

INFLUENCE FACTORS OF INTERNAL AND EXTERNAL STUDENTS STUDENT PARTICIPATION IN ONLINE TUTORIAL (STUDY CASE IN MM-GRADUATE PROGRAMS UNIVERSITAS TERBUKA)

Any Meilani, Eko Kuswanti dan Ami Pujiwati

Abstract

Online tutorial (Tuton) is one of the services given learning Open University (UT) UT S2 students. This activity must be followed by students of Master of Management (MM) UT. In Tuton, students are required to participate actively, both in learning the material initiation, discussion, and writing tasks. The main problem that often occurs in Tuton is a student in the following Tuton inactivity. It can be caused by internal factors and external factors students. The main problem that often occurs in Tuton is a student in the following Tuton inactivity. It can be caused by internal factors and external factors students. What is meant by the internal factor is the ability of students to use the computer, the student's ability to use the Internet, Motivation in following Tuton, allocation of time in following Tuton, financial capability and ease of access to the internet and the location, while the external factors include the Internet tissue disorders, problem management Tuton, completeness problem Tuton facilities granted tutors, tutors too late to give initiation / materials / assignments, tutors do not provide feedback and ability to tutor problem in utilizing the facility Tuton. The data retrieved from the database record Tuton includes many student access to material initiation, discussion forums, and task Tuton, while other data are collected through questionnaires were 241 students at 2012.2. The data obtained were analyzed using factor analysis and SEM (Structural Equation Model) assisted with the program SPSS 17:00. The results showed that the level of participation Tuton influenced by internal factors (-0.42) and external factors (-0.04). Internal factors and external factors have contributed to student participation rate of 18%. That is, changes in the level of student participation in Tuton by 18% due to internal and external factors were studied. Most of the variations of this change is caused by changes in internal factors rather than external factors.

Keywords: internal factors, external factors, student participation, online tutorials

BACKGROUND

Until now it is still underutilized Tuton S2 UT students, although students do not need to access it to pay in addition to the cost of the internet. Studies conducted Meilani (2005) find of course that ditutonkan Management Program, only 32% of students who use it. There are several obstacles that students perceived in following this tutorial, namely the difficulty in accessing the UT website (35%), slow tutors provide initiation (35%), UT network is often problematic (29%), less responsive tutor student responses or answers to the material or questions provided tutors (16%), students do not have internet access of location of residence and students can not use the computer, each for a maximum of 13%.

Budiwati research results (2007) found that the average student access the Master of Public Administration Program (MAP) for one semester for each course is less than

50% of that required. Even today there are subjects that access for one semester only 5%, and the highest range is only 55%. This suggests the participation of students in Tuton is not maximized. The reason, among others, the students are not used to access the Internet, the communication between the tutor face to face with a tutor Tuton is still minimal or none at all, the internet connection is slow, low ability students in the use of learning technologies, and tutors delay in performing their duties.

Susanti (2007) highlighted the influence of internal factors on the formation of student knowledge and student participation in the action Tuton. The results showed although the online tutorials for students of the UT Graduate Program is an activity which is mandatory for students, but it turns out in practice the level of student participation in this Tuton is low. It is seen from the number of days in a semester of access does not reach half of that expected. The reason is the student's internal factors, in particular the ability to use low-tech learning. Student participation in the MAP in following Tuton Administration Research Methods course is only about 41.67%.

This article wants to examine the influence of internal and external factors on the level of student participation in Tuton. The study was conducted with a sample of 241 students from 8 (eight) UPBJJ-UT. Data obtained using a questionnaire. Aspects that are asked in the questionnaire refers to the study questionnaire developed Meilani (2005) and Susanti (2007) with some modifications. Data were analyzed using factor analysis and SEM (Structural Equation Model) program assisted the Statistical Program for Social Sciences (SPSS) 17.00.

Data collected from the database records of learning support services (Tuton) includes the number of students access to material initiation, discussion forums, and task Tuton, while other data are collected through a questionnaire. For more details, contained in Table 1 below.

