STUDENT PERCEPTION OF THE EFFECTIVENESS TEACHING PROCESS OF CIVIL ENGINEERING'S TEACHER AT TECHNIC SCHOOL

Assoc Prof. Dr Azizi Haji Yahaya
Wong Siew Hee
82, Jalan Jelutong
96100 Sarikei,
Sarawak.

Abstrak: The purpose of this research is to evaluate the effectiveness of teaching process among the teacher of civil engineering base on four aspects such as knowledge, preparation, skills and personality. This research is focus on civil engineering subject. This research is also made to know there are any differences between the level of education, gender and states of teacher with four of the aspects above. Method of sampling that used in this research is cluster over cluster sampling and follows by random sampling. The sample of 180 form four students from six secondary technic schools at Johore, Malacca and Negeri Sembilan were choose as respondents. Instrument that used in this research is questionnaires which was build by own. Pilot survey was done among 15 students from technic school at Johore. The Alpha cronbach from the pilot survey is about 0.963. All of the data for the real research were analyzed with SPSS (Statitiscal Package for Sosial Sciences) to obtain mean, percentage, frequency, standard deviation, One Way ANOVA and Independent t-Test. The results showed that the effectiveness of teaching process by teacher of civil engineering is at high level. Therefore, there were no differences between the level of education, gender and states of teacher with four of the aspects above.

INTRODUCTION

Civil engineering is introduced for a purpose to give knowledge and basic skills in civil engineering to students (BKTV, 2003). Although there have many types of knowledge and skills learnt by teacher from institution before but the issues about the knowledge and skills of teaching in school still concerned by many parties. Most learners felt that knowledge and skills of teaching are the important elements to produce an effective teaching process.

Civil engineering's subject needs a lot of knowledge and skills especially in operate the equipment or machine in workshop. Instead of having knowledge and skills are not enough in an effective teaching process. As teachers, they should have a good personality to created student's interest in this subject. Therefore, teacher's preparation also is an important element that can't be less in teaching process. Teaching without preparation will affect the teaching process.

An effective teaching can be concluded as a teaching activity which produced learning revenue based on the objectives in a health, interesting, delight, democratic, peace and discipline. The effectiveness of teaching actually depends on the way of prepared and does when teaching (Mok, 2002). Mohd Hasni (1996) had did the research and find that a quality teacher is a teacher who manage to transfer their knowledge to student in the way of interest and effective. According to Omardin Ashaari (1999), teacher's role is to get attention when teaching, as an educator and they need to have a good character which can be accept by society so that the student could listen to their teacher's lesson.

Teaching Model
1. Direct Teaching Model (Ang, 1999). The purpose of this model is to help all the students to obtain specific academic skills.   In this case, teacher would provide information in hierarchy structure; student will give opportunity to question and giving the answer by themselves. The wrong answer will be corrected by the teacher.

2. Teaching Theory in Application Model (Ang, 1999). Teaching through this model included a series professional result which affects level learning of a student. Result from the teaching is relevant with the content, how student attempt to achieve learning through the activity and teacher's character in teaching.

3. Robert Glasser Teaching Model (Mok, 2002). Teaching process started with determine the objective of study. As the objective of study had clarified the need and result that should obtain by students after a lesson. The achievement here included behavior change, able to gain knowledge and skills.

4. Expository Model (Mok, 2002). Expository method is a kind of teaching method through explanation, story and demonstration for the teaching purpose. The advantages of this method are save teacher's times as the teacher giving all of the information when lesson and the students are listening to the lesson.

Knowledge

According to Ee (1987), knowledge means recall back important element, methods and process, structure and situation. In addition, according to Jagdish (1983), a teacher should equip themselves with what they need to teach to students. In sufficient knowledge in the field could increased teachers confidential when they facing their students.

According to Morrison (2000), teacher should have knowledge in implement effective teaching process which included knowledge about the subject, knowledge about the effective teaching method, knowledge how to do planning, knowledge about student's progress, knowledge of professional, knowledge of curriculum, knowledge to communicate with each other, knowledge to manage the class, knowledge to teach in various races and gender, knowledge in community and knowledge about background of education.

