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جامعة أبوظبي
Abu Dhabi University

Increasing students Maths engagement with MyLab Math

Institution: Abu Dhabi University, UAE

Instructor: Samah Abu Siyam

Platform: MyLab Math

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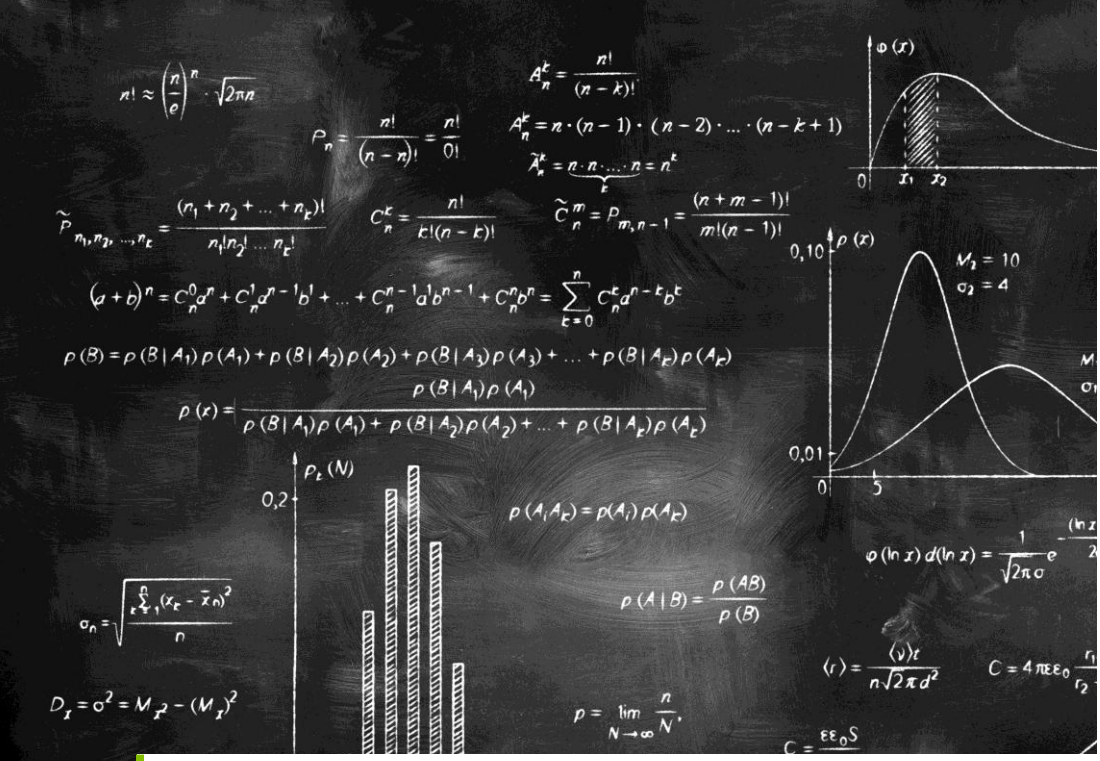

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"What you need to do is move the experience of learning from teacher-centred to student-centred."

Samah Abu Siyam

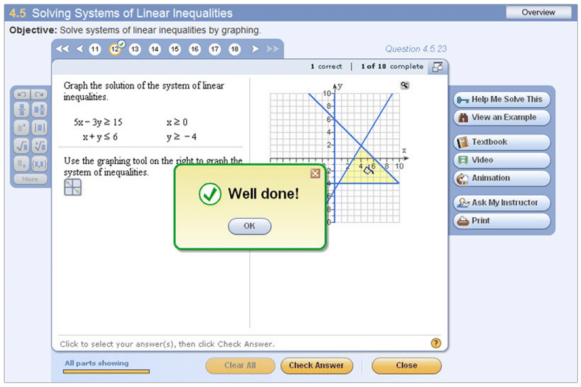
Course

I currently teach three main courses at Abu Dhabi University, UAE: a deeper course in **Mathematics**, **Precalculus**, and **Calculus**, with a summer course **in Maths for Business**, and I also cover **Maths for Life**. The main focus in these courses revolves around precalculus and calculus, with a strong emphasis on algebra basics. I **integrate MyLab Math** across all of them, using it primarily as a **practice tool** in class and for **assessment** through homework, quizzes, and case studies. For the Maths for Business and Maths for Life courses in particular, I use it to **connect theoretical concepts with real-life applications** to enhance student understanding both in and outside the classroom. This has been my teaching approach so far.

"...you can see that the grades are good because the students are practicing."

Aims and objectives

Using MyLab Math, which is directly linked to the textbook, I can assess student understanding both by outcomes and specific objectives. After teaching each objective, I can create a **quiz or in-class activity** to see if students are struggling or excelling, allowing me to **address weaknesses** immediately. This tool is especially helpful for building assessments **tailored to individual student needs**, such as extra practice for those who need it. It **saves time** by automatically grading and linking results to Blackboard, eliminating the need for manual grading. By providing real-time feedback, MyLab Math allows me to make my classroom more **student-centred**, as students can work **independently** through examples, identify their mistakes, and build their understanding without constant guidance. Overall, the tool has been effective in **supporting students of all levels**, from beginners to advanced, without any major issues.



