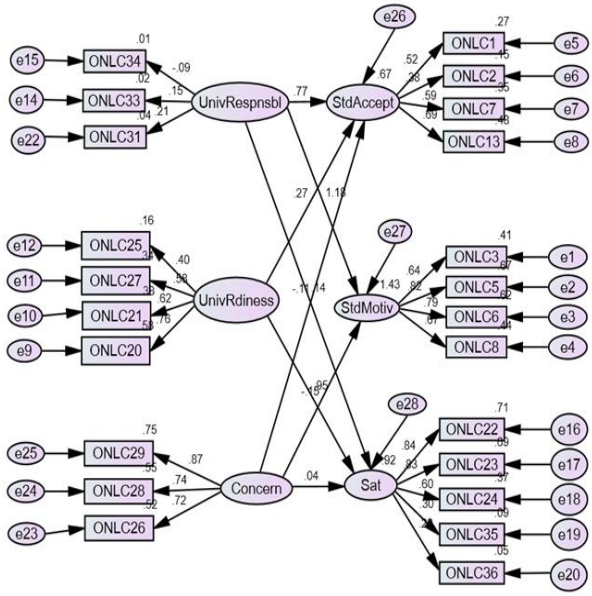

Figure 4 The Tested Initial Path Model Structure

Table 4 Scale Regression Weights of Student Acceptance, Motivation, and Satisfaction

Indicators		Scales	Std. Estimate	Unstd. Estimate	S.E.	C.R.	P
ONLC1	<---	Student_acceptances	.549	1.000			
ONLC2	<---	Student_acceptances	.407	.676	.162	4.180	***
ONLC7	<---	Student_acceptances	.633	1.099	.190	5.773	***
ONLC13	<---	Student_acceptances	.713	1.244	.201	6.201	***
ONLC3	<---	Student_motivations	.668	1.000			
ONLC5	<---	Student_motivations	.793	1.199	.147	8.145	***
ONLC6	<---	Student_motivations	.749	1.054	.135	7.791	***
ONLC8	<---	Student_motivations	.675	1.047	.146	7.148	***
ONLC22	<---	Satisfactions	.787	1.000			
ONLC23	<---	Satisfactions	.898	1.093	.106	10.275	***
ONLC24	<---	Satisfactions	.672	.729	.089	8.207	***
ONLC35	<---	Satisfactions	.323	.486	.130	3.738	***
ONLC36	<---	Satisfactions	.236	.295	.108	2.716	.007

Regression weights in Table 4 indicate items obtained significant and sufficient loadings. These demonstrate items as reliable indicators of each factor. Their r^2 values are also higher demonstrating items explain a high proportion of their variances. Path analysis provided coefficients effects of the research latent variables on each respective dependent variable. Following the hypothesized structure proposed in this study, results are presented in Figure 4 and Table 5.

Estimates generated from the path model computation demonstrate generally the independent variables have significant effects on the research dependent variables. Standardized regression values reported in Table 5 respectively indicate university responsibility provided significant direct effects on student acceptance (β = 0.76), student motivation (β = 1.00), and student satisfaction (β = 0.14). University readiness provided direct effects on both dependent variables of student acceptance (β = 0.27) and satisfaction (β = 0.95). Finally, student concern only provided a significant effect on satisfaction (β = 0.04).

However, p *values* show some variables do not provide significant coefficients. The final model then is created concerning the significant effect coefficients as shown in Figure 5. Compared to the initial structure, the final path model show that university responsibility has direct and significant effects on its respective dependent variables including student acceptance (β = 0.77), motivation (β = 1.00), and satisfaction (β = 0.14).

Followed by effects of university readiness on both dependent variables: student acceptance (β = 0.27), and satisfaction (β = 0.95). These effect coefficients are obtained significantly on the basis of *p* values of < 0.05. With the exception variable "student concern" contributed very weak or very small and insignificant coefficient because its p values are 0.576 or higher than the acceptable significant values (> 0.05).

