

Lecturer Profile, Student Satisfaction Rate and Teaching Method, Its Contribution to the Passing Rate

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Abstract. Petra Christian University Faculty of Economics, which consists of 8 programs is one of the faculties which has developed a core competency courses. This courses must be taken by students in all study programs under the Faculty of Economics. To maintain the quality of teaching, faculty management has facilitated with a variety of ways, including debriefing the lecturers, tightly selecting the part-timer lecturers, providing textbooks and various other learning tools. In addition, periodically, the faculty also conducts an evaluation of teaching through a questionnaire to obtain feedback from students related to teaching and learning process. The teachers who obtain a good evaluation score will accept an award as a faculty appreciation of their performance, this activities are called 'faculty award'.

However, these efforts have not achieved optimal results, because the percentage of classes with passing rate less than 70% is still quite low. Therefore, It is needed to conduct an in-depth review with empirical data to get comprehensive information about the factors that influence the passing rate of core competency courses in the Faculty of Economics. The results are then expected to be useful as one of the considerations for determining the policies and efforts to improve the teaching process of Faculty core competency courses. This study will examine whether the lecturer profile, student satisfaction rate that represented by lecture performance score and teaching methodology have a contribution to the passing rate.

Keywords—*faculty core competency courses, lecturer profile, student satisfaction rate, teaching methodology, passing rate*

INTRODUCTION

The success of the academic process characterized by the efficiency of the teaching and learning process, the level of student satisfaction towards the learning process, and student success rate in taking a particular course. The efficiency of university teaching and the levels of student satisfaction have been a common focus of academic work of great import to the university system and its quality control (Tejedor, J 2002). Universities and educational institutions are aware of the importance of maintaining the quality of teaching and learning process, that is why it has a lot of efforts in improving the quality of teaching and learning. Another seriousness in maintaining quality of education authorities is proved by requirement to set up quality assurance system in each of education institution, especially in higher education.

Institution, either universities or school have an important role in the student achievement, since such institutions are interested to prove their performance to stakeholder. Ferguson (1991) suggest that teacher qualification has an influence in student achievement as well as class size (Glass et. al 1982, Mosteller et al 1985)., On the other hand, other researcher believed that school just has a little contribution in student achievement. Though it was debatable about universities role in the student

achievement, but many other researches have proved a solid finding that there is an association between many aspect of universities such as teacher experience, teacher education, teaching method to the student achievement.

Faculty of Economics Petra Christian university has facilitated teaching process to enhance student achievement in core competence courses. Unfortunately, certain classes of core competence has not yet reached the minimum standard of percentage of passing rate i.e 70% per class. In-depth study is required to reveal which factors that influence passing rate, so it could contribute and promote more effective policy by the faculty authority.

PREVIOUS RESEARCH

i. *Lecturer Profile and Passing Rate*

Jepsen (2005) suggest that teacher profile or teacher quality is an important concern of parents and policy maker. Lecturer or teacher profile, according to Ackerman et. al (2006), include teacher training, teacher experience, pedagogical practice and professional development. Some of the factors have been investigated with result confirm the existence of a correlation between teachers profile and student achievement (Tella 2006). In addition, preliminary results from Clotfelter et al. (2003) suggest positive impacts

of teacher experience and teacher license test scores on student achievement in North Carolina.

Darling-Hammond (2000), also confirm previous studies through their research which revealed that teacher quality variables appear to be more strongly related to student achievement than class sizes, overall spending levels, teacher salaries at least when unadjusted for cost of living differentials), or such factors as the statewide proportion of staff who are teachers. Furthermore, Darling-Hammond (2000) also revealed that among variables assessing teacher "quality," the percentage of teachers with full certification and a major in the field is a more powerful predictor of student achievement than teachers' education levels (e.g., master's degrees). Moreover, Harris and Tim (2007) find out that more experienced teachers appear more effective in teaching elementary math and reading and middle school math.