Credit and integration

For the Maths for Life course, which covers basic operations, I use the tool to connect these operations with real-life applications, **making the content more engaging and relevant**. The book and tool demonstrate how to determine which operation to use in practical situations, helping students link theory with real-world contexts. Although the operations are simple, students sometimes struggle because they have to **think critically** about which operations to apply, especially when more than one is required. This course, along with Maths for Business, involves **case studies** from the book to assess student understanding after completing the in-class examples and exercises. I allocate **20%** of the total grade to **homework** done through the tool across all courses, and in Maths for Business **30 marks come from case studies**. This approach helps assess student comprehension effectively, while the tool saves time by **automating grading** and linking it with the curriculum.

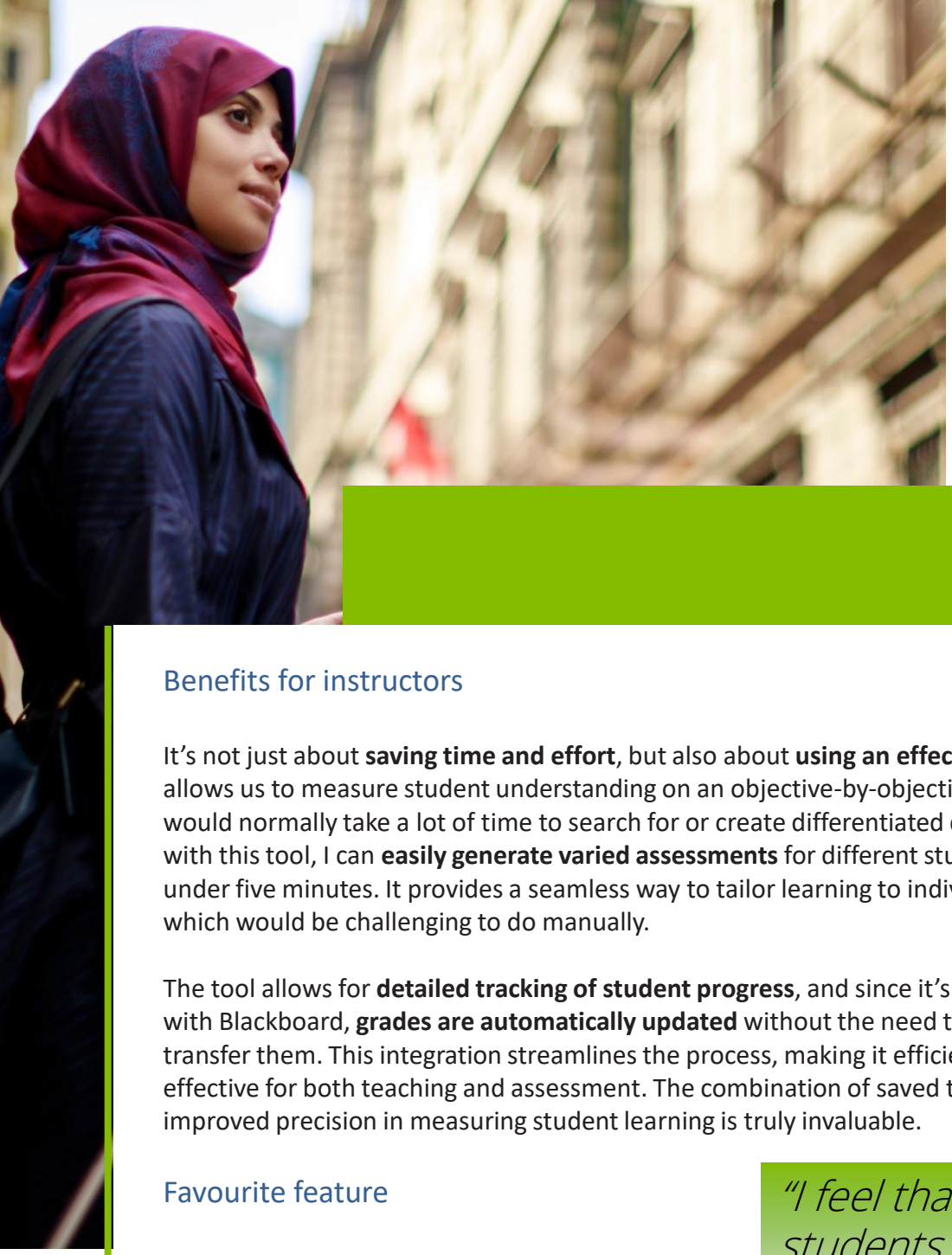
Communication

In the first session, I typically introduce the syllabus to students, explaining the various assessment tools and **showing** them how to navigate the book and tool effectively. I demonstrate how they can review examples, access the study plan, and prepare for upcoming topics before we cover them in class. I also incorporate **challenges** by creating specific questions during class as a form of interactive assessment, where students work through examples without me giving direct answers. This approach keeps the class engaged, avoiding the usual monotony of long sessions filled with examples.

