

# TEACHING PORTFOLIO

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# TEACHING PHILOSOPHY

I always believe that learning is a never-ending process. Formal teaching normally occurs in school and university, but we will continue learning until we breathe our last. I believe that everybody is capable of learning and acquiring knowledge. However, the achievement is subject to attitude, effort and focus of the individual. I also believe that education at any level should not be exam-oriented; rather they should be knowledge-oriented. And this is something, which I always emphasise to my students; they must make sure that they understand well in class and master the knowledge. They should not worry about their grades, as mastery of knowledge will naturally be manifested by good results.

In teaching and learning process, having a good rapport and mutual respect between a teacher (or a lecturer) and students is of importance. As a lecturer too, I would, as much as possible, ensure that the learning atmosphere is always positive. To develop a positive aura, a lecturer must be in good mood and at the very least smile to his or her students and ask their conditions before commencing his or her lecture. I believe by having done all these in class, the knowledge transferring from both parties will occur very smoothly and naturally.

The teaching process must be carried out in a lively manner so that it will capture the attention and interest of the students to gain the knowledge. Not only that, in upholding the sanctity of the knowledge, the teaching and learning process must be conducted honestly and in proper manner.

While class should be conducted in a relaxing atmosphere, students must be made to understand the importance of promptness and deadline. Accordingly, my doors are always opened for students and I make a point that they are my priority over other tasks. I would not be here if not because of their presence and their success is also my success.

I also believe that simplicity is paramount in the process of teaching. However difficult and complicated knowledge is, there must be a way to present it in a simple form so that any layman can understand the knowledge. Being fair and firm in the teaching process are also an important ingredient in ensuring a good teaching and learning process.

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My research students are made to understand that they are in the driver seat instead of me. While meetings are made regularly, students are responsible on the direction of their research work with guided supervision.

As a scholar used to say - "A great teacher is one who realizes that he himself is also a student and whose goal is not to dictate the answers but to stimulate his student's creativity enough so that they go out and find the answers themselves."

## **TEACHING RESPONSIBILITY**

My experience in teaching civil engineering courses started at Universiti Teknologi Malaysia (UTM) in 1998. Within the period of nearly 19 years, I have taught various courses (more than 200 credit hours) and most of them are related to environmental engineering courses at the Faculty of Civil Engineering (FKA), UTM. The students that I teach are diploma, undergraduate and postgraduate students.

From 1998 to 2001, I was assigned to teach diploma and undergraduates students in Environmental Engineering (SAA 2913), Water Supply and Wastewater Engineering (SAA 4923) and Civil Engineering Laboratory (DAW 2952 & SAA 3052) courses. After obtaining my master's degree in Environmental Engineering in 2001, and up till now, I have taught several undergraduate core courses such as Water Treatment (SKAA 2912 & SAB 2912), Wastewater Engineering (SAB 2922), Water and Wastewater Treatment Engineering (SAM 3913, SZW 4913), Environmental Engineering (SAU 3912), Environmental Management (SAM 5913, SAA 3922) and Environmental Pollution and Control (SAE 3912). As for the undergraduate elective courses, I have taught Municipal Solid Waste Management (SAB 4943, SAM 5943), Water Quality Management (SAM 5983) and Solid and Hazardous Waste Management (SAE 4953) courses. Apart from those courses, I was also involved in teaching laboratory courses such as Civil Engineering Laboratory I, II & III (SAU 3052, SKAA 3012, SAM 4051) and team teaching on computer related core course for undergraduate titled Introduction to Information Technology Laboratory (SAM 1412). On average, about 43 students enrol in my undergraduate class, having more or less similar number of male and female students. Most of my undergraduate students are local students. At times, I do have some international students in my class.

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After completing my doctorate study in 2016, I started to teach postgraduate students. The first postgraduate course that I taught was Environmental Quality Analysis (MKAK 1043), having 12 students (local and international) enrolled for that course.

Besides teaching, I am involved in supervising students at undergraduate and graduate level in various Environmental Engineering and Management areas. There were 34 undergraduate students completed their Research Methodology & Pre-Project as well as their Bachelor's Degree Project (SKAA 4022 – SKAA 4034, SAB 4022 – SAB 4034, SAM 5062 – SAM 5064, SZW 5062 – SZW 5064, SAA 4062 – SAA 4064, SAE 4062 – SAE 4064) under my supervision and another two students are expected to complete their Bachelor's Degree Project in June 2017. As for postgraduate students, I am currently co-supervising a student at master's level and will be graduating in April 2017.

