STUDENT **ENGAGEMENT: GROUP** WORK, LABS, ANALYTICS, PEER ASSESSMENT

BLENDED LEARNING COMMUNITY

Sharing and fostering good practice in blended learning across all disciplines for both educational practitioners and developers. The BL Community is collegial based and coordinated by A/Prof Yasir Al-Abdeli and Dr Emma Leitner at ECU. We welcome members from staff at any Perth based university.

Edith Cowan University

0930 - 1000

Centre for Learning and Teaching



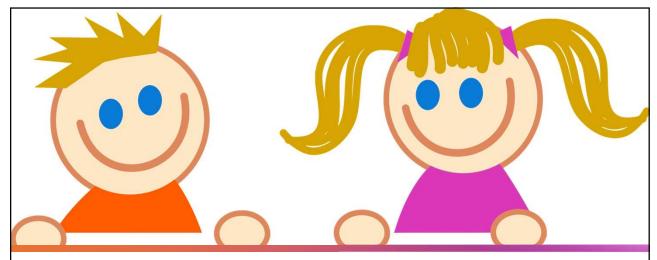
BL Community 31.10.2024

Settle-in, Morning tea courtesy of Pathways - The University of Notre Dame Australia

Wrap-up

0000 1000	oddo iii, morining tod oddrody o'r ddindyd 'r no diirvorolly o'r nodd baino Addalaid		
1000 - 1010	Helen Rogers, National Director; Dr Cinzia Loddo, National Course Coordinator - Pathways (The University of Notre Dame Australia)		
	Opening / Welcome, Acknowledgement of Country, and Housekeeping		
	Prof David Sadler, Deputy Vice-Chancellor (Academic), The University of Notre Dame Australia		
	The importance of 'Student Engagement' in Learning and Teaching		
	Assoc Prof Yasir Al-Abdeli, Co-Coordinator BLC and Associate Dean Teaching and Learning, School of Engineering, Edith Cowan University		
	Agenda / Theme: The Blended Learning Community - Student Engagement: Group Work, Labs, Analytics, Peer Assessment		
	<u>Presentations</u>		
1010 - 1020	(1) Lisa Duffy, Subject Coordinator – Aboriginal Education (Master of Teaching) (Western Sydney University, Online)		
	Blending for balance: engaging Parents in Prep (PiP) students to succeed in Higher Education		
1020 - 1030	(2) Dr Simone Duncan, Lecturer - School of School Biomedical Sciences (The University of Western Australia)		
	Two-stage assessment		
1030 - 1040	(3) Martie Riemer, Unit Co-Ordinator and Academic Teacher (Edith Cowan College)		
	Enhancing student engagement through diverse approaches: integrating Padlet, H5P tools and collaborative groupwork		
1040 - 1050	(4) Murray Terwey, Course Coordinator – Bachelor of Aviation (Edith Cowan University)		
	Reflection on the implementation of Universal Design for Learning (UDL) in an aviation subject		
1050 - 1100	Q&A time for presentations 1-4		
1100 - 1110	(5) Dr Padraig Strappe, Senior Lecturer - Curtin Medical School (Curtin University)		
	Teaching 'error' in medical laboratory sciences using instrumentation to promote student engagement		
1110 - 1120	(6) Michelle Katavatis, Head – Innovation and Design (The University of Notre Dame Australia)		
	LMS templates for student engagement		
1120 - 1130	(7) Dr Rina Wong, Unit Coordinator - School of Medical & Health Sciences (Edith Cowan University)		
	Empowering student-to-peer engagement through role modelling and a multimodal assignment		
1130 - 1140	(8) Dr Joanne Castelli, Lecturer - Faculty of Science and Engineering; Ifeoluwa MacKenzie, Lecturer - Curtin Medical School; Dr Stephanie Vialle, Senior Research Fellow - School of Earth and Planetary Sciences, Tommy Woodward, Learning Media Developer - Faculty of Science and Engineering; Dr Alexandra Yeung, Senior Lecturer, School of Molecular and Life Science; Dr Chen Zheng - Senior Lecturer, School of Accounting, Economics and Finance (Curtin University)		
	Using Student Relationship Engagement System (SRES) and other strategies to promote belonging and connection		
1140 - 1155	Q&A time for presentations 5-8		
1155 - 1200	Dr Emma Leitner, Co-coordinator BLC, Senior Learning Advisor, Centre for Learning and Teaching, Edith Cowan University		
	Open floor discussion, wrap-up		
1200 - 1220	Networking		

https://intranet.ecu.edu.au/learning/academic-development/learning-communities/blended-learning-community