Hanushek (1971) in his study about teacher characteristics and gains in student achievement using micro data suggest that teaching experience and graduate education do not contribute to gains in student achievement scores. Betts et al. (2003) find mixed results for teacher characteristics using detailed individual-level data from elementary schools in the San Diego Unified School District. Similar results are also shown by Jepsen and Rivkin (2002) using grade-level data from California, they found that teachers experience are associated with student test score, while teacher education and certification have no systematic relationship with achievement.. RAND researchers (2009) found no evidence that these standards i.e teacher characteristic have a substantial effect on student achievement in Los Angeles public elementary, middle, and high schools. However, the lack of significant effects for these teacher characteristics should not be interpreted as evidence that teachers have no impact on student achievement (Jepsen 2005). According to Kasoko, and Oyedoko (2008) indicate generally relationship exist among the 3 teacher's profile i.e teacher self-efficacy, teacher's training and teacher's attitude and pupil's academic achievement.

ii. *Student's Satisfaction and Passing Rate*

At the end of semester, Faculty of Economics, Petra Christian University has always asked student feedback related to the lecturer's performance by filling out the questionnaire. This such assessment of learning outcomes and quality through student evaluation is considered by many as being the single most valid source of data on teaching effectiveness (Kelly, Ponton, & Rovai 2007).

The more students satisfy with the performance of lecturers, the greater the likelihood of students successfully. During in its depth investigation, The Vice-Chancellor's Office for Quality, Universidad de Oviedo, suggest that student are more satisfied with teaching in subject with a higher pass rate. Similarly, Kelly et al. (2007) found that students' evaluation of the course was related to factors related to instructor attributes, course content and

organization as well as factors related to grading and assessment.

Students overall satisfaction with the course has been found to be associated with a number of factors. Kim, Liu and Bonk (2005) in Wong and Jason (2008) found students satisfaction with the course was positively related to factors which included students feeling they had learned a lot, their sense of community in the class, their engagement in learning, the use of a range of learning techniques, their academic confidence and prompt feedback from the instructor.

iii. *Teaching Method and Student Passing Rate*

In this research, teaching method is defined by using Romberg's model in Haas (2002), as shown on fig 1.

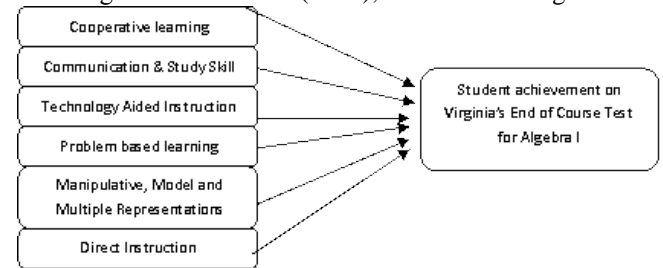


Figure 1. Theoretical model explaining algebra student achievement by teaching methods (Romberg 1998) in Haas (2002)

Teaching method play an important role in student achievement. According to Haas (2002), the teaching method categories accounted for 9.7% of the variance in teachers' students' mean scale scores for the End of Course SOL Test for Algebra I. Further, this research also rank the teacher method categories based on meta analysis and find out that the consecutive strongest variable as follow : direct instruction, problem based learning, technology aided instruction cooperative learning, manipulative model and multiple representations and communication and study skill.

Although, Haas (2002) suggest that teacher should emphasize on the three highest of teaching category i.e. direct instruction, problem based learning, technology aided instruction, however this research do not include problem based learning. The exclusion of problem based learning from teaching method is due to this method is not widely used in teaching core competence courses. Instead, we use cooperative learning and technology aided as the proxies of teaching method. Moreover, as a preliminary study, this research is not intended to investigate deeply which teaching method is proper, but just to describe roughly whether teaching method contribute to the student achievement or not. Therefore, the selection of teaching category is accustomed with the research objective.

Cooperative learning is a promising technique for instruction in a college program with a certain level of rigidity. In order to offer a pedagogical practice, many researchers have started to switch to this technique to increase student achievement and improve retention. For the purposes of this study, cooperative learning (CL) is

defined as a method of instruction characterized by students working together to reach a common goal (Haas 2002)

Research has shown that cooperative learning techniques will promote student learning and academic achievement, increase student retention, enhance student satisfaction with their learning experience, help students develop skills in oral communication, develop students' social skills, promote student self-esteem and help to promote positive race relations.

