The Significance of Initiation, Discussion and Assignment of Online Tutorial Strategy to Students' Performance at Universitas Terbuka

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Abstract

The dynamics associated with students' performance through an online tutorial strategy of a course delivered by Universitas Terbuka through the Department of English were reviewed in this paper. The importance of initiation, discussion and assignment as the main ingredients of the approach were concurrently probed in accordance with the readiness of students to attend the final exam. Those highlights will then be linked up to their performance in this tutorial process with respect to the course they undertook. The exploration was mainly aimed at analysing the influential elements of the online tutorial to the students grade. This study involved 194 and 196 students who undertook a Structure III course in the first and the second semester of 2012 academic year respectively. Methodologically, all students involved were listed in two different tables using microsoft excel for windows 2007. The first table is for registered students in the first semester and the second table is for registered students in the second semester of 2012. The tables incorporated names in relations to their frequencies and doings that they were actively engaged in the eight access of initiations and discussions forum plus the accomplishment of three different marked-assignments in the related semester. Having merged all assorted records, they were then sorted out quantitatively utilizing structural equation model with the help of Lisrel version 8.30 to be acquainted with the importance of each element that were engaged. Nine hypotheses were then developed for each table. It was found that seven and eight hypotheses of both in the first and second tables were consecutively validated by the analysis. The analysis confirmed that students' grade in tutorial online strategy mostly influenced by initiations and followed by assignments and activities for both tables.

Keywords: Students' performance, online tutorial, marked-assignment, discussion forum, initiation access.

INTRODUCTION

Universitas Terbuka, the Indonesian Open University, is a distance mode university established in 1984 by the Government to initially overcome limitation in terms of space and time restraints from student's stance as well as offering more opportunities of higher education to the Indonesians. In

general, learning materials are developed and provided with multimedia approach in the form of printed and electronic media. Instructional processes are conducted through integrated tutorial systems with several modes of delivery; including face to face and electronic tutorial and one of the electronic tutorials provided by the University is called online tutorial service. By the end of each semester, exams are implemented and conducted twice in a year. Specifically, as insinuated by Sembiring (2008) at glance, this paper will explore implementation of the online tutorial in Structure III course in English Department for the first and the second semester of 2013 academic year.

Diagrammatically, the scheme of the online tutorial service and its relation to the final grades are administered as illustrated in the following figure.
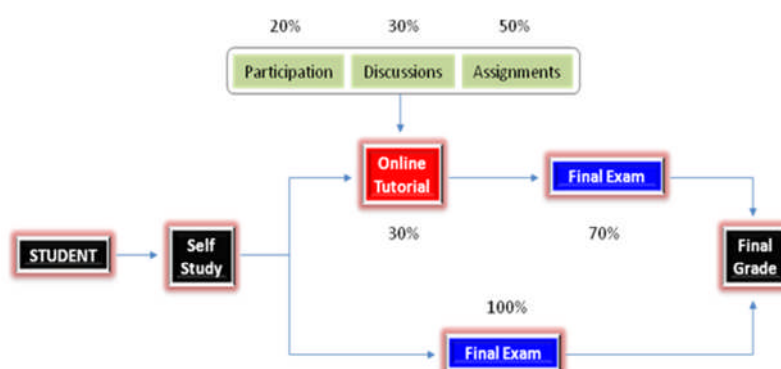

Figure 1: The Online Tutorial Strategy

Students' final grades are determined by their score in the online tutorial activities plus final exam score, i.e., 30% and 70% respectively. The final grades for students who do not use this service are completely determined by score entirely from the final exam. For those who engage in online tutorial service, their grades are determined by their involvements in participation (initiations), discussions, and assignments. The contribution of each part is 20%, 30% and 50% respectively. The frequencies of participation (initiations), discussions and assignments entitled to students are 8, 8 and 3 times respectively.

This study was mainly aimed at analysing the influential elements of the online tutorial service in conjunction with their performance prior to the final exam phase as inspired by Kotsiantis, Pierrakeas & Pintelas (2004). Additionally, the importance of initiation, discussion and assignment were investigated to underline their impact to the grade in the online tutorial course of action. Finally, the study will elucidate the most influencing element with respect to the grade itself.

