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MyLab in Accounting, Maths and Operations Management Cranfield University, UK

Supporting student engagement, self-paced learning and knowledge acquisition



About the resource

MyLab is a digital learning resource designed to work alongside specific textbooks as an online homework, tutorial and assessment programme. MyLab provides a variety of different question types which can be studied independently or assigned by the lecturer. Assigned work is created and set with a deadline either as homework (for practice) or a test (for assessment). Settings can be adjusted to allow for single or multiple attempts. In anything other than a test, students will have access to a range of features to provide support and feedback such as 'Help Me Solve This' which offers a similar exercise, broken down into steps. Independent study is completed in a study plan with practice and sample test questions.

Achievement within MyLab can be measured in a number of ways including mastery. Students gain mastery points as they complete the online study plan, or in some cases assigned questions, to a maximum of 54 points. They must score 100% on the relevant sections and this score is translated as a percentage for the overall study plan score.

Introduction

This study investigated the use of MyLab on three different modules, taken by students in the School of Management at Cranfield University. The University used MyLab Accounting, MyLab Math and MyLab Operations Management (OM) for students on two Master's degree programmes: *Logistics & Supply Chain Management (LSCM)* and *Procurement & Supply Chain Management (PSCM)*. They were used as part of three different modules in these subject areas: *Analytical Techniques for Supply Chain*, *Accounting & Finance for Supply Chain* and *Inventory & Operations Management*.

The purpose of the study was to understand how effectively MyLab:

- Supported knowledge acquisition on a diverse, fast-paced course.
- Enabled students to learn at their own pace, supporting their progression.
- Addressed some of the language difficulties encountered by international students.
- Compensated for cultural differences regarding propensity to ask for help.
- Helped students keep on top of work and build confidence in their knowledge acquisition.
- Contributed to a positive student experience and perceptions of their course.

In order to explore the outcomes above, we conducted in-depth interviews with members of the teaching team, including the course director, and four students who represented their peers. We also interviewed the students as a group in a more informal group conversation.



Key Findings

“Having a resource that people can use at their own pace, in their own time, allows them to engage with the learning and engage with the material.” – Dr Denyse Julien, Course Director, Cranfield University

It was clear from the research that students appreciated the opportunity MyLab provided them to take control of their own learning in a personalised and productive manner. The teaching team felt that MyLab gave students greater flexibility about how and when they engage with the course material.

In summary, the MyLab programmes:

- Allowed students to more easily manage self-paced learning.
- Supported student progression.
- Motivated and encouraged student engagement with the course content.
- Delivered immediate feedback, helping students monitor their own performance and guide further study or revision.
- Provided the teaching team with access to off-the-shelf online learning tools, that could supplement and enrich what they were able to do with students.

Student comments and observations from the teaching team also indicate that the MyLab resources potentially:

- Supported wellbeing by increasing student confidence during this high-level Master’s course.
- Provided valuable feedback and extra support for international students, especially those from backgrounds who are less inclined to ask faculty for help.

Course overview

Dr Denyse Julien is an Associate Professor and Course Director in the School of Management at Cranfield University. She led the introduction of MyLab Accounting, MyLab Math and MyLab OM on two MSc programmes in 2016: *Logistics & Supply Chain Management (LSCM)* and *Procurement & Supply Chain Management (PSCM)*.

The students on these two full time MSc programmes are motivated and internationally diverse. The majority are students with English as a second or other language.

This study was conducted with the September 2018 cohorts on the LSCM and PSCM programmes. Four students participated in our qualitative research. The class profile for the 2018/19 academic year is shown here:

Class profile 2018/19	
Gender	Female 52% Male 48%
Age Range	20 – 46 years
Nationality	UK/EU 13% International 87%
Cohort Size	194



Implementation

The MyLab programmes were introduced to provide a self-paced learning tool that would encourage students to engage in learning and help them acquire knowledge. It was crucial that this online resource offered easy and flexible access so that students could use it whenever and wherever was most convenient to them, both on and off campus.

