

UTM-MIT BLOSSOMS: Teacher's Readiness in Developing BLOSSOMS for Classroom Learning in Malaysian Schools

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Very good afternoon, everybody. I'm here to share our experience in managing the BLOSSOMS project Malaysia, as well as to talk about our teachers' readiness in developing BLOSSOMS for classroom learning in Malaysian schools.

Actually, our BLOSSOMS manager, Dr. Zaleha, was supposed to be here presenting this talk, as she prepared all the PowerPoints. Unfortunately, she was unable to come because of health reasons. Remember that it's a 20-hour flight from Malaysia to Boston, and she couldn't make it. I hope she's watching now, but it is 2 AM in Malaysia time, exactly 12 hours time difference. So you have to bear with me. I have to present the talk on her behalf.

OK. Let's start with the launching of UTM-MIT BLOSSOMS. In January of this year, we had a small ceremony. Dick was there. Liz Murray was there. We had a very ambitious plan to produce 20 videos in one year, which is quite ridiculous, actually. And according to date, if we produce 20 videos in one year, which the team from Saudi did in 18 months, then we break the world record.

But according to my boss, it's good to aim high, because if you can achieve half of them, it's good enough. So we did try to plan on how to get the 20 videos. Basically what we planned – to train teachers as well as professors in university, to double up the BLOSSOMS lessons. And if I can show you, this guy here is from the Ministry of Education. He's very much interested in the project. He supported us, and we probably will get some funding from them, as well. So that's why we have to train the teachers.

What I'm going to share with you today is some of the problems that we face with Malaysian teachers, and how we try to overcome those problem. The other activities that we planned include conducting research on BLOSSOMS. Because UTM is a research university, part of the BLOSSOMS project is funded by research grants. So we have to conduct some research to ensure that the money is well spent. So we have distributed some money for a few researchers to conduct research as well. I will give you the list of research that we have started on BLOSSOMS.

The first workshop took place in January right after the launching of BLOSSOMS. It was conducted by Professor Larson, Dan Frey, and Liz was there, as well. In the first workshop, we had 100 participants, mainly teachers – 68 teachers from all over the country and 32 lecturers from UTM Malaysia – were in the first workshop. Out of this, we planned that at least we can produce at least five videos from the first workshop. At the end of the workshop, we were quite lucky, because seven BLOSSOMS documents were produced. Five of them were approved by the UTM and MIT team, while the rest are still making improvements.

We have two lessons from the first workshop. One is to avoid grouping teachers from different regions, because later on, they have to work together to improve the content. So if the distance is a problem, then they won't be able to work together then. The second lesson that we learned is that it's good to form members with diverse backgrounds in one group. We had them sitting in one table, from eight to 10 people in one table. And they come from various backgrounds – math, physics, and chemistry teachers sitting at one table. This encouraged interesting outcomes from the discussion – lots of ideas and collaboration among different background of sciences and mathematics.

The second workshop was conducted in April of this year, and this time we decided to call only the university professors as our participants, and 20 of them turned up during the workshop. We invited also a professor from the English Department, because we might have problems with the language. We might do some scripting, and so on. We also invited people from the Multimedia Department. The group whose video had been selected in the first workshop were also invited to share their experience with the new participants.

In the third workshop, which was held in May, 2013, we called again on the teachers, some of them from the first workshop, especially from the Southern region, where our University is located. And we asked them to improve on what they have done. Some of them received very unfavorable comments from the MIT team. Some of them did cry because of the comments, like, “this is not deep enough,” “the theory is wrong,” or comments like that. And some of them blocked our phone number so that we cannot call them. By the way, this is Dr. Zaleha, our BLOSSOMS manager. She conducted that workshop very well.

We plan to hold the next workshop at the end of this month, and this time we will call teachers from other regions in Malaysia. I think about close to 40 of them have agreed to come. This is sponsored by the Ministry of Education because there are teachers coming. And for those who attended the first one, we told them to come with the previous document so that they can improve the document and hopefully it will be accepted by MIT next time. Well, really it was 30 who had registered for the third workshop. The reason why we did this workshop is because we think it's easier to call them together and then have them discuss the topic instead of having them working alone in their respective areas. So that's why we call them in a workshop like this.

Altogether, currently we have five videos in the process of shooting and editing. My staff in the Center for Teaching and Learning are currently quite busy editing some of the videos. After they are finished editing, they will submit the videos to MIT for comment and approval later on. And then if there's anything to be done with the video, they'll redo the editing and so on. So the quality of the video is guaranteed by MIT, actually.