Blending for Balance: Engaging Parents in Prep (PiP) Students to Succeed in Higher Education

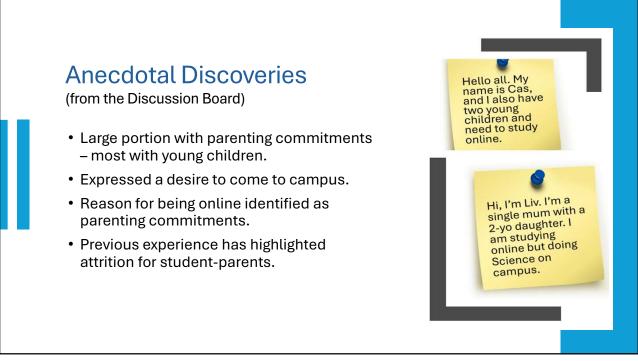
Lisa Duffy

1

Context

- Online students in an enabling course.
 - Alternate pathway, preparing students for university studies.
 - Graduates enter a variety of disciplines.
- Semester 2, 2023.





Project Plan

- Blended learning opportunity for studentparents studying online.
- Gauged interest in running family-friendly 'drop-in' academic workshops on-campus.
 - 2-hour session, once a week.
 - Child-friendly environment (equipped with toys).
 - Aims of sessions to consolidate weekly learning, answer questions, and provide assessment support across subjects.
 - Volunteered and self-funded.

5

Barriers

- Finding a suitable location on-campus for the semester.
 - · Child safe.
 - Accessible (prams).
 - Resourced for student-parents (desks and charging points, with toilets and kitchenette in close proximity).

Drivers



7

Participants

- Regular attendees 5-6 parents (highest 10, nearing exams).
- Single parents, FIFO partners.
- Attended with and without their children.
- Children all below school-aged.
- Part-time students, most working towards new careers.
- All students experienced difficulty navigating on-campus creche and daycare facilities:
 - Separation anxieties.
 - · Lack of availability.
 - Unable to 'book' places (drop-in) or rigid booking rules.

Feedback

- Most students attended 6 or more sessions (8 were run across the semester).
- Sessions were highly valued.
- All students recommended and requested to be included in future sessions, despite completing their enabling course.

"I wish there were these sessions open to the whole university not just prep"

9

Impact

Students shared how these sessions impacted their university experience

- Encouraged motivation.
- Felt sessions contributed to their success.
- Enabled opportunity or greater clarity of expectations (assessments), especially as 'new to university' students.
- Enhanced sense of belonging and support.
- Increased confidence.

Motivation

Having like-minded parents that are travelling the same path as me gave me **so much motivation** to keep going even when it got tough.

These had a tremendous **positive impact on it motivation and success**.

Meeting the other participants helped me gain insight of how they manage they're home/family life and studies, seeing them succeed gave me **great motivation**. Attending the mother's group was the highlight of my week.

11

Clarified Expectations

The support was great and ability to get a little **extra clarity on assignments** in a comfortable space was amazing!

Lisa's help allowed me to gain a **greater understanding of what was expected** of me when addressing assignments.

It has been so helpful to be able to attend an open forum where I can **ask questions about assignments** etc without the added stress of finding childcare.

Sense of Belonging & Support

Attending the mother's group was the highlight of my week, I felt very **supported by all the attendees**. Having a place where I could bring my child and study with other people in the same position gave me a **sense of peace knowing I wasn't disturbing others**.

I felt accepted by a university where I thought it would be mainly young students.

I absolutely felt a **sense of community**, it has been so refreshing to meet like-minded people in similar circumstances.

Yes, it was great to develop a **Lil community** with the few of us regularly attending.

These sessions impacted my academic performance by allowing me to **feel supported** and like I was not doing this alone.