CONTEXT AND METHODOLOGY

This study observed two groups of different students who enrolled in the first and the second semester of 2012 academic year in English Department of Universitas Terbuka. They were taking Structure III course and engaged in the online tutorial service. The first group (involved in the first semester)

consist of 194 students and the second group (involved in the second semeter) consist of 196 students. Each student was expected to access eight participations (initiations), follow eight discussions and accomplish three marked assignments. Only those students who actively engaged in the system will exclusively get the benefit of the mark, i.e., up to 30%.

Methodologically, all students registered in Structure III course and engaged in the online tutorial, defined as the participants, were listed in two diifferent tables (Sugiyono, 2012). The process of doing that is by using Microsoft excels for windows 2007. The first table was devoted for registered students in the first semester of 2012 with 194 participants. The second table was devoted for registered students in the second semester of 2012 with 196 participants. The tables incorporated names in relations to their frequencies and doings that they were actively engaged in the eight access of initiation and discussion forum plus the accomplishment of three different marked-assignments in the relevant semester. Having merged all assorted records, then they were arranged quantitatively utilizing structural equation model or SEM (Hair et al, 1995) with the help of Lisrel version 8.30 (Wijayanto, 2008) to be acquainted with the importance of each element engaged.

For the sake of analysis, the model used in the research, referring to the strategy of the online tutorial (Figure 1), was constructed as illustrated in Figure 2 below.
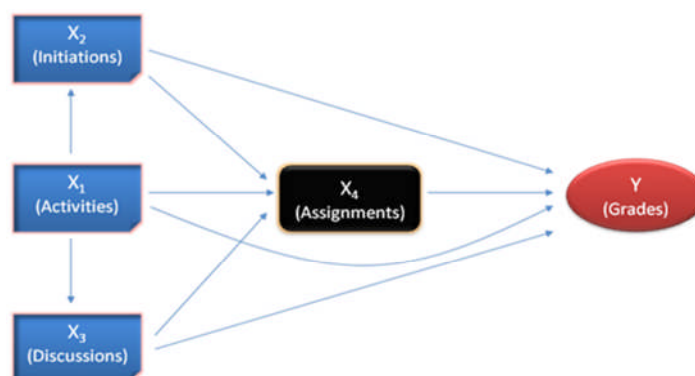

Figure 2: The Model of the Study

From the model, it can be explained that grades (Y) is the dependent variable. While activities (X_1), initiations (X_2) and discussions (X_3) are the independent variables; moreover, assignments (X_4) is an intervening variable. Going after the rule of thumb under SEM and refering to the basic model used in this inquest (Figure 2), nine hypotheses were afterwards developed and applicable to both tables, they are:

1. The grade of tutorial online is directly influenced by activity
2. The grade of tutorial online is directly influenced by intiation
3. The grade of tutorial online is directly influenced by discussion
4. The grade of tutorial online is directly influenced by assignment
5. Assignment in tutorial online is directly influenced by activity
6. Assignment in tutorial online is directly influenced by initiation

7. Assignment in tutorial online is directly influenced by discussion
8. Initiation in tutorial online is directly influenced by activity
9. Initiation in tutorial online is directly influenced by discussion.

Each student within the table is unique each other. In other words, student in the first table will not be listed in the second table and vice versa.

RESULTS AND DISCUSSIONS

Having processed all data based on both tables, the outputs of those SEM are described in the following features, consisting of both in associated figures and tables. To be better recognized, let us take a look several figures as illustrated below.
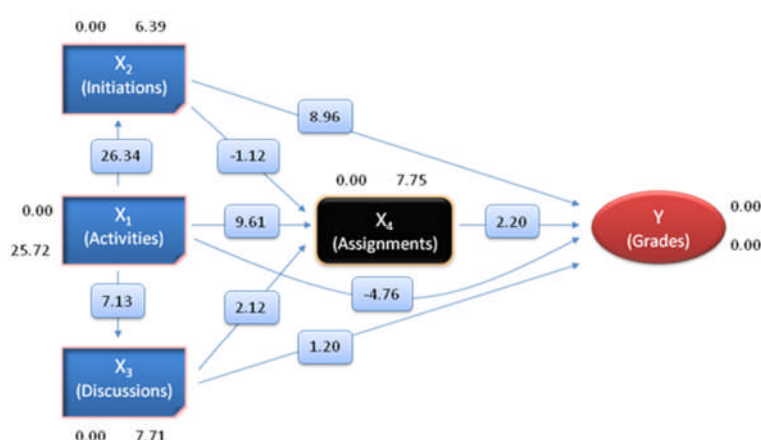