Table 1. Data Collected

Code	indicators are researched material	Resources
	Participation Factors	
Material	Total Access material data base Tuton initiation	data base Tuton
Discussion	Total Access discussion	Data base tuton
Tasks	Total access tasks	Data base tuton
Y1	Tuton reading material online	questionnaire
Y2	Involvement in discussion forums Tuton	questionnaire
Y3	Working / transmit duty	questionnaire
	Internal Factors	
X1A	The ability of students to use computers	questionnaire

Code	indicators are researched material	Resources
X1B	Students' ability to use the internet	questionnaire
X1C	Motivation in following Tuton	questionnaire
X1D	Allocation of time in following Tuton	questionnaire
X1E	Financial capability	questionnaire
X1F	Ease of access to the internet and location	questionnaire
	External Factors	
X2A	Internet network disruption	questionnaire
X2B	Tuton management issues	questionnaire
X2C	Completeness problem Tuton given facility tutor	questionnaire
X2D	Tutors too late to give initiation / material / assignments	questionnaire
X2E	Tutors do not provide feedback	questionnaire
X2F	Problems in utilizing the facility's ability tutor Tuton	questionnaire

Participation is formed by 5 (five) indicator, as do / send task (Y3) almost uniformly or almost no variation, so it is not effective if it is used as an indicator. In addition, work activities / tasks are sending off the line, because the task can be done without having to always access Tuton. Therefore, this indicator is not used in the subsequent analysis phase. Internal and external factors, each formed by six (6) indicators of X1A to X1F (internal factors) and X2A to X2F (external factors).

At this stage of the preparation of the structural model, this participation factors into endogenous latent factors, internal factors and external factors become latent exogenous factors. The estimation method used is the method of maximum likelihood (ML) by the number of observations required minimum of $0.5 q (q - 1)$, q is the number of measurement variables in the model. According to the rules of t-rule, on condition that the model is identified if the number of parameters estimated is less than or equal to $0.5 q (q - 1)$. ML method chosen for this model is consistent and efficient for sample sizes above $0.5 q (q - 1)$, or about 200-500, depending on many indicators are used, although the assumption of normality of the data is not being met. ML method slightly biased when the number of samples (about 50) or less than $0.5 q (q - 1)$. Bollen (1989) states that although the indicators of exogenous variables is not a normal distribution, the maximum likelihood estimators remain consistent. That is, by increasing the number of samples, maximum likelihood estimation method will be even closer to the true parameters.

RESULTS AND DISCUSSION

Based on the eligibility criteria of the model in Table 2 still large that the null hypothesis (hypothesis χ^2 , it appears that the value suitability) rejected, indicating that the model does not depict empirical data. χ^2 value is very sensitive to the magnitude of the number of samples if χ^2 test the sample is too small (less than 50) or too large (more than 500), χ^2 becomes unreliable. Therefore, the value must be accompanied by due diligence another (Tabachnick and Fidell in Ferdinand, 2000). In SEM there is no single statistical test equipment to measure or test the hypothesis that the model is created, but using a variety of statistical tools, such as GFI, AGFI, RMSEA and RMSR.

Table 2. Feasibility Model Test Results

Criteria	The critical value / Test Criteria	Suitability Index	Evaluation Model
χ^2	Relatively small ($p \geq 0.05$)	163.21 ($p=0.002$)	Marginal
GFI	≥ 0.90	0.90	Very good
AGFI	≥ 0.80	0.87	Very good
RMSEA	≤ 0.08	0.049, (0.030 ; 0.065)	Very good
RMSR	Relatively small	53.91	