According to Myint *et al.* (2004), content of the subject is very important and the content is always changing with the progress of society. Teacher is like a moveable dictionary to students. The more knowledge that teacher has, and then it is easier for them to teach in the class. Teacher, who has more knowledge or understanding the field that they teach, will give a positive effect to the students as the teacher could give a detailed explanation about the subject. Therefore, it doesn't mean that teacher had done their teaching process effectively but the knowledge that they have could help them to give the information clear and systematic as they had prepared for any question by students and not hesitate about their answer. (Woolfolk, 2004).

In addition, according to Loughran and Russell (2002) that teacher has the knowledge in their field is good because they can gave the knowledge to students but in the other way they should also try to increase their own knowledge.

Preparations

Planning before starting a lesson is very important when starting a new session or teaching different classes. Teacher should do the planning for every class as the students have different learning level (Stephens and Crawley, 1994).

According to Farrant (1981), teaching preparation could make the teaching process easier. Criteria that included in teaching preparation are teaching aid equipment, suitability of the equipment, early preparation for student and teacher and preparation for teacher to implement cooperate concept with each other.

Skills

Teaching needs skill and practice. A good student not certainly will become a good teacher. Teacher may have knowledge in the subject but they don't have any skill to transfer the knowledge to students. Another situation is teacher, who have not enough knowledge but they know how to teach students in effective way (Abd. Ghafar, 2003).

According to Bigge and Shermis (1999), skills of teaching that will make student really understand the topic are state the objective clear, motivation technique, do the teaching and learning process in good way such as don't rush to finish the syllabus and use daily planning in teaching. According to them again, teacher must use the exploratory-

understanding in teaching process. This method of teaching is student centre teaching and no longer using explanatory-understanding which is teacher centre.

Actually teacher can ask student or make student to learn and do the homework without a forcing. The skill and method that can be used are using eye contact, avoid quarrel between teacher and student when giving an instruction and don't point at student when giving an instruction as students are not pleasant about this. (Rogers, 2003).

Personalities
According to Loughran and Russell (2002) knowledge that given by teacher to student will not be used if teacher didn't give any instruction to students. Ayers (2001), said that good teacher is a teacher who are always joking or cheerful, treat students in same way, knowing class progression and believe that every student have their own level and not poor in study. Usually the students will notice whether their teacher have confidence in their teaching. Intonation, the way of teaching and all of the teacher's movement will be noticed by student. Therefore, teacher's clothing will be concern by student. So a professional clothing and body language of a teacher should see like a teacher (Myint *et al.*, 2004).

Methodology
The purpose of this research is to evaluate the effectiveness of teaching process among the teacher of civil engineering base on four aspects such as knowledge, preparation, skills and personality. This research is also made to know there are any differences between the level of education, gender and states of teacher with four of the aspects above. Method of sampling that used in this research is cluster over cluster sampling and follows by random sampling. Instrument that used in this research is questionnaires which was build by own. Pilot survey was done among 15 students from technic school at Johore. The Alpha cronbach from the pilot survey is about 0.963.

Result
Analyze the level of effectiveness teaching process for the four aspects are categorize into three level such as low, moderate and high.

Score	Category
1.00 - 2.33	Low
2.34 - 3.66	Moderate
3.66 - 5.00	High

(sumber: Azizi *et al*., 2006)

a. Analysis Knowledge Level of Teacher

Figure 1: Level for Knowledge of Teacher

Level	Frequency	Percentage
Low	3	1.7
Moderate	27	15.1
High	150	83.3
Total	180	100

Figure 1 shows that the level for knowledge of teacher is at the high level which is 83.3 percentage (150) respondents' follows by the 15.1 percentage (27) respondents and 1.7 percentage (3) respondents at the moderate and low level.

b. Analysis Preparation Level of Teacher

Figure 2: Level for Preparation of Teacher

Level	Frequency	Percentage
Low	4	2.3
Moderate	97	54.5
High	78	43.5
Total	180	100

Figure 2 shows that the level for preparation of teacher is at the moderate level which is 54.5 percentage (97) respondents' follows by the 43.5 percentage (78) respondents and 2.3 percentage (4) respondents at the high and low level.

c. Analysis Skill Level of Teacher
Figure 3: Level for Skill of Teacher

Level	Frequency	Percentage
Low	6	3.5
Moderate	72	40.1
High	102	56.8
Total	180	100