MyLab was important as a support tool in specific areas. For example, students regularly found the quantitative skills challenging, and through MyLab the teaching team could provide additional practice and feedback in that area.

It also provided the teaching team with access to a suite of digital resources that could supplement and enrich their course delivery.

Over a number of years of usage, the teaching team observed that a positive impact on student learning came when the MyLab was closely integrated into the course, with clear direction from the module leader. Faculty who embedded it deeply within their modules and lectures benefited from better student engagement and much higher usage.

“it’s not good enough to just upload a link to the VLE and expect that the students will use it. We must embed it, and tie it into the learning very clearly, because then that really drives the students to go into it, to reinforce what they’ve been taught in the classroom.”

- Dr Denyse Julien, Course Director, Cranfield University

Pearson resources were used on the following modules and were institutionally purchased for all students:

Module	Module Assessment	MyLab	Date of use	MyLab Implementation
Analytical Techniques for Supply Chain	Assignment	MyLab Math	Term 1 Sep – Dec 2018	Prescribed reading, not for credit
Accounting & Finance for Supply Chain	Exam	MyLab Accounting	Term 1 Sep – Dec 2018	Optional, not for credit
Inventory & Operations Management	Assignment	MyLab Operations Management	Term 1 Sep – Dec 2018	Optional, not for credit



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Student experience

Self-paced learning

Enabling and facilitating self-paced learning was one of the intended outcomes of using the MyLab resources. The module leader for Inventory and Operations Management stated: *"...students can do those exercises in their free time and apply the concepts they have discussed in the class, by using this software and tools, the students can do the exercises by themselves."*

"If I didn't have MyLab, it would be very hard to keep up with all the lectures."

– Student, Cranfield University

Student comments highlighted the importance of:

- Ease of use and navigation.
- Flexible access.
- Structured activities.

They also talked extensively about three key benefits which self-paced learning on MyLab provided for them:

- Ensured they understood the subjects already covered in class.
- Enabled additional knowledge gain as and when desired.
- Visibility of / monitoring their own progress was motivating and helpful.



Student Comments

MyLab was very valuable to me because it meant that I could work from home as well as on campus.

It was very simple to use MyLab, it was very user-friendly.

They have exercises level by level. They start from the beginning and increasing the level smoothly.

Online resources are good because they are self-paced learning...you could go back and look at things over and over again.

... it was very useful for me to practise the theoretical part that we did in class...we had lots of formulas and exercises to do to grasp the practical techniques.

... it was very helpful to have a dashboard, where you can see your progress throughout the chapter. ...when you move from one chapter to another, you can see how you have improved.

MyLab helped me to be more independent.





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Student engagement

Across the sector, even in motivated cohorts, student engagement can be a challenge. The more students engaged with the content, the more they would understand. In order to understand they would have to apply the theory and, in a virtuous circle, build out their knowledge even further.

“Having a resource that people can use at their own pace, in their own time, allows them to engage with the learning and engage with the material.”

– Dr Denyse Julien, Course Director,

It was clear from the student comments that they valued the MyLab resources and felt motivated to engage with them. In particular they felt they engaged when they were able to:

- See close links to lecture content.
- Consolidate and revise knowledge.
- Compare their performance.



Student Comments

Encouraged me to make sure I came to class prepared.

Really helpful with consolidating knowledge from the class. Everything that we study in the lectures, we can practise afterwards.

You improve your knowledge very much.

You can compare with others as well, so that's very useful.

We competed with each other to see who will have the highest score. Just to have fun at the end.





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Immediate feedback

Within MyLab individual students can access a dashboard which shows their marks in the homework assessments and independent work they have done in the Study Plan. Students placed a high value on receiving immediate feedback; they used it to help them progress, support efficient knowledge acquisition where they needed it most and prepare for their final assessment. The feedback was useful in four ways:

1. Identifying gaps in or level of understanding
2. Addressing gaps in knowledge or understanding
3. Motivating students to take action and close the gaps
4. Guiding their revision for the final assessment

"It was really useful to have MyLab as part of the course because it allowed us to check that we fully understood the material being taught in lectures."