Table 5 Regression Weights the Initial Path Structure

Criterion		Predictor	Std. Estimate	Unstd. Estimate	S.E.	C.R.	P
Sat	<---	UnivRdiness	.945	.847	.098	8.611	***
Sat	<---	Concern	.036	.053	.095	.560	.576
StdAccept	<---	UnivRespnsbl	.765	2.068	.808	2.560	.010
StdMotiv	<---	Concern	-.151	-.182	.115	-1.589	.112
StdAccept	<---	UnivRdiness	.273	.168	.055	3.087	.002
StdMotiv	<---	UnivRespnsbl	1.185	3.834	1.846	2.077	.038
Sat	<---	UnivRespnsbl	.142	.557	.287	1.938	.053
StdAccept	<---	Concern	-.113	-.114	.108	-1.055	.292
ONLC3	<---	StdMotiv	.639	1.000			
ONLC5	<---	StdMotiv	.819	1.302	.165	7.896	***
ONLC6	<---	StdMotiv	.786	1.163	.151	7.691	***
ONLC8	<---	StdMotiv	.667	1.083	.159	6.799	***
ONLC1	<---	StdAccept	.517	1.000			
ONLC2	<---	StdAccept	.383	.682	.180	3.795	***
ONLC7	<---	StdAccept	.594	1.088	.211	5.152	***
ONLC13	<---	StdAccept	.691	1.259	.225	5.597	***
ONLC20	<---	UnivRdiness	.763	1.000			
ONLC27	<---	UnivRdiness	.580	.601	.089	6.722	***
ONLC25	<---	UnivRdiness	.399	.374	.082	4.560	***
ONLC33	<---	UnivRespnsbl	.151	.791	.475	1.667	.096
ONLC34	<---	UnivRespnsbl	-.086	-.458	.427	-1.072	.284
ONLC22	<---	Sat	.844	1.000			
ONLC23	<---	Sat	.833	.946	.083	11.391	***
ONLC24	<---	Sat	.605	.625	.082	7.629	***
ONLC35	<---	Sat	.297	.433	.125	3.476	***
ONLC21	<---	UnivRdiness	.620	.855	.118	7.216	***
ONLC36	<---	Sat	.217	.263	.105	2.509	.012
ONLC31	<---	UnivRespnsbl	.206	1.000			
ONLC26	<---	Concern	.720	1.000			
ONLC28	<---	Concern	.739	1.058	.133	7.947	***
ONLC29	<---	Concern	.866	1.222	.152	8.051	***

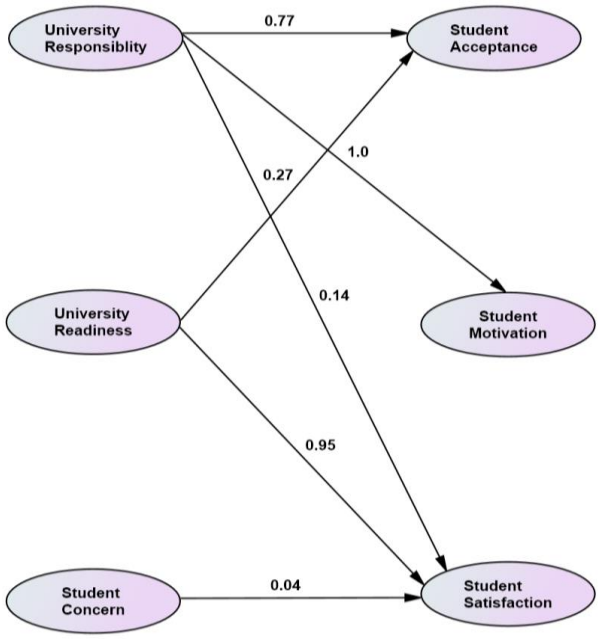

Figure 5 Final Path Model Effects of University Responsibility, Readiness, Student Concern on Student Acceptance, Motivation, and Satisfaction

Data from an open question of the survey questionnaire listed five statements inquiring student opinion about the benefits of online learning classes organized in this target university. Table 6 shows "self-learning development" perceived by most students (85%) as one of online learning benefits. This is followed by "online communication training" (21%) and "self-mastery learning material provided in online-learning classes" (20%).

Table 6 Responses to Open Questionnaire Statements

Statements on the Benefits of Online Classes	Frequency	Percent
Self-mastery of learning material provided in online-learning classes	20	13.4
Self-learning development	85	57.0
Recreation climate created in online classes	12	8.1
Online communication training	21	14.1
Fostering cooperation among students	11	7.4
	149	100.0

5. DISCUSSION

It was evident that that pandemic outbreak has hit most countries in the world. As reported by World Health

Organization reported, the pandemic condition has been regarded globally as a human tragedy. This situation has implications for changing life patterns, higher education market, and academic strategies especially how to organize the school system and implement teaching and learning activities both at schools and at universities (Code et al., 2020; Hollweck & Doucet, 2020; Neuhauser, 2002). It has been almost a year since the past that this kind of emergency has forced parents, communities and schools to change the lesson delivery system, from a conventional model to a more mobile, online system. This section discuses findings on the effectiveness of online courses delivered during pandemic outbreak.

Effectiveness of the online teaching learning model was centred on three predictor variables namely (1) university responsibility, (2) readiness, and (3) student concern. The examination was carried out to find how these variables influence their criterion variables including (1) student acceptance on online courses, (2) student motivation, and (3) student satisfaction. Four hypotheses were constructed to test the strength of the effects of those predictors on their dependent or criterion variables.

