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Lt Case Study-The University of Sydney

Transforming the Teaching of Medical Science

How the University of Sydney Medical Sciences team has increased student engagement and future-proofed its teaching approach.

In 2013, the Medical Sciences team at the University of Sydney set out to transform student engagement in practical classes and laboratories by spearheading the use of our innovative and interactive cloud-based learning platform, **Lt**.

Lt lets educators bridge the gap between theory and practice, and helps practical classes and labs run smoother.

According to Associate Professor Tina Hinton, Senior Lecturer in Pharmacology, the implementation of Lt has been a huge success in terms of turning around student satisfaction and engagement.

"What's most important to me as a teacher is that my students are engaged. And we've found that by using Lt we're able to engage students in so many ways. It's interactive, but we are also able to engage with the students before they come to class, during class and after class."

Since implementing Lt, the team has experienced a major transformation in the enthusiasm and depth of understanding that their students demonstrate in class. The team also have quantifiable evidence of a specific improvement in student experience and learning in their practical laboratories, as received in unit of study survey feedback.

By implementing Lt, the School of Medical Sciences at the University of Sydney has:

- **Increased Engagement in Practical Labs**
- **Improved Efficiency of Labs**
- **Increased Student Satisfaction**
- **Improved Multidisciplinary Collaboration**

"Students love it. The feedback has gone from practicals being the worst thing about the unit of study, to the complete opposite. Thanks to Lt we've seen a huge improvement in our students' learning. They love it."

– **Associate Professor Tina Hinton**
Senior Lecturer Pharmacology

ADINSTRUMENTS

Case Study: Lt + The University of Sydney

The School of Medical Sciences at the University of Sydney is a major player in international biomedical research and education. Incorporating the Disciplines of Pharmacology, Physiology, Pathology, and Anatomy & Histology, Medical Sciences is the largest school at the prestigious University, and the teaching team are renowned for their passion and innovative approach to science education.

But, in 2013, the Medical Sciences team were experiencing some challenges. In particular, students were unenthusiastic about the practical components of their courses. How could the team produce the world-class medical researchers and practitioners of tomorrow, if they couldn't get them to willingly attend their labs today?

Associate Professor Tina Hinton, Senior Lecturer in Pharmacology, says that the team decided to address this problem by transforming their teaching approach. They implemented Lt to deliver their curriculum and to encourage active, immersive learning.

"We wanted to make sure that we had a state-of-the-art online learning platform for our students to use. The outstanding choice for us was Lt."

– **Associate Professor Tina Hinton**
Senior Lecturer
Pharmacology

FOR STUDENTS

Lt lets students access course content anywhere, anytime

Because Lt is delivered online, the Medical Sciences team can set interactive activities, quizzes and pre-lab reading for their students to complete before coming to class. Third-year medical science student, Dylan, logs into Lt to prepare for his classes.

"It's easy to log in to Lt from anywhere. I access Lt from my computer at home to get ready before my practical classes to make sure that I'm understanding the content properly before I go to the lab."

– **Dylan**, 3rd year student, Medical Science

Lt increases student engagement in practical classes

Grace, a student in biomedical engineering and medical science, finds that the cloud-based functionality of Lt makes it easy to familiarize herself with scientific concepts prior to her practical classes, maximizing the benefit she gets from being in the lab environment:

"I love Lt because it helps to make science really interesting and interactive."

Grace has found that using Lt helps her to apply scientific theory to the activities she is performing in the lab.

"Using Lt to prepare means that we can use the whole time in the lab to practically apply what we've learned. I love seeing the concept we've just read about in action! It helps me understand "Wow, okay - that's how it works!" rather than it just being a theoretical concept."

– **Grace**, 3rd year student,
Biomedical Engineering and Medical Science

FOR TEACHERS

Labs run smoother with Lt

Senior technical officer, Donald Davidson, uses Lt for practical classes in wet and dry laboratories. He has noticed a definite ease in the way labs run since Lt has been installed.