Figure 3: The t-Value of the 1st Semester Students

The first upshot of Figure 3 above ought to be endorsed is with reference to the nine hypothesis of the research. To be aware of, let us take a look Figure 3 above. It clearly demonstrates that seven of the nine hypotheses were validated by the analysis. This implies that two hypotheses were disapproved, they are initiation to assignment ($X_2 \rightarrow X_4$ = -1.12) and discussion to grade ($X_2 \rightarrow X_4$ = 1.20), for both values were less than ±1.96 as statistically required, while the rests of the tests were validated by the analysis. These implied that grade (Y) was influenced by activities (X_1 = 4.76), initiation (X_2 = 8.96) and assignment (X_4 = 2.20). Additionally, assignment (X_4) was influenced by both activities (X_1 = 9.61) and discussion (X_3 = 2.12); likewise, both initiation and discussion were influenced by activities ($X_1 \rightarrow X_2$ = 26.34 and $X_1 \rightarrow X_3$ = 7.13 respectively).

Having accomplished the result from hypotheses testing, the next output of SEM is on the method of estimated model to see how the portrait of the model diagrammatically. This result needs to be uncovered to perceive the conformation on the influential powers among the independent variables on the subject of the dependent variable, i.e., the grade. To see those related marks evidently, let us notice Figure 4 below.
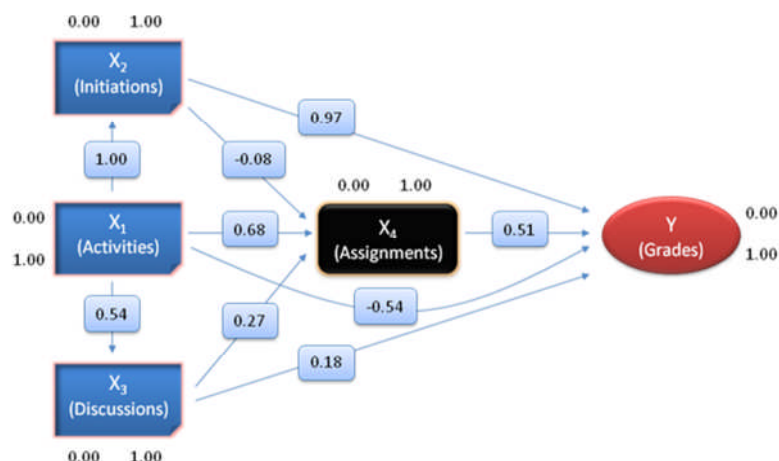
Figure 4: Loading Factor of the 1st Semester Students

Figure 4 above mainly confirmed on the four imperative features of the inquest. The first piece of evidence is that three of the main variables involved affecting the grade, they are activity ($X_1 = 0.54$), initiation ($X_2 = 0.97$) and assignment ($X_4 = 0.51$). The second detail is that the largest part influencing grade from students' performance stance is initiation aspect ($X_2 = 0.97$). The third point that can be drawn from the figure is that other two factors following initiation that have the effect on the grade were assignment ($X_4 = 0.51$) and activity ($X_1 = 0.54$). The forth that is also nice to be disclosed on the fact that both initiation and discussion were intrinsically influenced activity, i.e., $X_1 \rightarrow X_2 = 1.00$ and $X_1 \rightarrow X_3 = 0.54$ respectively).

As usual, another eminent side that trivial to be revealed under SEM approach is the goodness fit of the model. Before that nonetheless, it is also proper to unveil that the measurement error of the loading factor was highly reliable since they were all in 0 : 1 (see Figure 4, in each variable was indicated). This means that measurement error of the model is zero; it is in fact good.