To test these hypotheses, this study built and validated two sets of scales including (1) three correlated factor model of the predictors' measure and (2) three correlated factor model of the criterion variables. Items in each respective scale have significant and sufficient loadings demonstrating their capacity as significant indicators in explaining the scales. Their $\boldsymbol{r}^2$ values are also higher that means successfully explain each factor or latent variable in the measurement model. Factor loadings obtained by the developed scales are statistically significant indicating the factors extract sufficient variance from their respective variables or indicators. In other words, items in the measurement model satisfactorily contribute to explaining each latent variables or factors and the model has well defined structures (Burhanuddin & Supriyanto, 2019).

The hypothesized structural model depicts all independent variables have multiple effects on their specified independent variables. However, this study found not all variables' interactions in the proposed model result in significant effects. The model, thus, is adjusted referring to significant effect coefficients, and lead to a final path model. University responsibility as depicted in the final model is found to have direct and significant effects on its dependent variables. The first hypothesis (university responsibility has effects on student acceptance, motivation, and satisfaction) is then fully accepted. The explanation is that university responsibility in providing facility, professional and technical supports strongly influence students' acceptance, motivation and their satisfaction in joining online-classes. This is relevant with a study by Rasmitadilla et al. (2020) Young (2010), and Muilenburg & Berge (2007) that the implementation of online learning system need to be prepared in order to ensure its effectiveness in achieving its objectives.

University readiness in organizing online classes was found to provide significant effects on both student acceptance and student satisfaction. The second hypothesis (university readiness effects on student acceptance, motivation, and satisfaction) is partially accepted because this predictor did not provide a significant effect on student motivation as one of the criterion variables. University readiness can be observed in providing internet quota, facilities for students' online learning activities, staff commitment in conducting online courses, and technical services to students. These elements are found to have strong effects on both students' acceptance and satisfaction. The better the university readiness in implementing online courses, the more accepted and satisfied students in engaging in online learning experiences (Young, 2010) and fostering effective human interactions (Bolliger & Wasilik, 2009) and faculty empowerment of online learning programs (Baran et al., 2011). Such a finding supports the theory or other research that online classes will be effective when providers has designed relevant learning models and its various features (Bartley & Golek, 2004; Bolliger & Wasilik, 2009; Code et al., 2020; Dunn et al., 1995; Rasmitadila et al., 2020). They need to remove barriers that probably relate with technical and financial supports to make those high technological based-learning models happen and work properly (Joshi et al., 2020; Muilenburg & Berge, 2005; Smith & Renzulli, 1984)

Student concern did not have significant effects on its independent variables. The third hypothesis (student concern has effects on student acceptance, motivation, and satisfaction) is rejected. It means that student concern on pandemic crisis does not have direct effects on any of its dependent variables mentioned above. In other words student concern does not contribute to the increase of student acceptance, motivation, and satisfaction. This variable relates with students' attitude towards the critical pandemic situation, and how they regard this disadvantageous condition that may affect their health condition. It does not predict the increase of acceptance, motivation, and satisfaction in undertaking online teaching learning activities. In line with Hollweck (2020), these elements can be fulfilled when the online learning providers especially schools have knowledge, skills, and collaborative networks in designing and implementing the online learning model.

Finally, this study found no significant effects of student acceptance on motivation. Fourth hypothesis is also rejected. Students' acceptance of online classes practiced in a university does not influence student motivation in doing any learning activities during the pandemic outbreak. This variable is closely related with student preference or inclination and positive image upon online class activities designed by a university or lecturers (Bolliger & Wasilik, 2009). But the capacity of education institution and its educators in organizing and designing this learning system was found as significant factor that influenced student motivation in the blended learning

model (Aragon et al., 2002; Code et al., 2020; Dunn et al., 1995; Garrison & Cleveland-Innes, 2005; Hollweck & Doucet, 2020; Oliver, 1999).

6. CONCLUSION

Pandemic outbreak has broad impacts on most human life in educational institutions as well as universities in this hemisphere. Since the situation does not allow direct and face-face meetings, it challenges universities to design and implement smart teaching learning models in delivering courses to students during this pandemic condition. Learning experiences are scheduled and carried out through online classes in order to anticipate such a disadvantageous learning environment. The study has limitations because being conducted at a university setting in Indonesia. However, the findings add the literature that the effectiveness of electronic teaching learning system in a university is determined by several components. These include providing technical supports as well as internet quota, facilities for students' online learning activities, technical services to students, and staff with high commitment in conducting online courses. The readiness of the university in providing computer facility, learning modules, professional arrangement capacity, empower faculty, and technical supports which enable learners engage optimally in learning activities. They also need to be encouraged to concern and use of their time efficiently and effectively during online learning seasons. Appropriate online learning designs are perceived by most students as important strategies to improve their individual learning capacities.