I'm sure that by the end of this year, we can get at least 10 videos uploaded. All of the videos, all of the lessons currently being edited and the videos that are being edited right now are created by our professors. None of them are from teachers, unfortunately. So at this stage, we were discussing some of the challenges faced by the teachers-- why are they not forming, why are their videos being rejected, and so on. So we try to get a systematic approach to help the teachers so that they can design and develop a better lesson next time.

As you notice, there are two groups of video developers here in our project – one coming from teachers, from school, and the other group coming from universities. We have less problems managing the university professors, and yet we require more understanding on how to assist the school teachers in developing the video lessons.

What causes them to be not so creative? And we figured out that one of the reasons is because the Malaysian school system is basically exam-oriented. We have a national exam every year at the end of the year, and the teacher's duty is to ensure that as much as possible of their students get as many A's as possible in all subjects in the final exam. So it is very much exam-oriented. And they are bound by the curriculum, the syllabus. They don't have to go beyond the syllabus. So that's probably one of the major reasons why they are less creative in producing the video.

They also complained that they have hundreds of school activities to be done throughout the year. They have to take students to sports games, extracurricular activities, and so on. So they don't have the time to really sit down and think of very creative video lessons. Whereas the university professors, at the most only 40% depending on the exam below so they have to be flexible in the syllabus and so on. Therefore, the professors have more flexibility and more time to think about the video lesson, and also they are more creative in this case.

So how to assist the teachers to think out of the box? So these are some of the comments from the participants: “This is new to us,” “We require close guidance.” Those whose videos have been selected, they want to share their experience. They also want some reward system for them – at least a point in the KPI, and so on. So those are their comments – true comments from the teachers.

So let's take a look at the first sharing of experience and how we can guide these teachers. We think about this so-called COICIAL approach – cognitive plus social apprenticeship. The cognitive approach is more formal, and the social approach is less formal. We

encourage the teachers to learn from the expert, and, at the same time, we encourage them to share with their peers, to share with their expert through social network – through Facebook, for example. So this is our approach, and my manager calls this COCIAL.

It can be divided into three stages. One is modeling by showing example. We have a website for the Malaysian BLOSSOMS projects. We encourage the teachers to look at some of the example videos from the MIT website. As I mentioned just now, we also have a Facebook group specially designed for the BLOSSOMS developers. Those who have attend the process, the workshop, are encouraged to be a member of this group. This is an example of our website, where we have links to modules. Catalog modules available. And we try to add each module that is available online – currently available at the MIT website – to the Malaysian syllabus so that the teachers know this video will be available for this syllabus example.

As an example, “Irrational Numbers,” one of the videos, is in the area of mathematics. It covers form one fractions, form one decimals, form 2-squared, squared root, and so on. So we try to map each video with the students' high school syllabus. That helps the teachers in selecting which video to be used in the class and which video to be used if they want to learn how to develop a good lesson. This is the Facebook group of UTM-MIT BLOSSOMS. Any announcements, any activities regarding the project will be disseminated through to this group.

The second stage of the COCIAL model is by coaching and scaffolding, supporting by the MKO. MKO is more knowledgeable. Others are more knowledgeable experts in the area, especially those whose video has been selected in the project. The teachers are encouraged to articulate, to develop, and to explain to others why they do this, why they do that, and so on. They are also encouraged to do reflection on what they've done, to explore and engage so that they become more independent in producing the content.

In that third stage of the COCIAL model, the articulation and reflection – those whose video was not selected by MIT were encouraged to upload their video on their local website. At least to make them happy. And also to give them the opportunity to reflect on what they've done wrong so that others can comment, so that others can contribute to improve their content. So they can upload their video to the Ministry of Education website or to our own UTM website so that other teachers, other developers can comment and they can also reflect on what they've done. So those are the three stages in the COCIAL model that we developed to help the teachers.

As a conclusion, as I said, the COCIAL model consists of three phases. It includes online as well as the face-to-face support from the expert. And we have agreed, more or less, to give a reward of about 500 Malaysian ringgit, which is less than 200 USD. A certificate and a point in the KPI if they can produce a video that is accepted by MIT. And I have a list of research projects which are currently being conducted in UTM. There are more to come, but for now, we have distributed the money to five projects, at least \$30,000 each,

to conduct research on BLOSSOMS – how BLOSSOMS can be used effectively to learn difficult topics, like thermodynamics, for example. What is the readiness of teachers in developing the video lesson?

So those are the research components of our BLOSSOMS initiative, which is a must for UTM because the money comes from our research grant. OK. So that's it for me, and thank you very much for your attention.