Chapman and Kenneth (2006), though humble in scope, demonstrate that the use of cooperative learning groups in a rigorous college level course enhances overall student achievement. The percentage of students who dropped or failed the class for the control group was 29 + 5%., while the percentage of students who dropped or failed the class for the treated group was 13 + 2%. Conversely the pass rate for the control group was 71%, while the pass rate for the treated group increased 23 % (p<0.05) to 87%.

Another powerful teaching method is direct instruction. Binder and Watkins (2000), concluded that precision teaching and direct instruction are mature and extremely powerful instructional technologies that are fully capable of erasing America's "basic skills crisis" if widely adopted. (Mercer 1997) in (Din 2000) defined direct instruction is as an instructional sequence that includes demonstration, controlled practice with prompts and feedback, and independent practice with feedback. In his study, Din (2000) suggested that the integrated direct instruction approach, when used appropriately, can be both effective and efficient in helping students improve their basic math.

Recently, the using of technology as an aided instruction is become more popular among educator (Collins et al 2008). There are various of using technologies, ranging from simple to complex. Haas (2002), defined technology aided instruction (TAI) as a method of instruction characterized by using computer software application and/or hand-held calculators to enhance instruction. According to Collins et al (2008), shown that the use of Computer Aided Instruction (CAI) is pedagogically effective and that currently available applications are easy to integrate into the student's in-class experience. It is shown that the use of CAI significantly increased student final exam grades.

RESEARCH METHOD

i. Context of research

Faculty of economics, Petra Christian University has established core competence course that are required for all student under the faculty of economics. The courses in core competence consist of 5 categories i.e accounting, business and management, business, economics, and humanity.

The purposes of the establishment of core competency courses are to equip students under the Faculty of Economics with the basic knowledge of economics and to promote sharing resources among study program.

Unfortunately, the success rate of student in core competency courses do not reach the minimum standard of percentage of passing rate i.e 70% per class. Based on the database of Faculty of Economics, the percentage of classes with passing rate less than 70% is still quite low. This issue become a concern to the faculty policy maker, due to student achievement is one of the indicators of faculty efficiency, in addition, it is also a focus for parents and policy makers (Jepsen 2005).

Therefore, it is needed to conduct a preliminary research. The main objective of this research is to depict what factor that should be focused in teaching and learning process to improve student passing rate.

ii. Operationalisation of Variables

Based on previous research and research context, this study proposed the factors that influence student passing rate, i.e lecturer profile, student satisfaction rate, and teaching methods. For the purposes of this study, the lecturer profile is defined as a teacher quality that is characterized by lecturer experience (Ackerman et. al 2006, Clotfelter et al. 2003, Darling-Hammond 2000), and lecturer rank. Lecturer rank is considered more appropriate in this study, because it is an academic achievement of lecturer that proved his competence in teaching, research and community services. To achieve a higher rank, a lecturer need to accumulate certain score in teaching, research and community service. Therefore, in this study, higher lecturer rank is considered as a higher lecturer competency. Lecturer rank consist of 4 degree i.e Teaching Assistant, Assistant Professor, Associate Professor and Professor.

Student satisfaction rate is a level of student satisfaction with the lecturer performance. In Faculty of Economics, student satisfaction rate is used to measure lecturer performance from the student's view. The measurement include 6 aspects i.e academic value, tangible, reliability, responsiveness, assurance and empathy. Faculty of Economics also has developed tools to measure student satisfaction rate. These tools have been tested to ensure its validity, before it is applied in regular survey by faculty of economics. In this study, we do not carry out our own survey to obtain the data of student satisfaction rate, but only use available data from Faculty of Economics. Other proposed variable influence passing rate is teaching methods. For the purpose of study, teaching methods chosen are direct instruction, cooperative learning and technology aided instruction. Summary of research variables and operationalisation are presented in Table 1, below.