Responsibility and readiness were found significantly contribute to the extent of students' acceptance upon the online learning programs, learning motivation, and satisfaction in joining online learning experiences or courses delivered by departments in a university. Since the success of the learning system significantly depends on how these elements to be fulfilled, universities as higher education providers then have to improve their capacity in organizing online learning programs with full responsibility and readiness in supporting all learners with online-technical supports, online learning based-modules, computer/internet facility, and skillful technical assistants and administrative staff members.

REFERENCES

[1] Aragon, S. R., Johnson, S. D., & Shaik, N. (2002). The Influence of Learning Style Preferences on Student Success in Online Versus Face-to-Face Environments. *American Journal of Distance Education, 16*(4), 227-243. doi: 10.1207/S15389286AJDE1604_3.

[2] Baran, E., Correia, A.-P., & Thompson, A. (2011). Transforming online teaching practice: critical analysis of the literature on the roles and competencies of online teachers. *Distance Education, 32*(3), 421-439. doi: 10.1080/01587919.2011.610293.

[3] Bartley, S. J., & Golek, J. H. (2004). Evaluating the cost effectiveness of online and face-to-face instruction. *Educational Technology & Society, 7*(4), 167-175.

[4] Bolliger, D. U., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education, 30*(1), 103-116. doi: 10.1080/01587910902845949.

[5] Burhanuddin, B., & Supriyanto, A. (2019). Effects of Organisational Culture, Situation, and Leadership Orientation on School Leadership Performance. *International Journal of Management and Applied Science, 5*(5), 4-7. http://www.iraj.in/journal/journal_file/journal_pdf/14-562-15640467674-7.pdf doi:15492.

[6] Code, J., Ralph, R., & Forde, K. (2020). Pandemic designs for the future: perspectives of technology education teachers during COVID-19. *Information and Learning Sciences*. https://www.emerald.com/insight/2398-5348.htm doi:10.1108/ils-04-2020-0112.

[7] Cohen, L., Manion, L., & Morrison, K. (2018). *Research Methods in Education*. New York: Routledge.

[8] Dunn, R., Griggs, S. A., Olson, J., Beasley, M., & Gorman, B. S. (1995). A Meta-Analytic Validation of the Dunn and Dunn Model of Learning-Style Preferences. *The Journal of Educational Research, 88*(6), 353-362. doi: 10.1080/00220671.1995.9941181.

[9] Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating Cognitive Presence in Online Learning: Interaction Is Not Enough. *American Journal of Distance Education, 19*(3), 133-148. doi: 10.1207/s15389286ajde1903_2.

[10] Hollweck, T., & Doucet, A. (2020). Pracademics in the pandemic: pedagogies and professionalism. *Journal of Professional Capital and Community*. https://www.emerald.com/insight/2056-9548.htm doi:DOI 10.1108/JPCC-06-2020-0038

[11] The impact of corona virus on higher education. (2020). *Times Higher Education*.

[12] Joshi, A., Vinay, M., & Bhaskar, P. (2020). Impact of coronavirus pandemic on the Indian education sector: perspectives of teachers on online teaching and assessments. *Interactive Technology and Smart Education, Vol. ahead-of-print No.* https://doi.org/10.1108/ITSE-06-2020-0087 doi:10.1108/ITSE-06-2020-0087.

[13] Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance Education, 26*(1), 29-48. doi: 10.1080/01587910500081269.

[14] Neuhauser, C. (2002). Learning Style and Effectiveness of Online and Face-to-Face Instruction. *American Journal of Distance Education, 16*(2), 99-113. doi: 10.1207/S15389286AJDE1602_4.

[15] Oliver, R. (1999). Exploring strategies for online teaching and learning. *Distance Education, 20*(2), 240-254. doi: 10.1080/0158791990200205.

[16] Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies, 7*(2), 90-109.

[17] Smith, L. H., & Renzulli, J. S. (1984). Learning style preferences: A practical approach for classroom teachers. *Theory Into Practice, 23*(1), 44-50. doi: 10.1080/00405848409543088.

[18] Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Education, 22*(2), 306-331. doi: 10.1080/0158791010220208.

[19] World Economic Forum. (2020). The COVID-19 pandemic has changed education forever. https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/.

[20] Young, S. (2010). Student views of effective online teaching in higher education. *American Journal of Distance Education, 20*(2), 65-77. https://doi.org/10.1207/s15389286ajde2002_2 doi:10.1207/s15389286ajde2002_2.