I was the coordinator for Environmental Management (SAA 3922) (July 2003- June 2005) and Water and Wastewater Treatment Engineering (SAM 3913) (July 2005 – May 2007) courses. Occasionally, I was also invited to give training courses on basic chemistry, statistically designed experiment, particularly response surface method to UTM staff and students.

## **TEACHING METHODOLOGY**

I use combination of techniques in my teaching. In the old days, I used transparencies as my teaching aids to enhance students understanding. However, as the notes need to be upgraded from time to time, I have to disregard the old transparencies and prepared the new ones. I found this not an environmental friendly approach as I have been disposing non-biodegradable plastics to the environment. Hence, I moved to computer slide presentation in my teaching. Besides making note upgrading easier, my slide presentation include photos, movie clips and animation to make teaching and learning more interesting. I preferred to use whiteboard when it comes to calculation. At times, whiteboard and computer presentation are used simultaneously.

I spend significant amount of time to prepare my slides so that the students can easily understand them. Half completed lecture notes are given to my students at the early semester. I do this by deliberately left out small portion of my slide presentation from the notes, so that the student will do a little a bit of writing (be a little bit active) and will not fall asleep in class. This will improve the

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students' concentrations, as they may be able to focus on the lecture without having to indulge themselves to write notes all the time. I would also give time for them to copy the left out note from my slide without being interrupted by my lecture. Actual experiences are normally shared with the student as deemed appropriate. Additionally, extra reading materials are assigned to the students for further reading.

I encourage questions from students and discussions in my class. I also ask questions during my lecture. Homework is normally given through the e-learning platform developed by UTM at the end of a topic. The students are expected to either to hand in the homework at the prescribed time or show the solution for the problem at the whiteboard. Some students will be picked in a lucky draw manner, to write down the solution of the homework on the whiteboard and explain it to their fellow colleagues. I occasionally give surprise quizzes at the very beginning of the class to encourage student to come early to my lecture.

Apart from giving lectures, I introduce an active learning technique to my students whereby they have to work in groups and do discussion and solve the problems given to them. At times, site visits, especially for water treatment course, are organized to water treatment plants in and outside Johor to enhance the students' understandings of the course that they take.

In my lecture, I frequently insert some motivation words, slides, or videos especially at time when I realize that the students' focus are dwindling. This is done to boost up the students spirit and motivate them. Rewards in the form of sweets and chocolates are given to students who actively participate in class. I would very rarely or almost never say that 'you are wrong' to my student if they answer my questions incorrectly. Instead, I would use more positive words such as 'it was a good attempt, thank you' or 'I admire your courage and effort' and et cetera so that their self-esteem will not jeopardize.

With regards to student supervision, I meet my students on a regular basis. Meetings are made on one-to-one basis or in a group, depending on the needs. Ideas and creativity are stimulated through different form of activities including discussion and presentation. Tasks and targets are set for student to fulfil within a given deadline.

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## **EFFORT TO IMPROVE TEACHING**

I always believe that there are rooms for improvement in anything I do. In teaching, I am making continuous effort to improve my knowledge in the areas that I teach to students. This is done through conducting research in the relevant areas and through constantly updating myself with the current development in the areas by reading, doing site visits and attending seminars and conferences. In addition, I also attended seminars and workshops on improving teaching methods and skills.

I improve my notes from time to time in terms of content and presentation. Creativity is inculcated in preparing homework, test and exam to promote student understanding of the subject matter. By doing this, I hope to expose the students to the techniques involved in the environmental engineering that are normally carried out and the actual problems typically encountered in this field.

In class, I try my best to be alert to the surroundings. I reflect myself by observing the students response and try to vary my teaching methods as deemed appropriate. I assess the students' understanding of my teaching by having them participate in the class. I also make it clear to the students that I am open to comments and critics. In the middle of semester, I normally assess my teaching quality by asking my students to give comments or suggestions to improve the teaching and learning process in writing personally to me. By doing this, remedial action could be done before the end of the semester.