TABLE 1

OPERATIONALISATION OF VARIABLES

| | | |
|------------------|----------------------------------|--|
| Lecturer profile | Years experience of the lecturer | Data obtained through structured interview |
|------------------|----------------------------------|--|

| | | |
|---------------------------|--|--|
| | teaching the subjects (Exp) | |
| | Degree of academic rank of lecturer (Rank) | Data obtained from University database of administration |
| Student satisfaction rate | student satisfaction rate with the lecturer's performance (SatisR) | Data obtained from the results of regular survey conducted by Faculty of Economics |
| Teaching Method | Direct instruction implemented in each of class (DI) | Data obtained through structured interview |
| | Cooperative learning implemented in each of class (CL) | Data obtained through structured interview |
| | Technology Aided Instruction implemented in each of class (TAI) | Data obtained through structured interview |
| Student Passing rate | Percentage of number of success student in each class (PassR) | Data obtained from University database of administration |

iii. Research Model

Research model employed in this study is formulized as follow :

$$\text{PassR} = \alpha + \beta_1 \text{Exp} + \beta_2 \text{Rank} + \beta_3 \text{SatisR} + \beta_4 \text{DI} + \beta_5 \text{CL} + \beta_6 \text{TAI} + \epsilon \quad [1].$$

The above research model, hereinafter referred to as model one, cover some research hypothesis below:

H1A There is an impact of lecturer experience to student passing rate

H2A There is an impact of lecturer rank to student passing rate

H3A There is an impact of student satisfaction rate to student passing rate

H4A There is an impact of direct instruction method to student passing rate

H5A There is an impact of cooperative learning method to student passing rate

H6A There is an impact of technology aided instruction to student passing rate

The survey to assess the level of student satisfaction rate is conducted at final exam, where students have received a portion of the test results. Therefore we are concern that the student assessment of lecturer performance is no longer objective. It means that students who are likely to pass a certain level courses may be satisfied with the performance of lecturers. It is contrary with our suggestion

that higher students satisfaction rate drive students more enthusiastic toward the subject delivered, and finally make them success in certain core competency courses.

Therefore, to reach a consistency of the result of model one, especially hypothesis 3A, we will also test whether there is an existence impact of student passing rate to student satisfaction. Based on our concern above, now we propose the second research model as follow :

$$\text{SatisR} = \alpha + \beta_1 \text{Exp} + \beta_2 \text{Rank} + \beta_3 \text{PassR} + \beta_4 \text{DI} + \beta_5 \text{CL} + \beta_6 \text{TAI} + \epsilon \quad [2].$$

Meanwhile, the hypothesis for model two are as follow :

H7A There is an impact of lecturer experience to student satisfaction rate

H8A There is an impact of lecturer rank to student satisfaction rate

H9A There is an impact of student passing rate to student satisfaction rate

H10A There is an impact of direct instruction method to student satisfaction rate

H11A There is an impact of cooperative learning method to student satisfaction rate

H12A There is an impact to technology aided instruction to student satisfaction rate

iv. Research sample

Research sample is all core competency classes that meet with the criteria of the sample, i.e classes are handled by fulltime lecturer who answer question completely and has satisfaction rate data. The summary of sample selection is below :

| | |
|--|------|
| Total of core competency classes | 285 |
| Less : classes handled by part time lecturer | (90) |
| Full time lecturer do not answer question completely | (55) |
| Full time lecturer without satisR | (16) |
| Number of classes meet with the criteria | 124 |

RESEARCH RESULTS

i. Descriptive Statistic

The mean and standard deviation of the all the variables are shown in table 2. From total 124 classes taught by 34 lecturers, 60,48% of them has average passing rate equal to or above 70%, while the remaining 39,52% lecturer has classes which the passing rate are below 70%. This is shown in table 3.