"Lt saves us a lot of time in class because we don't need to demonstrate the equipment to each small group of students. We've included videos in Lt that show all the equipment and how it should be used, which students find really useful. They can stop it and start it wherever they need or replay a certain part."

– **Donald Davidson**, Senior Technical Officer, Charles Perkins Centre

Lt is easy to author

Dr. Sharon Hercus, Senior lecturer in Physiology and the Foundation Studies coordinator in the Sydney medical program, has developed dozens of practical and tutorial lessons using Lt. It has a range of handy panels that allow teachers to author lessons easily, including data panels, text panels and a variety of quiz templates.

"It's not only about putting in a whole lot of content - we need to get the students to be actively engaging with the material. And Lt has been very helpful for developing blended learning, which is really important."

"Lt has some great authoring features. I can easily create some really interactive quizzing in terms of drag and drop quizzes, sequencing, filling the gap, annotating pictures. There's a whole lot you can do, you just have to be creative!"

- **Dr. Sharon Hercus**, Senior lecturer Physiology

Lt lets you run large labs, without headaches

For Dr. Michael Morris, Sesqui Senior Lecturer in Embryonic Stem Cells in the Discipline of Physiology, a huge benefit of Lt has been its ability to accommodate the needs of large classes.

"In the modern world, we are expected to run very large classes, and give every student a fantastic experience. With Lt we can be assured that everyone in a huge class of 100 students is working from the same song sheet and getting the maximum amount of benefit, with minimum interruption."

– **Dr. Michael Morris**, Sesqui Senior Lecturer in Embryonic Stem Cells, Physiology

Lt saves time

For Michael, Lt saves valuable time, both on a daily basis and with his annual curriculum updates.

"Once a practical lesson is set up in Lt it's simple to keep it running. I can update anything instantly. At the end of a year I simply make appropriate changes to the content as I need. It's fantastic economies of scale because I can use the same practicals across different units of study and update them or edit them at once. It's been a real godsend."

Lt improves team communication and collaboration

For Physiology lecturer, Dr. Melissa Cameron, Lt has also proven its value with staff interactions. Lt has streamlined the team's preparation and delivery of notes to each other, especially in larger classes where there can be multiple staff members involved.

"Lt makes it easy for us to work with other people, in other departments. Instead of one person doing all the work, we can all contribute and add to the lesson and really work as a team."

- **Dr. Melissa Cameron**, Lecturer, Physiology

Lt is proven to improve student engagement and success

The positive results are more than anecdotal. New research examining the use of Lt in a 2nd year Pathophysiology Paper has shown that **student success has increased significantly over the last three years with the intervention of Lt** (Hogarth, 2017).

The study shows that:

- Lt has significantly increased student engagement
- Using Lt has improved test results in theory and clinical practice
- Using Lt has reduced exam failures by over 50%
- Lt has increased the average class pass rate to 97%

About Lt

Lt is a cloud-based learning platform that bridges the gap between theory and practice by delivering an engaging immersive learning experience.

Designed to stimulate active learning based on the latest pedagogical research on engagement and retention, Lt has 340+ fully editable life science lessons created by a specialized team of instructional designers. Educators can also create, customize, and deliver their own content using Lt's modern tools and features. Lt gives students the unique ability to record and analyze their own physiological signals, encouraging active learning and giving students an engaging, immersive learning experience.

About The University of Sydney

The University of Sydney is ranked the #1 University in Australia for scientific impact and is consistently ranked within the top 50 universities globally. The University has been a world leader in research and education for over 160 years.

The University of Sydney has over 50,000 full and part time students. With more than 400 areas of study to choose from, it offers Australia's broadest range of courses and disciplines. The University's research focuses on finding solutions to society's biggest challenges.

Currently ranked 4th in the world, and 1st in Australia, for graduate employability, the University boasts world-class facilities, inspirational academics, and internationally recognized and respected qualifications.

Lt

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REFERENCES:
Hogarth, K., (2017, September). Immersive learning in nursing education. Paper presented at the ANEC Conference, Christchurch, New Zealand.

Watch the video and read the full story at adi.to/unisydney