13

Confidence Building

It definitely **gave me more confidence** in my Uni journey.

This group **gave me so much confidence** that I wasn't the only parent juggling study and a family.

I had my reservations about returning to study as a parent but the parent's group, Lisa and staff have really **put my mind at ease**. It has **given me the confidence to continue on studying** alongside caring for my family.

These sessions were so valuable and **hugely contributed towards my success** in my first semester.

Most beneficial aspects as a student-parent?

The ability to **seek advice from people in the same situation as myself** and also being **able to bring my child along** and have no judgement!

Meeting other parents, **extra guidance from our tutor**, the extra time I could study where I **didn't have to worry about childcare**, discussions regarding university and personal life, Having other parents proof read work and offer feedback

15

Most beneficial aspects as a student-parent?

Piece of mind knowing I had **somewhere to go with my children** and study. I also enjoyed meeting other mums who were doing the same as me, This made me realise I can do a degree.

Being able to connect with other parents / students in person.

Challenges

The biggest challenge was when my **child was unwell**. Coming to these sessions helped to give understanding of the assignments and also the support to get extensions if needed. **Moral support was huge**!

My child got very sick, resulting in a lot of time spent in hospital, I was able to talk to Lisa about how I approach this and she offered great reassurance. Having that one on one chat to a tutor on how to approach this really helped my anxiety.

17

Challenges

I had to study online but there were some instances I just needed that face to face time to ask questions and get clarification. While studying online was good, sometimes I just needed that extra in person support.

My only option at the moment is to study online, however I do thrive more in a face-to-face environment. The Parents group has been a great way to still feel connected to my cohort / lecturers and has given me an opportunity to ask questions and understand assignments. I also found childcare challenging. My son has experienced separation anxiety and after a failed attempt at the creche, it has been great to bring him along to parent sessions with me.

What worked well in the sessions?

I love that there are **resources there to help entertain my children, as well as an opportunity for them to socialise**. I enjoyed the format of the group. It may be helpful to have additional staff that can help with questions during busy times, however I found a lot of value in the current set up.

Group discussions on assignments was very helpful.

How to manage study with a family. Advice on parenting with small children and studying. Being able to watch recordings that we would miss in a lecture because we weren't able to attend live due to children.

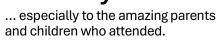
Mostly one on one time to **discuss assignments** with the lecturer.

19

What I Learned

- · Highly driven students.
- Quick to task (time is precious)
 - Key to engagement was the academic support not interested in 'catch-ups'.
- Feel 'forced' online and welcomed opportunity to come to campus.
- Strong peer-support.
- Learning strategies parents use to help with the student-parent balancing act.
- There is a need to provide family-friendly resources and support for student-parents on-campus.

Thank you





Baby "Dottie" born week 8, Semester 2, 2023

If interested in learning more, please feel free to contact me on either

lduffy@westernsydneyonline.edu.au or lkelleeduffy@gmail.com

Two-Stage Assessment Design: Improving Student Engagement Through "Assessment as a Form of Learning"

Dr Simone Duncan,

Lecturer, School of Biomedical Sciences



1





Presentation in Brief

Unit description and need
 What is Two Stage Assessment (TSA)
 Uterature with TSA
 Unit Specific Approach
 Any questions/feedback/advice (Question Time)

2

Description of Units

Units: UIWA Body Systems I & II (DENT3001/2 & PODI3111/5) (covers anatomy, physiology, pathology, pharmacology....)

Cohort: First-year postgraduate students in dentistry and podiatry

All individual assessment:

2 x in-semester tests (MCQ and SAQ)
1 x assessment (poster or video)
1 x written final exam (MCQ and SAQ)
However, limited individual and some general cohort feedback for remaining assessments = lost learning and enagement opportunity

(Question and answer banks not released to students)

3

5

Student Experience of Learning and Teaching (SELT) Scores

**Pos. 88 bars*

**CONTROL 2024

**U03 The assessment tasks in this unit help me learn!

4



Repeat Entire Assessment

The group can re-solve the entire exam, reinforcing concepts and identifying areas for improvement.