Figure 3 shows that the level for skill of teacher is at the high level which is 56.8 percentage (102) respondents' follows by the 40.1 percentage (72) respondents and 3.5 percentage (6) respondents at the moderate and low level.

d. Analysis Personality Level of Teacher
Figure 4: Level for Personality of Teacher

Level	Frequency	Percentage
Low	8	4.4
Moderate	72	40.0
High	100	55.6
Total	180	100

Figure 4 shows that the level for personality of teacher is at the high level which is 55.6 percentage (100) respondents' follows by the 40 percentage (72) respondents and 4.4 percentage (8) respondents at the moderate and low level.

Analysis Differential between Level of Education Teacher with Knowledge, Preparation, Skill and Personality

Figure 5: Differentiate Between Knowledge of Teacher with the Level of Education

	df	Mean	F	Significant
Between group	26	0.174	1.412	0.103
Within group	153	0.123		

* Significant at level .05

Figure 5 shows that differentiate between knowledge of teacher with the level of education. Result show that there is no differentiate between knowledge of teacher with the level of education as the hypothesis 1 is accepted, where the significant value is 0.103 more than 0.05. Therefore mean for between group is 0.174 and mean for within group is 0.123.

Figure 6: Differentiate Between Preparations of Teacher with the Level of Education

	df	Mean	F	Significant
Between group	23	0.121	0.913	0.582
Within group	156	0.132		

* Significant at level .05

Figure 6 shows that differentiate between preparations of teacher with the level of education. Where the mean between group is 0.121 and mean within group is 0.132. Therefore the significant value is 0.582 more than 0.05, and the hypothesis 2 is accepted. So there is no difference between preparations of teacher with the level of education.

Figure7: Differentiate Between Skills of Teacher with the Level of Education

	df	Min	F	Significant
Between group	29	0.136	1.046	0.412
Within group	150	0.130		

* Significant at level .05

Figure 7 shows that differentiate between skills of teacher with the level of education. Where the mean for between group is 0.136 and mean for within group is 0.130. Therefore the significant value is 0.412 more than 0.05, and the hypothesis 3 is accepted. So there is no difference between skills of teacher with the level of education.

Figure 8: Differentiate Between Personalities of Teacher with the Level of Education

	df	Min	F	Significant
Between group	30	0.199	1.702	0.021
Within group	149	0.117		

* Significant at level .05

Figure 8 shows differentiate between personalities of teacher with the level of education. Result show that there is difference between personalities of teacher with the level of education when the hypothesis 4 is not accepted as the significant value is 0.021 less than 0.05. Therefore mean for between group is 0.199 and mean for within group is 0.117.

Analysis Differentiate between Teacher's Gender with Knowledge, Preparation, Skills and Personalities

Figure 9: Differentiate Between Knowledge of Teacher with the Teacher's Gender

	No	Mean	Standard deviation	df	t	Significant
Male	18	3.2111	0.60672	178	-5.514	0.120
Female	162	3.9241	0.51049			

* Significant at level .05

Figure 9 shows differentiate between knowledge of teacher with the teacher's gender. Result show that there is no difference between knowledge of teacher with the teacher's gender when the hypothesis 5 is accepted as the significant value is 0.120 less than 0.05. Therefore mean for male teacher is 3.2111 and mean for female teacher is 3.9241.

Figure 10: Differentiate Between Preparations of Teacher with the Teacher's Gender

	No	Mean	Standard deviation	df	t	Significant
Male	18	2.8958	0.64205	178	-5.242	0.366
Female	162	3.6111	0.53850			

* Significant at level .05

Figure 10 shows differentiate between preparations of teacher with the teacher's gender. Result show that there is no difference between preparations of teacher with the teacher's gender when the hypothesis 6 is accepted as the significant value is 0.366 more than 0.05. Therefore mean for male teacher is 2.8958 and mean for female teacher is 3.6111.

