# MyMathLab

# Ain Shams University, Cairo, Egypt

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## LEARNING OUTCOME

Ain Shams University found MyMathLab's automatic grading and feedback facility provided **the timely support they needed** to monitor the progress of over 500 students simultaneously. It also **helped improve communication between lecturers and students**.

**Course**
Calculus

**Textbook in use**
*Calculus*, 2011
Briggs and Cochran

**Type of data collected**
Lecturer observation

**During this period**
2012–13

## Course background

Ain Shams University is one of the leading universities in Egypt. More than 100,000 students are registered in different faculties distributed in three campuses in Cairo. One of its excellent faculties is the recently founded faculty of Computer and Information Sciences located in the main campus in Abbassia in the centre of Cairo.

The Computer and Information department offers a calculus course to first-year students. Usually there are more than 500 students taking the course. Therefore, they are divided into 3 groups. Calculus course is a fundamental course. It is a core component of the computer science programme. It has been taught using traditional methods. The course consists of 4 lecture hours and 3 tutorial hours per week, in which the students are divided into smaller groups of about 20 students per group. Thus we normally have 20 sub-classes requiring many teaching assistants.

Thus, students rarely received the appropriate feedback at the moment they most needed it. The lack of timely feedback led to loss of student motivation, less class participation, and a reduction in handing in homework on time. Over time, students who needed the most helped, lost the advantage with continuous practice; and hence they didn't master the course goals.

At this point we implemented MyMathLab to meet the challenges described above. MyMathLab not only engaged students in learning the material, but it also improved the way we functioned as a team. We've been using the programme for 3 semesters now. During the last semester we had 560 students in a 14-week term. We created 17 online assignments, 3 quizzes and 1 test utilising MyMathLab. In addition we made great use of the communication feature.

> The system's automatic grading and feedback provided the timely support we needed to monitor over 500 students simultaneously.

## Implementation

Before using MyMathLab, students were assigned paper-based homework chosen from the textbook's exercises. The homework was handed in for grading. Students had regular in-class quizzes and scheduled exams. The main problem facing the teaching staff was grading all that material – homework, quizzes and tests – in a reasonable time window. It was hard in some cases to follow up with individual students to give the appropriate advice.

## Results

MyMathLab allowed us to provide weekly homework assignments and online quizzes. The system's automatic grading and feedback provided the timely support we needed to monitor over 500 students simultaneously. Faculty and their assistants now had the time to intervene because each student had a unique profile in the system.

In addition to helping students master the course material, they benefited from learning how to use an online resource by taking active control of their own learning. In addition to the homework and quizzes we assigned to align with our course goals, the programme includes additional student resources. Students could tailor their learning by viewing similar worked examples or other helpful tools.

Lastly, MyMathLab fostered a community amongst our teaching faculty, assistants and students. It is excellent as a communication platform. Due to the current political circumstances in Egypt, many lectures were cancelled. We used the announcement feature and calendar to quickly and officially alert students to the rescheduled lectures.

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## Conclusions

Technology can play a fundamental role in helping students take control over their own learning and evaluation. MyMathLab conveniently allowed us to manage a large class size in a timely manner and with less effort than the traditional method. Its use as a communication tool allowed us to respond quickly to changing situations. We plan to continue using MML as it has transformed the way our course is taught and the way students learn.