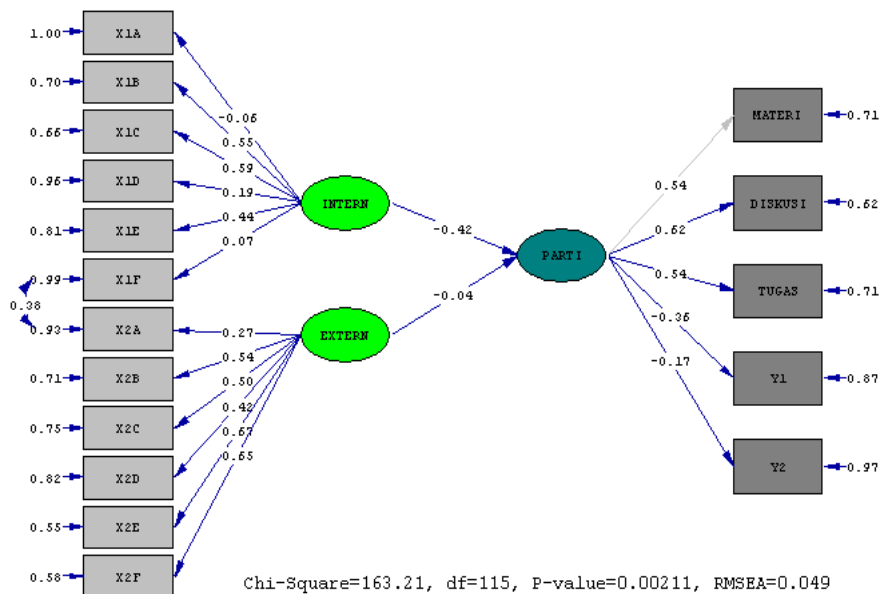


Figure 1. Measurement and Structural Participation Tuton Model

Based on the results of the analysis of the suitability of the model can be seen that the model can be said to be planned fit (RMSEA, GFI, AGFI, and CFI), because once tested correspond to the reference value, the results meet the requirements of structural equation models. It can be said that the test results are good models of suitability, even if p-value of his Chi-Square $0.000 < 0.05$. Test the suitability of the model shows the model deserves to be analyzed further. Conclusion models in Figure 1 above shows that the model can be accepted as a model to describe the data Tuton participation.

To measure the validity of each of the individual indicators used validity raw direct relationship between observed variables and latent variables. The reliability of each indicator (individual reliability) was measured with a commonality, while to assess the reliability of the indicators in measuring a latent factor used jointly construct reliability index.

Validity of the suggested value of at least 0.5 (Sharma, 1996). Direct raw coefficient (validity) for a number of indicators to be equal to or greater than $\alpha = 5\%$ (Table 3), with the absolute value of t is greater than 1.96 (meaning that a number of indicators that are used are valid in measuring each respective latent factors. However, a number of other indicators are not valid measure latent factors.

Table 3. The Results of Validity and Reliability of The Structural Equation Model of Participation Tuton

Factors and Indicators		Content Validity (≥ 0.50)	t- value (≥ 1.96) ($\alpha = 5\%$)	Reliability	
				Factor (≥ 0.70)	Indicator (≥ 0.5)
INTERN	INTERNAL PROBLEMS			0.16	
X1A	ability to use the computer	-0.06	-0.63		0.004
X1B	Ability to use the internet	0.55	5.25		0.30
X1C	Motivation in following Tuton	0.59	5.49		0.34
X1D	Allocation of time in following Tuton	0.19	1.94		0.037
X1E	Financial ability	0.44	4.41		0.19
X1F	Convenience and location with internet access	0.07	0.78		0.005
EXTERN	EXTERNAL CONSTRAINTS			0.61	
X2A	Internet network disruption	0.27	3.36		0.073
X2B	Tuton management issues	0.54	6.47		0.29
X2C	Completeness problem Tuton given facility tutor	0.50	5.97		0.25
X2D	Tutors too late to give initiation / material / assignments	0.42	5.00		0.18
X2E	Tutors do not provide feedback	0.67	8.26		0.45
X2F	Problems in utilizing the facility's ability tutor Tuton	0.65	7.97		0.42
PART 1	PARTICIPATION			0.58	

Factors and Indicators		Content Validity (≥ 0.50)	t- value (≥ 1.96) ($\alpha=5\%$)	Reliability	
				Factor (≥ 0.70)	Indicator (≥ 0.5)
MATERIAL	Total Access material initiation	0.54	*		0.29
DISCUSSION	Total access discussion	0.62	4.26		0.38
TASKS	Total access tasks	0.54	4.16		0.29
Y1	Reading material Tuton	-0.36	-3.27		0.13
Y2	Involvement in discussion forums Tuton	-0.17	-1.72		0.028

Note.: * This indicator is used to define the scale of the latent factor loading set 1.

Individual reliability are presented in the rightmost column of Table 3, this value is the value of R2 each measurement equation models of each indicator. An indicator is said to reliable (reliable) if the value of the reliability of individual worth more than 0.5 (Sharma, 1996).

All indicators of access to valid and sufficient participation factor "reliable" in measuring this factor, while the activity indicator is invalid. Initiation activity indicator reading, though not invalid, but statistically significant (t-value > 1.96), meaning that even though it is still relatively small indicators carries with participation factor. Thus, the participation factor can be measured by four (4) indicators, namely access to the material, a discussion of access, access assignments, and reading activities initiation. While involvement in discussion activities are not effectively used as an indicator to measure participation.

On factors internal problems, based on the validity and significance, there are only three (3) indicators that can be used to measure these factors, the ability of students to use the internet, motivation in following Tuton, and financial capabilities. As for the factor of external constraints, all the indicators can be used, unless the indicator Internet network disruption.