Table 1: The Goodness Fit of the Model of the 1st Semester

Goodness of Fit	Cut-off Value	Results	Notes
Significance Probability (P-value)	$\geq 0,05$	0.83813	Good Fit
RMR (Root Mean Square Residual)	$\leq 0,05$ or $\leq 0,1$	0.031	Good Fit
RMSEA (Root Mean Square Error of Approximation)	$\leq 0,08$	0.000	Good Fit
GFI (Goodness of Fit)	$\geq 0,90$	1.00	Good Fit
AGFI (Adjusted Goodness of Fit Index)	$\geq 0,90$	0.99	Good Fit
CFI (Comparative Fit Index)	$\geq 0,90$	1.00	Good Fit
NFI (Normed Fit Index)	$\geq 0,95$	1.00	Good Fit

Back to the story of goodness fit of the model, it actually aims at exemplifying how proper was the rate of the model in terms of its fitness related to the model development. The output of the analysis approved on the goodness fit of the

model, including the dimensions and requirements used in the study. They are factually considered in the categories of "Good Fit". This implies that the model is regarded as the good one in the sense that the model was developed in accordance with relevant theory. The dimensions, attributes, values and requirements of the model can be seen in Tabel 1 illustrated previously.

The next is the process of describing the results on student performance in the online tutorial strategy from the second semester of 2012 program. To be better identified, let us take a look two related figures as illustrated below.
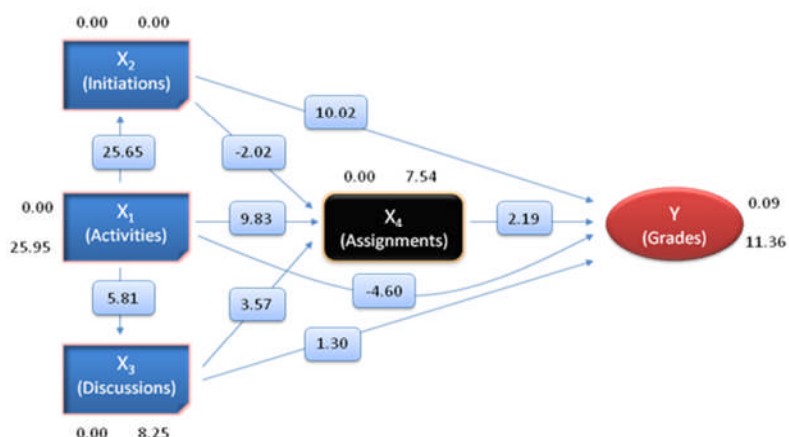

Figure 5: The t-Value of the 2nd Semester Students

The first upshot ought to be expressed is in conjunction with the nine hypothesis of the inquest. To be attentive in, assent to scrutinize Figure 3 above. It visibly exhibits that eight of the nine hypotheses were authenticated by the analysis. This implies that only one hypothesis was repudiated, namely discussion to grade ($X_2 \rightarrow Y = 1.30$), as the value was less than ±1.96 as required statistically, while the rests of the tests were confirmed by the analysis. These implied that grade (Y) was influenced by activities ($X_1 = 4.60$), initiation ($X_2 = 10.02$), and assignment ($X_4 = 2.19$). Additionally, assignment (X_4) was influenced by activitie ($X_1 = 9.83$), initiation ($X_2 = 2.02$) and discussion ($X_3 = 3.57$); likewise, both initiation and discussion were influenced by activity ($X_1 \rightarrow X_2 = 25.65$ and $X_1 \rightarrow X_3 = 5.81$ respectively).
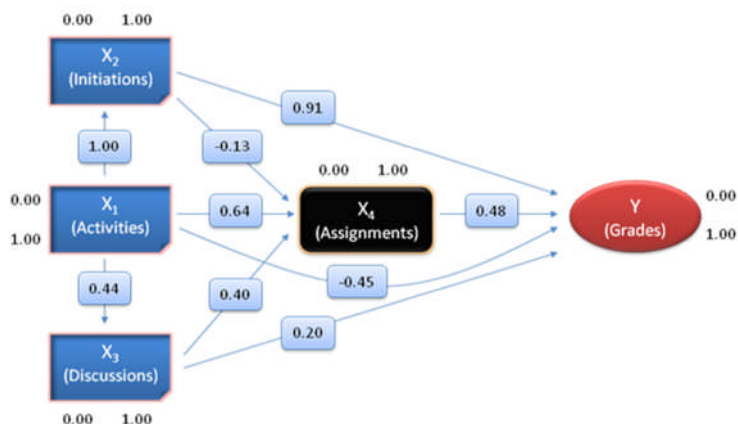