From the start, I set **clear expectations** on how to use the tool, troubleshoot issues, and track their marks, which saves both their time and mine. This also instils a sense of responsibility in the students, as they understand that if they don't use the tool regularly and come to me only at the end of the course with their problems, it reflects that they didn't fulfil their role in the learning process.

During practice sessions, I give them **10 attempts** to solve problems, but **for graded homework** or Study Plan, I limit it to **three attempts**. This balance ensures they recognise the tool's importance and use it effectively for both practice and assessment.

"I think this will help the weak students to build their understanding and to practice with different examples for the same ideas."



Benefits for instructors

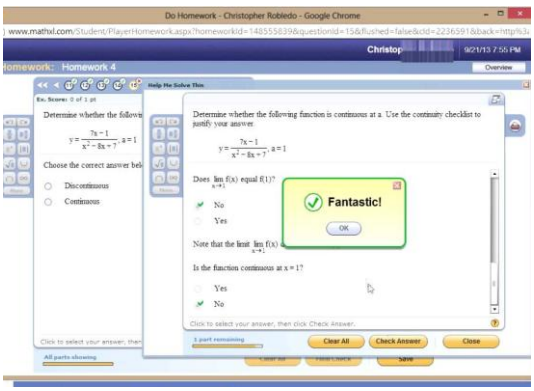
It's not just about **saving time and effort**, but also about **using an effective tool** that allows us to measure student understanding on an objective-by-objective basis. It would normally take a lot of time to search for or create differentiated questions, but with this tool, I can **easily generate varied assessments** for different students in under five minutes. It provides a seamless way to tailor learning to individual needs, which would be challenging to do manually.

The tool allows for **detailed tracking of student progress**, and since it's linked directly with Blackboard, **grades are automatically updated** without the need to manually transfer them. This integration streamlines the process, making it efficient and effective for both teaching and assessment. The combination of saved time and improved precision in measuring student learning is truly invaluable.

Favourite feature

One great feature of the tool is how it **guides students step by step through examples**, ensuring they follow the correct process rather than just providing the final answer. This approach helps them understand each part of the problem-solving process. However, a common issue I encounter is that students sometimes struggle with formatting their answers correctly. This is why I always emphasise the importance of reading carefully and checking the examples to see the correct format. Despite this minor issue, I really appreciate how the tool **shifts the learning experience from being teacher-centred to more student-centred**, as it encourages them to **take responsibility for their own learning** by following the steps independently.

*"I feel that the students are really engaged, and they are really **enjoying**, not just engaged."*



What students say

For students who don't naturally enjoy Math, having a tool that allows them to practice, see their mistakes, and correct them is especially helpful. It gives weaker students the chance to **build their understanding** by working through different examples of the same concept. I've noticed the impact particularly on these students, as their **performance improves significantly** with practice. While their grades on practice assessments may not be high initially, after multiple attempts, there's a clear improvement. This practice carries over to their homework assessments, where they perform much better, and eventually to their final exams.
Even though I use paper-based exams, I can see that **the practice using the tool translates into better grades**, showing that the learning process is effective. It's rewarding to see the progress from initial struggles to stronger results in the final assessments.

Impact on student engagement

In the summer courses, where lectures run for about four hours, I've adapted my approach to keep students engaged. Instead of lecturing the entire time, I **break the chapters down into sections**, introducing concepts one-by-one. After explaining each section**, I shift the focus to the students**, allowing them to work in pairs or groups using MyLab Math. This **hands-on practice** not only keeps them engaged but also **builds their independence**. I've noticed they enjoy the process of solving problems on their own and feel empowered when they understand where to find the answers. They recognise that while the tool helps them during practice, they will need to apply that understanding on paper during assessments. This approach has had a **noticeable impact**, as I can see the benefits in their final grades and their overall engagement. It's especially rewarding to see them enjoying Math and actively participating in their learning.

*"They are **enjoying** that they get to the answers, and they know from where they can get their answers and they can solve their problems alone."*

Advice for first-time users

I believe it's essential for instructors to **fully explore the tool** themselves before using it with students. Check the book, learn how to create assessments, link grades from Pearson to your own learning management system, and practise answering examples. Doing this preparation will save a lot of time and prevent future issues.

When introducing the tool to students, it's crucial to **be thorough** from the first session. If students understand how to navigate and use the tool early on, both the instructor and the students will avoid unnecessary headaches later. However, if it's not explained well at the start, problems will arise throughout the course.

I also recommend **meeting with colleagues who have experience** using the tool to learn from their insights and avoid common mistakes. Sharing experiences with fellow instructors can be incredibly valuable, as it helps us learn not just from the tool itself but from each other's successes and challenges.

For more information about MyLab Math, please visit

https://www.pearson.com/en-gb/higher-education/products-services/mylab/mylab-math.html