Focus on Challenging Questions

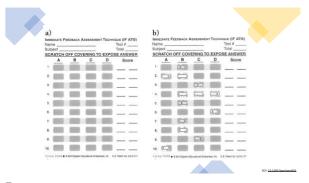
The group can focus on specific challenging questions, deepening understanding and problem-solving skills.

Convert to Multiple-Choice or Ranking Tasks

The group can convert questions to multiple choice or ranking tasks, promoting consensus-building and critical thinking.

If AT carsh have been used successfully.

6



Managing the Transition and Group Dynamics



7 8

Other Considerations

How are groups formed? Students choose or instructor assigns

Weighting of each stage
Timing allocation

Peer-feedback component (factor responses into weighting?)



Successful Implementation Strategies in STEM:

Communicate Purpose
Clearly explain the rationale for using this exam format to students.

Allocate Time
Ensure the individual part takes up about 2/3 of the total exam time.

Weighting
Weight the individual stage 1 is higher (85-90%) than the stage 2 group component (15-10%).

Prevent Score Decrease
Implement a policy to prevent a student's overall score from decreasing due to the group part.

9 10

Evidence of Student Experience

Students overwhelmingly responded positively to the two-stage format

Students highlighted the value of immediate feedback and learning from mistakes.

Thematic analysis of TSA forced interactions on FYS peer relationship found benefits of meeting, socialising and sharing knowledge with peers.



Unique, unit specific application:

Students complete all assessments face-to-face, invigilated on paper.



11 12

Unique, unit specific application:

Why not summative stage 2?
Give students freedom to focus on questions of their choosing.
Cohort competitive, forming 'fair' groups, extra analety about 'performing', can contribute lots/little
Group work not a ULD Currently, in depth feedback not provided and student instructed to NOT discuss paper. Offers opportunity for immediate formative feedback $Individual \, Summative \, \underline{\textbf{+ Group Formative}} \, (\text{very little published evidence here})$ Students will be surveyed post-Test 1 to incorporate improvements for Test 2 Provides a realistic idea of grade results prior to release

Thanks to todays hosts @ Notre Dame and the Blended Learning CoP $\ensuremath{\mathfrak{G}}$

Full Disclosure:

Did anyone detect AI (Gamma) used in this presentation?

I used today's presentation as an opportunity to learn a little about what my students probably know very well!

14

Made with Gamma



13

Some useful references:

Lee et al., 2022. Two-stage Examinations in STEM: A Narrative Literature Review. International Journal of Innovation in Science and Mathematics Education, 30(5), 73-90, DOI:10.30722/IUSME.30.05.005

Rempel, Brian & McGinitie, Elzabeth & Ciris, Maria. (2023). The Influence of Two-Stage Collaborative Testing on Peer Relationships: A Study of First-Year University Student The Canadian Journal for the Scholarship of Teaching and Learning. 14.10.5206/cjsotiracea.2023.2.14252.

SALTISE (Supporting Active Learning & Technological Innovation in Studies of Education) Two Stage Assessment
https://www.youtube.com/watch?v=93m21Txcpd4
(real conversation between academics, sharing of experiences is useful and informative)

15



Enhancing student engagement: integrating Padlet, H5P & collaborative groupwork

Presented by Martie Riemer
Unit Co-ordinator & Academic Teacher

Business units: Accounting, Management, Effective Communications



Presentation Resources accessible via QR Code

ACCESS VIA QR CODE & SCROLL DOWN

Example Padlet Poll

Useful links

- What is Padlet
- What is H5P
- Quality Indicator for Learning and Teaching (QILT) report

Some new Padlet Features

- How to download QR code
- How tO create poll on Padlet
- Transforming Padlet wall into a slide show
- Using breakout links
- Scheduling a future date on Padlet
- Recovering a deleted Padlet



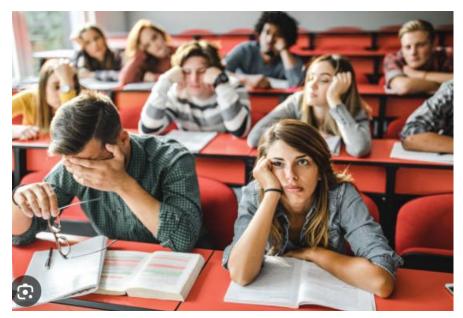


Is student engagement a real problem?