Figure 11: Differentiate Between Skills of Teacher with the Teacher's Gender

	No	Mean	Standard deviation	df	t	Significant
Male	18	2.9630	0.51467	178	-6.331	0.660
Female	162	3.7716	0.51400			

* Significant at level .05

Figure 11 shows that differentiate between skills of teacher with the teacher's gender. Result show that there is no difference between skills of teacher with the teacher's gender when the hypothesis 7 is accepted as the significant value is 0.660 more than 0.05. Therefore mean for male teacher is 2.9630 and mean for female teacher is 3.7716.

Figure 12: Differentiate Between Personalities of Teacher with the Teacher's Gender

	No	Mean	Standard Deviation	df	t	Significant
Male	18	2.9056	0.62164	178	-6.124	0.583
Female	162	3.7920	0.57828			

* Significant at level .05

Figure 12 shows differentiate between personalities of teacher with the teacher's gender. Mean for male teacher is 2.9056 and mean for female teacher is 3.7920. The significant value is 0.583 more than 0.05. The hypothesis 8 is accepted. It means that there is no difference between personalities of teacher with the teacher's gender.

Analysis Differentiate between States with Knowledge, Preparations, Skills and Personalities
Figure 13: Differentiate Between Knowledge of Teacher with States

	df	Mean	F	Significant
Between group	26	0.810	1.253	0.201
Within group	153	0.647		

* Significant at level .05

Figure 13 shows differentiate between knowledge of teacher with state. Result show that there is no difference between knowledge of teacher with states when the hypothesis 9 is accepted as the significant value is 0.201 more than 0.05. Therefore mean for between group is 0.810 and mean for within group is 0.647.

Figure 14: Differentiate Between Preparations of Teacher with States

	df	Mean	F	Significant
Between group	23	0.570	0.832	0.687
Within group	156	0.685		

* Significant at level .05

Figure 14 shows differentiate between preparations of teacher with states. Result show that there is no difference between preparations of teacher with states when the hypothesis 10 is accepted as the significant value is 0.687 more than 0.05. Therefore mean for between group is 0.570 and mean for within group is 0.685.

Figure 15: Differentiate Between Skills of Teacher with States

	df	Mean	F	Significant
Between group	29	0.783	1.207	0.232
Within group	150	0.649		

* Significant at level .05

Figure 15 shows differentiate between skills of teacher with states. Result show that there is no difference between skills of teacher with states when the hypothesis 11 is accepted as the significant value is 0.232 more than 0.05. Therefore mean for between group is 0.783 and mean for within group is 0.649.

Figure 16: Differentiate Between Personalities of Teacher with States

	df	Mean	F	Significant
Between group	30	0.602	0.880	0.648
Within group	149	0.684		

* Significant at level .05

Figure 16 shows differentiate between personalities of teacher with states. Result show that there is no difference between personalities of teacher with states when the hypothesis 12 is accepted as the significant value is 0.648 more than 0.05. Therefore mean for between group is 0.602 and mean for within group is 0.684.

From the result above, can be conclude that student perception of the effectiveness teaching process of civil engineering's teacher base on knowledge, skills and personalities are at high level. But for the aspect of preparations is at moderate level.

Therefore, there were no differences between the level of education, gender and states of teacher with four of the aspects above.

Discussion
Student perception is one kind of method that has been using to determine the effectiveness of teaching process. Actually there have some opinioned that this method is less accurate but anyway the result of the research are base on the decision that make by students.
Majority students gave a positive perception for the items. This showed that teacher of civil engineering's knowledge, preparations, skills and personalities are at high level.

In addition, according to Rosnani (2001) majority teachers have knowledge, skills and good attitude in teaching. According to Zainnudin (2003), 95 percentages of students agree the statement teacher has good attitude and consideration in teaching. 92 percentages said that they like their teacher because they deliver their knowledge step by step and clear. 98.3 percentages of students gave opinion that their teacher treats every student in same way. Therefore, there were no differences between the level of education, gender and states of teacher with four of the aspects above.

Conclusion
Student's attitude and academic result will affected by teaching process. Actually teachers should develop their knowledge or skills in teaching for nowadays as creative generations are needed for the development country. From the result above, we can know that student perception of the effectiveness teaching process of civil engineering's teacher base on knowledge, skills and personalities are at high level.

Few suggestions have been suggested to improve the weakness of the teaching process. Future suggestions have been given so that other researchers be able to do this kind of research completely and more effective.

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