TABLE 2

DESCRIPTIVE STATISTIC

| | M | SD |
|--------|------|------|
| Exp | 2.66 | 0.58 |
| Rank | 1.32 | 1.04 |
| SatisR | 3.81 | 0.23 |
| DI | 0.68 | 0.23 |
| CL | 0.66 | 0.20 |
| TAI | 0.58 | 0.17 |

TABLE 3

PASSING RATE

| | n | % | Accumulated % |
|-------|-----|-------|---------------|
| <0.7 | 49 | 39.52 | 39.52 |
| >=0,7 | 75 | 60.48 | 100.00 |
| Total | 124 | | |

ii. *Model one: Lecturer Profile, Student Satisfaction Rate and Teaching Methods to Passing Rate*

The Goodness of Fit test valued adjusted $R^2 = 0,301$ shown in table 4 indicate that the value of the dependent variable can be explained by 30,1% of the independent variables. This value can be considered sufficient because passing rate is influenced by many factors beside the teaching methods, student satisfaction, and lecturer profile.

TABLE 4

MODEL SUMMARY OF MODEL ONE

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .579 ^a | .335 | .301 | .16106 |

a. Predictors: (Constant), TAI, Exp, CL, SatisR, Rank, DI
 b. Dependent Variable: PassR

The F test of the regression analysis shows the result as seen in table 5. The p-value is 0,000 which is less than 0,05 means that the hypothesis of model 1 is supported, that is there is an impact of the independent variables to dependant variable. This means that the independent variables (lecturer profile, student satisfaction, and teaching methods) altogether have significant impact to dependent variable (passing rate).

TABLE 5

F TEST (ANOVA) OF MODEL ONE

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|-------------------|
| 1 | Regression | 1.529 | 6 | .255 | 9.825 | .000 ^a |
| | Residual | 3.035 | 117 | .026 | | |
| | Total | 4.564 | 123 | | | |

a. Predictors: (Constant), TAI, Exp, CL, SatisR, Rank, DI
 b. Dependent Variable: PassR

TABLE 6.

T TEST RESULT (COEFFICIENTS) OF MODEL ONE

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.896 | .255 | | -3.507 | .001 |
| | Exp | .069 | .035 | .208 | 1.964 | .052 |
| | Rank | -.064 | .019 | -.347 | -3.378 | .001 |
| | SatisR | .349 | .075 | .421 | 4.646 | .000 |
| | DI | -.217 | .121 | -.254 | -1.789 | .076 |
| | CL | .315 | .110 | .332 | 2.870 | .005 |
| | TAI | .236 | .113 | .203 | 2.084 | .039 |

a. Dependent Variable: PassR

The t test is used to indicate the relative impact of individual variable to the dependent variable. The results in table 6 shows that variable Rank, SatisR (satisfaction rate), CL (cooperative learning), and TAI (technology aided instruction) are significant predictors of passing rate at significance level 0,05. Among the independent variable, SatisR is the most significant predictor (sig .000) of passing rate. Variable DI and Exp is not significantly associated with passing rate at significance level 0,05, however both variable DI and Exp are significant predictors of passing rate at significance level 0,10.

iii. *Model two: Lecturer Profile, Passing Rate and Teaching Methods to Student Satisfaction Rate*

In model two, we will test whether there is an impact of student passing rate to student satisfaction rate, since the survey to assess student satisfaction rate is conducted when students have already receive a portion of the test results. That is why we concern that student assessment on lecturer performance will no longer objective and it is possible to distort the implication of model one results.

Based on the test of model two, the Goodness of Fit test valued adjusted $R^2 = 0,387$ shown in table 7 indicate that the value of the dependent variable can be explained by 38% of the independent variables. This value can be considered sufficient because student satisfaction rate is influenced by many factors beside the lecturer profile, passing rate, and teaching methods.

TABLE 7

MODEL SUMMARY OF MODEL TWO

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .646 ^a | .417 | .387 | .18224 |

a. Predictors: (Constant), TAI, Exp, CL, PassR, Rank, DI

b. Dependent Variable: SatisR

The F test of the second model shows the result as seen in table 8. With the p-value 0,000, the hypothesis of model two is supported, that is there is an impact of the independent variables to dependant variable. This means that the independent variables (lecturer’s profile, passing rate and teaching methods) altogether have significant impact to dependent variable (student satisfaction rate).