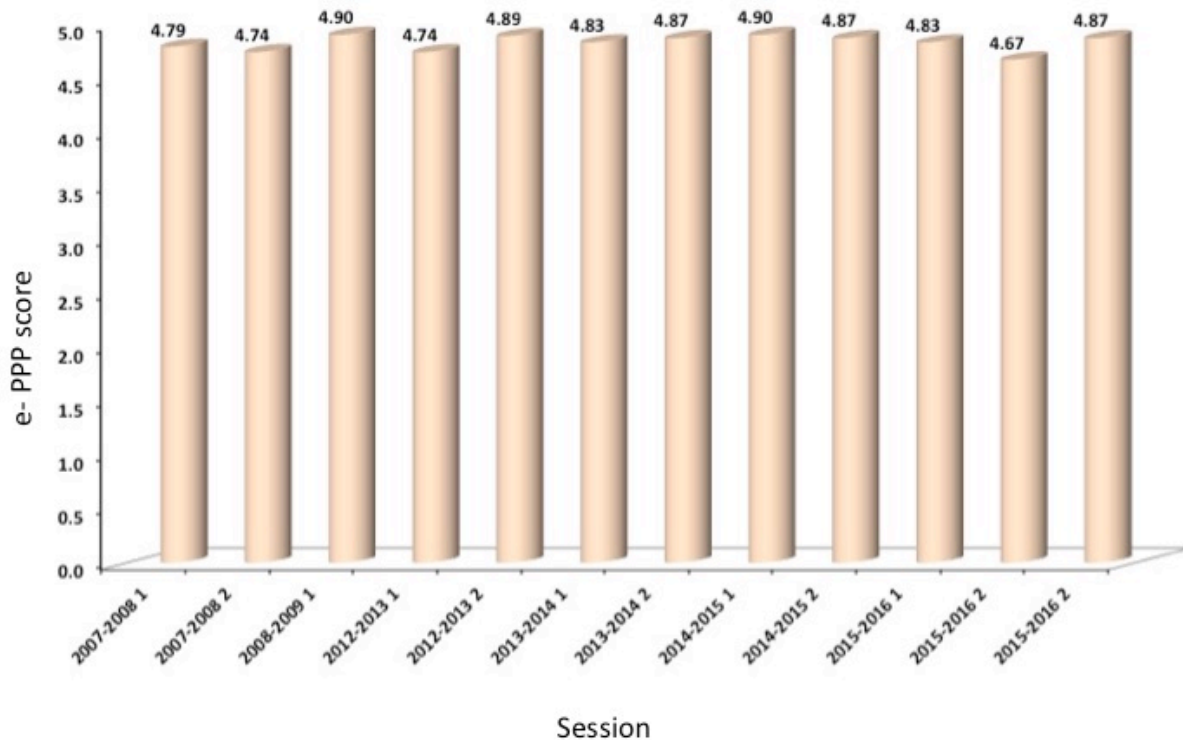
I am also improving my teaching through continuous quality improvement (CQI) approach that is part of the components in Outcome Based Education (OBE) system. By monitoring students' achievement on the Course Outcomes (CO) and Programme Outcomes (PO), weaknesses in teaching method can be evaluated and corrected.

## **TEACHING EVALUATION**

According to the electronic evaluation for lecturer's teaching (e-PPP) records, around 90% of my teaching ranks are at rank 5. At UTM, Rank 5 is the highest rank that indicates that any lecturers, who are at rank 5, have the overall e-PPP scores higher than 80% of their UTM counterparts. The

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chart below shows my overall e-PPP scores since 2007 to 2016. Out of the maximum e-PPP score of 5.00, my mean value of the scores is 4.83.



As for the recognition in teaching, I received letters from the Deputy Vice Chancellor (Academic) in 2003, 2005 and 2007 congratulating me for being included in the top 5% best teachers at UTM in the courses that I taught. Other teaching related awards that I received since coming back from my Ph. D study in 2012, are the e-PPP undergraduate FKA special award (2014) and FKA teaching award (2015).

Below are the excerpts of my students' comments in the e-PPP reports:

- 1. thank u for the best way of teachin u do thank u so much for the motivation which you give for us..what ever i say wont be enough to say how great r u*
  - 2. Very well prepared for EVERY LECTURE, very interesting, never fail to impress. Always respected as a lecturer and an individual. Blessed.*
  - 3. Pensyarah yang mengambil berat tentang kebajikan pelajar,..ada gula2,..:D*
  - 4. his attitude also is very good whether with whether malay students or international students ,,, i like that so much*
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5. *The best lecturer this semester. Hands down. Give this man a raise.*
6. *i consider him as one of the best lecturers in FKA he is so friendly helpful cooperative and has a high technique in delivering ideas and concept*

## **TEACHING GOALS: SHORT- AND LONG-TERM**

**Short-term:** My teaching goal is to be able to succinctly deliver whatever knowledge I would like to share to my students in a proper and interesting manner. It is immensely blessed and contented to be able to witness my students enjoying my lecture and are driven to come to my class as they find the class to be very useful and important. Another joy is to be able to see my students to really understand the knowledge content and eventually this is well manifested in their assessment results.

**Long-term:** In long term, I hope to be an expert in the area of Water and Wastewater Treatment Engineering (in specific) and Environmental Engineering (in general) and able to share my expertise with my colleagues and students.

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