Construct reliability for each latent factor for the successive internal factors, external and participation is 16%, 61% and 58%. The greater the reliability index, the better the construct will cause these indicators in measuring factors. Suggested construct reliability value is greater than 0.7 (70%), all constructs are not reliable, \geq (Sharma, 1996). Based on both criteria (only the external constructs and constructs participation approaching this figure.

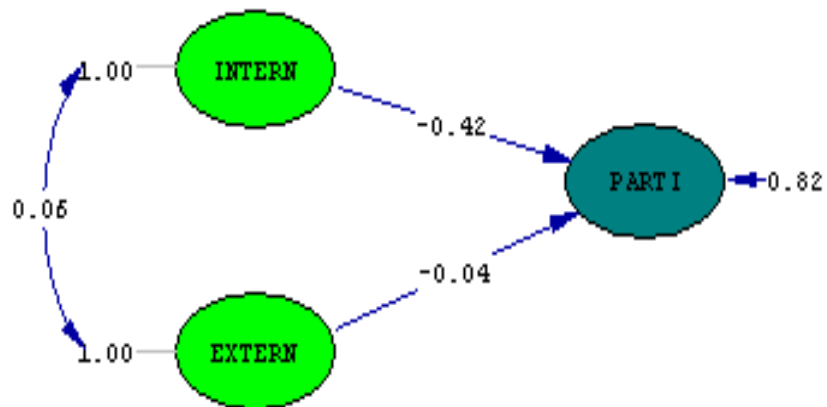


Figure 2. Structural Model of Student Participation

Structural model in Figure 2 shows that the internal and external factors have a negative influence on the level of participation Tuton, with each internal factors (influence coefficient -0.42) and external factors (influence coefficient -0.04), $R^2 = 18\%$. This means there is conformance with the expectation that any reduction of barriers to internal factors and external factors issues, together, result in an increase in the participation rate Tuton. Or conversely, any additional constraints on the internal factors and external factors will reduce student participation in Tuton. According to this model, first, the direction of the coefficients match expectations that any reduction of barriers to internal and external factors (mean increase of internal factors or external circumstances for the better), together, result in an increase in the level of student participation in Tuton. Secondly, the internal and external factors have contributed to student participation rate of about 18%. That is, changes in the level of student participation in Tuton about 18%. Variations of these changes can be explained by changes in the conditions of internal and external factors were studied. Most of the variations of this change will be explained more by changes in the internal factors of the external factors.

Thus, based on the indicators, internal factors that influence participation Tuton is the ability of students in using the Internet, the motivation to follow Tuton, and financial capabilities. External factors influence the same (balance) between the level of the condition of the indicators of the level of student participation in Tuton.

Although the model has a low reliability, but of the validity and significance, this model can still be used to assess the influence of structural indicators of the level of participation Tuton. To compare the structure between the indicator and the influence of structural factors, it can be seen from the raw value of the coefficient of the direct relationship throughout his t-significant values (not statistically different from zero). Greater influence of internal factors (external factors than) the level of participation Tuton. As already noted, there are at least three (3) indicators of the internal factors that inhibit participation Tuton, namely: motivation in following Tuton, students' ability to use the internet, and financial capabilities.

CONCLUSION

Tuton participation rate is influenced by internal factors (influence coefficient -0.42) and external factors (influence coefficient -0.04). Internal factors and external factors have contributed to student participation rate of 18%. That is, changes in the level of student participation in Tuton by 18% due to internal and external factors were studied. Most of the variations of this change is caused by changes in internal factors rather than external factors.

REFERENCES

- Budiwati, Yulia (2007) Effect of Management Participation Students Against Online Tutorials. *Journal of Higher Education Distance*, Vol. 8 (1), 54-67
- Bollen, K. A. (1989) *Structural Equations with Latent Variables*. John Wiley & Sons, New York.
- Ferdinand, A. (2000) *Structural Equation Modeling in Management Research*. Agency Publisher Diponegoro University, Semarang.
- Meilani, Any (2005) Images Tutor and Student Activity In Online Tutorials Open University (Case Studies Management Studies - Fekon).
- Meilani, Any (2011) Activity Distance Education Tutor Online In Tutorial.
- Susanti (2007) Internal Factors Influence Students Against Student Participation In Online Tutorials. *Journal of Open and Distance Education*, 8 (1), 62-82.
- Sharma, S (1996) *Applied Multivariate Techniques*. John Wiley & Sons, New York.
- (2012) *Pasacasaryana Program Catalog*. Ministry of Education and Culture. Universitas Terbuka.