TABLE 8

F TEST (ANOVA) OF MODEL TWO

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 2.778 | 6 | .463 | 13.940 | .000 ^a |
| | Residual | 3.886 | 117 | .033 | | |
| | Total | 6.664 | 123 | | | |

a. Predictors: (Constant), TAI, Exp, CL, PassR, Rank, DI

b. Dependent Variable: SatisR

The t test results of model two is shown in table 9. The result shows that variable Rank, PassR (passing rate), and TAI (technology aided instruction) are significant predictors of satisfaction rate at significance level 0,05. Among the independent variable, Rank and SatisR are very significant predictors of satisfaction rate. Variable Exp, DI and CL has no significantly impact to passing rate.

TABLE 9.

T TEST RESULT (COEFFICIENTS) OF MODEL TWO

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.051 | .113 | | 27.000 | .000 |
| | Exp | .032 | .040 | .081 | .804 | .423 |
| | Rank | .077 | .021 | .345 | 3.606 | .000 |
| | PassR | .447 | .096 | .370 | 4.646 | .000 |
| | DI | .105 | .139 | .102 | .761 | .448 |
| | CL | -.037 | .129 | -.032 | -.289 | .773 |
| | TAI | -.342 | .126 | -.244 | 2.706 | .008 |

a. Dependent Variable: SatisR

iv. *Discussion and Finding*

Based on the test result, model one of this study confirm that lecturer profile, student satisfaction rate and teaching methods have a significant impact to passing rate, with goodness of fit 0.301 and F test significant at p-value 0,000. Though each variable is significant at a significance level 0,05 and 0,10, however, not all variables have a positive sign i.e Rank and DI. Rank has a significant negative impact to passing rate. The possible explanation of this result is lecturers with higher rank may delivered to

many beyond the subject content, so it is possible to make students confuse.

Implication of the finding of model one is faculty authority should pay attention to the student satisfaction due to this variable has the highest contribution to the student success. Further, teaching methods also need to be continuously developed to increase passing rate. On the other hand the faculty authority should establish the policy to assure that the lecturers are delivering material as required. This suggestion is proposed due to the finding that lecturer rank has negative significant impact to passing rate.

Unfortunately, our concern that the result of model one distorted is occurred. It is proved by the result of model two that confirm that passing rate has a significant impact to student satisfaction rate. Besides, model two has a higher goodness of fit than model one, that is 0,387 compared with 0,301, it means that model two has a better prediction than model one. Briefly, the results of model two imply that student will be satisfied if they have a higher possibility to pass certain courses. Possible negative impacts in accordance with the findings of model two is on the behavior of lecturer in teaching process. Lecturers have an interested to influence student assessment on lecturer performance through easy to pass.

The finding of model two should be considered in follow up the results of model one, particularly in improving student satisfaction rate. We suggest that student satisfaction do not directly related with lecturer performance. There is a tendency that lecturer try to make student easy to pass in order to get positive feedback from student. Assessment of lecturer performance only from student’s view could be bias and misleading. Lecturer performance should be assessed with other various performance measurement. This suggestion is supported by Aleamoni (1981) in Coburn (1984) stated that the way student ratings are used is of utmost importance. All who use the ratings must be careful to avoid placing inappropriate emphasis on selected student responses. Ideally, student ratings are but one component of a comprehensive instructional evaluation system.

CONCLUSION

Model one of this study confirm the prior research results that suggest lecturer performance has an impact to passing rate as well as student satisfaction rate and teaching method. Model one, also indicate that student satisfaction rate has the most significant impact to passing rate. However, this finding must be followed up carefully, considering the results of model two.

As a preliminary study, this research give an insight to the faculty policy maker to make a proper policy in order to increase student passing rate through develop lecturer quality, teaching method and also other various lecturer performance method.

Further study need to investigate which aspect of satisfaction (academic value, tangible, reliability, responsiveness, assurance and empathy) has the most significant impact to passing rate. In addition to, there is still open the opportunity to examine thoroughly other various teaching method to passing rate with a larger sample.

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