Figure 6: Loading Factor of the 2nd Semester Students

Having arrived at the result of those hypotheses testing, the next output of SEM is on the method of estimated model to observe the power of relations amongst the variables involved pictured quantitatively and digramatically. This result needs to be revealed to distinguish the conformation on the influential power among the independent variables on the subject of the dependent variable, i.e., the grade. To see those related scores unmistakably, accede to notice Figure 6 exemplified previously.

Figure 6 above predominantly verified on the four imperative countenances based on the inquest. The first part of a set is evidently three of the main variables involved affecting directly the grade, they are activity ($X_1 = 0.64$), initiation ($X_2 = 0.91$) and assignment ($X_4 = 0.48$). The second fact is that the largest part influencing grade from students' performance stance was still initiation outlook ($X_2 = 0.91$). The third point that can be drawn from the diagram is that another factor following initiation that have the effect on the grades were assignment ($X_4 = 0.48$) and activity ($X_1 = 0.45$). The forth point that is also appropriate to be divulged on the fact that both initiation and discussion were noticeably influenced the activity variable, i.e., $X_1 \rightarrow X_2 = 1.00$ and $X_1 \rightarrow X_3 = 0.44$ conceecutively).

As described previously, another prominent part that trivial to be revealed under SEM method is on the goodness fit of the model. Before that however, it is proper to unveil that the measurement error of the loading factor was highly reliable since they were all in 0 : 1 (see Figure 6). This means that measurement error of the model is zero; it is factually good.

Table 2: The Goodness Fit of the Model of the 2nd Semester

Goodness of Fit	Cut-off Value	Results	Notes
Significance Probability (P-value)	≥ 0,05	0.63744	Good Fit
RMR (Root Mean Square Residual)	≤ 0,05 or ≤ 0,1	0.032	Good Fit
RMSEA (Root Mean Square Error of Approximation)	≤ 0,08	0.000	Good Fit
GFI (Goodness of Fit)	≥ 0,90	1.00	Good Fit
AGFI (Adjusted Goodness of Fit Index)	≥ 0,90	0.99	Good Fit
CFI (Comparative Fit Index)	≥ 0,90	1.00	Good Fit
NFI (Normed Fit Index)	≥ 0,95	1.00	Good Fit

Back to the theme of goodness fit of the model, it actually aims at exemplifying the rate of the model in relations to its development. The output of the analysis approved on the goodness fit of the model, including the dimensions and requirements used in the study. They are factually considered in the categories of "Good Fit". This implies that the model is regarded as the good one in the sense that the model was developed in accordance with relevant theory. The dimensions, attributes, values and requirements of the model can be seen in Table 2 above.

NOTABLE REMARKS

This study aims at giving a picture of online tutorial strategy at Universitas Terbuka with respect to its elements engaged within it. From both tables, it can be summarized that there were no significant differences between students who undertook Structure III course in the first and the second semester related to the factors affecting the grade in this online tutorial service. Both tables come to the ending that grade was directly influenced orderly by initiation, activity and assignment. Besides, initiation and discussion were both directly affected by activity. In both lists, the most influential factor affecting grades was student initiation in the online tutorial service.

It is afterward interesting to notice however, why discussion has no effect on the grade while discussion has a direct effect to assignments. Further inquest on this matter is relevant to pursue in the near future. Additionally, It is appropriate to extend this study and apply to other course in the online tutorial service provided by the University as the rationale to improve the quality of the tutorial itself that certainly will benefit the students. It is hope that by doing this kind of inquests will ultimately help improving students' performance in their study. This is in a row with the University tagline, providing flexible quality education by reaching the unreach as part of making higer education open to all (Universitas Terbuka, 2011 & 2012).

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