– Student, Cranfield University



Student Comments

A particularly good feature of the MyLab was having immediate feedback on your answers. It helps you to identify where your weaknesses are.

... to understand in which part of the course you're really good in, and where you struggle, and where you need to focus your efforts to improve.

Before the exam I went back to MyLab ... Whenever I looked at my progress, my right and wrong answers ... I knew which part of the course to focus on, to better prepare for my exam.

It was very useful for preparing for an accounting exam.

... we're practising using the same terminology as we're going to get asked in the exam. So, I thought that was really useful.





International students & wellbeing

Cultural behaviours

Addressing cultural differences, such as the propensity to ask for help, was important when choosing to continue using MyLab year on year for this diverse, international cohort. Externally conducted cultural behaviour research, when applied to teaching, says “in some cultures, students learn that asking the teacher questions might imply that the teacher did not teach well, and therefore is impolite. Moreover, in some cultures asking questions can be seen as a way to challenge the teacher, and that is always discouraged and frowned upon.”¹ In addition, international students for whom English is their second language may encounter difficulties understanding course content during live teaching sessions and value working on problems with feedback in their own time.

“Feedback [from MyLab...] is available to the lecturer, so the lecturer can see what we are struggling with.”

– Student, Cranfield University

Students commented that MyLab supported their acquisition of subject vocabulary and helped support their learning during individual or group study, when they may have chosen *not* to approach faculty.

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Student Comments

Feedback [from MyLab...] is available to the lecturer, so the lecturer can see what we are struggling with as an individual and also what the group is struggling with. Then they could then focus in your revision lectures or recap lectures on the specific areas where we were struggling.

MyLab helped me to grasp the vocabulary as well.

... if we got stuck at any point we realised ‘oh, we covered that in the MyLab exercises, so let’s just go back to it and find out what the question was about’.



¹ <https://www.edutopia.org/discussion/being-mindful-cultural-differences>



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Building confidence

As with all rigorous Master's courses, there is a significant volume of work to cover in one year. It is usual for students to feel overwhelmed or stressed at times, particularly where English is a second language. Finding a way to reduce this is imperative for teaching teams. The large amount of knowledge acquisition needed to complete this course successfully is a key challenge for students on these programmes.

"If I didn't have MyLab, something that I would struggle with...is keeping up with the speed of the course. ...there are many topics to cover [in] a one-year course, so having MyLab really helps with that."

– Student, Cranfield University

The introduction of the MyLab programmes, along with changes to assessment structure, was designed to help students overcome this.

Student comments referenced how having MyLab helped them keep on top of work and build confidence, both acting as an opposing force against stress.



Student Comments

It helped us to be more confident about the techniques.

In every class we move onto a different topic. It really helps having something that you can go back to just to check your understanding and practise.





Conclusion

On these Master's programmes, MyLab was introduced to support students in their independent study. The teaching teams set up MyLab so that it closely related to their lecture content, providing students with guided extra practice. This study, conducted with the 2018/19 cohort, indicates that the introduction of three MyLab programmes has had the following impacts:

- Supported students to undertake self-paced learning, supporting student progress.
- Motivated and encouraged student engagement with the course content.
- Added value for students, particularly for the feedback they received and the ability that gave them to guide and monitor their performance.

The research also suggested that MyLab had a positive effect on two objectives, which, due to their very nature, are harder to determine:

- Helped them keep on top of work and build confidence in their knowledge acquisition.
- Overcome the cultural differences regarding propensity to ask for help.

Students said they would recommend MyLab to:

- fellow students.
- other institutions.

They described the key benefits of self-paced learning, knowledge acquisition and feedback as it pertains to individual students and one of the respondents also appreciated the wider benefit on the whole institution.



Student Comments

I would say to another student who considers using the lab, that in the very beginning be consistent. After every lecture, take your time to do MyLab exercises, so that you don't fall behind. And whenever you just follow it constantly, you improve your knowledge very much, and you see what to improve next time.

The objective of a university is to help students to improve their knowledge and their skills. And MyLab does help students to obtain this objective. So, universities should use or advise their students to use MyLab.

