

**BLOSSOMS Experience
From Production to Implementation**

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I am very proud to be here. Thank you very much, Dick and Liz, for inviting me to this presentation. I will shed some light about the MIT education initiative BLOSSOMS, with Jordanian collaboration, and how we started this and where we are today in Jordan. The MIT LINC 2007 conference was the seed for this project. It was attended by a number of educators from different countries. This is a picture of the opening of LINC 2007. It was attended by more than 500 different educators. It was sponsored by Her Majesty Queen Rania.

This project started by three countries: U.S.A., Jordan and Pakistan. The idea was to develop a large, free repository of blended learning video modules— “blended learning” the BLOSSOMS way. It was developed to create deeper and richer skills in students to enhance their critical thinking skills, encouraging education in math and sciences.

The BLOSSOMS goals are basically to offer an alternative approach for grasping different ideas, especially in the sciences, and to understand how they are applied in real life. This is where I feel we have made a difference - in the way we teach sciences. Most students are taught science for the science itself; they are not taught the real implications or applications of what they know. With BLOSSOMS, we teach abstract concepts through the joining of observation, experience and discussion. We want to stimulate the development of their critical thinking skills. We want to generate interest and spark imagination about the different subjects that they are learning. The idea, as well, is to attract a large number of students to study math and sciences. As we saw in the morning, the number of students studying engineering is decreasing.

Blended learning the BLOSSOMS way is unique. The idea of BLOSSOMS is that we want to explain a concept through the creation of five to six videos. Each video provides a continuation of an idea to explain a certain subject that is usually hard for students to understand. The modules are intended to enhance the in-class teacher, not to replace the in-class teacher. The BLOSSOMS module usually starts with a question or a puzzle to attract the students’ attention. I will be showing a sample of every single aspect of the different video modules.

[two-minute video segment plays:

<http://blossoms.mit.edu/video/nigmatulina/nigmatulina-watch.html> start time: 1 minute, 10 seconds]

Rana Abu Zeid Qubain: This was a sample of one of the segments, showing how you start. Then the in-class teacher will work with the students after having presented the question.

The other aspect of these video modules that it can be implemented using very simple tools, so anybody in the different countries who would like to use these modules will be able to do so regardless of where they are located. I will show a video featuring a person that you all know, demonstrating how to utilize simple tools.

[<http://blossoms.mit.edu/video/larson.html> start time: 1 minute; end time: 1 minute, 50 seconds]

Each segment usually ends with a question that the in-class teacher can work on with the students. I will show you a sample of the implementations that we have conducted in Jordan. How did the teacher engage the students after utilizing a question?

This is in Arabic.

[15-second video segment plays: <http://blossoms.mit.edu/video/al-juwhari/al-juwhari-watch.html> start time: approximately 6:00 minutes

Rana Abu Zeid Qubain: This shows how the students implemented what they saw in the video lesson, replicating the simple tools.

The in-class activities are up to the module producers, according to how they see the engagement between the teacher and the students and how they would like the implementation to be. At the end of every module, there is a teacher's guide that can inform the teacher in how to use this module and also provide various resources that he or she can utilize.

I will be going through the Jordanian experience - how we started and where we are today. We started by conducting awareness sessions, attended by Professor Larson and Liz, for the top two universities in Jordan in order to attract different professors as volunteers to do the work. After working with the 12 original university professors, we said, "Why don't we try to attract high school teachers, to consider their input in this project?" So we held another awareness session for the different high schools in Jordan. From there we collected around four or five different modules that we could utilize within the BLOSSOMS project, observing, of course, the BLOSSOMS codes and pedagogy within this.

After coming up with 17 modules, it took us from December to April in order to decide whether they were acceptable, what changes should be made, how to follow it up, and so on. Then we carried out the videotaping, which took around one month. That was the easiest part in the end, although it was the scariest at the beginning.

I will show you a sample as a tour. These are the different modules that we have done in Jordan. We have done five in biology, three in chemistry, three in math, and six in physics. This is a very quick tour for the modules created in Jordan.

[two-minute video segment plays: <http://techtv.mit.edu/collections/linc/videos/7664-blossoms-experience-from-production-to-implementation> begins at: 9 minutes, 58 seconds]

Rana Abu Zeid Qubain: In March of 2010, we held an appreciation event that made a lot of difference for all the producers, as well as the in-class teachers, in Jordan. The event made a big difference for all of them. This was attended by our Minister of education, as well as by Professor Larson and Liz, to show appreciation for all the different workers.

In April, we conducted three sample implementations, to receive feedback from students regarding these modules. I will show you a sample of this implementation.

[one-minute, 15-second video segment plays: <http://techtv.mit.edu/collections/linc/videos/7664-blossoms-experience-from-production-to-implementation> begins at: 12 minutes, 30 seconds; ends at 13 minutes, 45 seconds]

Rana Abu Zeid Qubain: The implementation of the video is dependent on the in-class teacher. This teacher mixed the math with the art. The teachers are free to utilize the module in the way they see fit.

BLOSSOMS really has had a very good impact on the people involved, from the producers who made the BLOSSOMS modules to the in-class teachers and the students who used it. We created and distributed a questionnaire to get feedback from the producers. The producers felt that it was really a mind exploration for them, to look for new ideas for teaching, to introduce questions to enhance critical thinking. Having the same idea segmented into different sections to reach what they envisioned at the end was really a very interesting approach. They are currently using this approach in their standard classes as well.

Relating the concept to daily observation was a key point as well. The in-class teachers felt that the questions were very motivational for the students, leading to higher student involvement within the class, as you have seen in the three sample implementations. The in-class teachers reached a wider range of students in the class. They felt that having this interaction between the video and the in-class activity had made students that are not usually involved more engaged. The activities imparted a new aspect to their teaching.

Students find this to be a very enjoyable and interesting way of teaching. It recognizes their daily life applications. It raises their curiosity about different subjects. A number of them have asked when they are going to see more of the BLOSSOMS lessons taught in this way. I will show you a sample interview with one of the students.

[35-second video segment plays: <http://techtv.mit.edu/collections/linc/videos/7664-blossoms-experience-from-production-to-implementation> begins at: 15 minutes, 55 seconds; ends at 16 minutes, 20 seconds]

Young woman: I personally found the interactive class more interesting, since it motivated the whole classroom to watch the video that was being presented. The interactive class was about genuine concepts that we have dealt with before, yet we were never stimulated to think of it in such a different way. After this class, I was motivated to challenge myself in concepts that I had previously taken for granted. Thank you.

Rana Abu Zeid Qubain: Our ambition is to see the seed that we planted in LINC 2007 grow into a nice tree, similar to your foundation. We wish to have more teachers involved in the BLOSSOMS project and to create more modules. Currently, we have just started in Lebanon, and we are looking for more countries and more teachers to be involved in this project.

I would like to extend my special thanks for a very special couple Prof Larson and Liz Murray that made things really happen. Thank you.