Discussions with fellow colleagues both at ECU & ECC

"It is wishful thinking to believe student will do pre-class activities"

"It's like pulling teeth today- no student discussions!"



https://www.istockphoto.com/photo/large-group-of-bored-students-at-lecture-hall-gm1136569008-302738083



Quality Indicator for Learning and Teaching

Annual QILT Survey provides shocking insights into Student Engagement

Student Experience Survey

QILT are a suite of government endorsed surveys for higher education, in Australia.

Target population

Undergraduate and postgraduate coursework students enrolled in Australian higher education institutions

🔯 Sample size

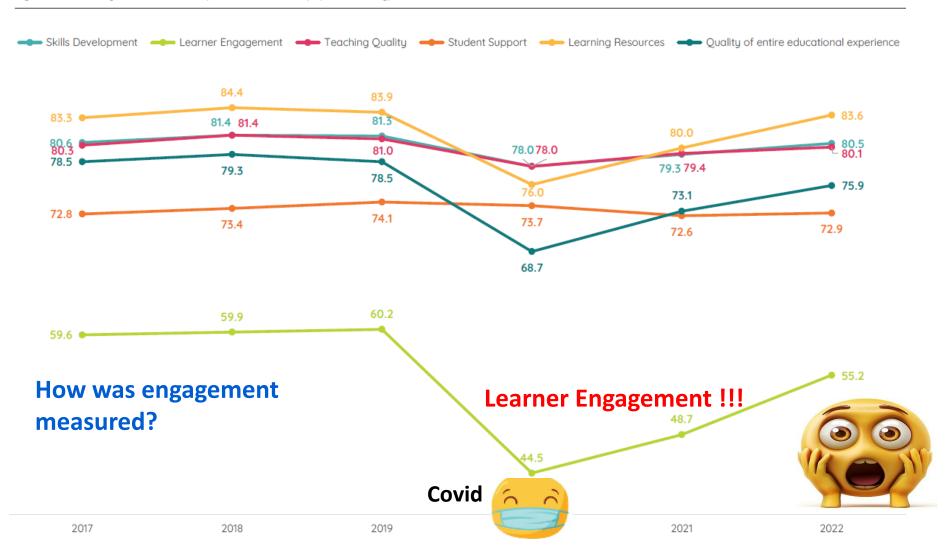
Over 175,000 undergraduate students and 65,000 postgraduate coursework students

https://qilt.edu.au/surveys/student-experience-survey-(ses)#latest



Quality Indicator for Learning and Teaching







Learner Engagement "defined" by QILT Survey

Learner engagement

During <year of survey>, to what extent have you:

1. felt prepared for your study? Engage to complete pre-class activities

2. had a sense of belonging to your institution? In the classroom

In <year of survey>, how frequently have you:

1. participated in discussions online or face-to-face?

2. worked with other students as part of your study?

3. interacted with students outside study requirements.

4. interacted with students who are very different from you?

Internationals
Language barrier,
confidence

Classroom layout Group activities

https://qilt.edu.au/surveys/student-experience-survey-(ses)



Padlet & H5P to enhance engagement



Padlet

https://padlet.com

Padlet - Visual Collaboration for Creative Work and Education

Beautiful boards and canvases for visual thinkers and learners. Used by 40 million people worldwide. Get started for free.



Free, user friendly tool that allows anyone to **develop interactive** online content and activities, without needing coding knowledge H5p plugin compatible with WordPress, Moodle, Canvas, Black **Board** and many other LMS

https://h5p.org/content-types-and-applications





Fill in the Blanks









PADLET: Digital Whiteboard Sense of belonging - Welcome Activity

SBL1200D : AFE -Welcome

Keeping us connected

- Anonymous 13d
 - is my name.
 - 2. I studied accounting in secondary school.
 - 3. I would want to own an accounting firm. Just need help people with financial aid and give advice to them.

Anonymous 13d

- 1. My first name is 1
- 2. No, I haven't studied accounting before
- 3. I would like to start a business in the retail industry such as food or coffee. I want to

- Anonymous 14d
- 1. :
- 2. No, I have not studied accounting before
- I would love to establish a yoga studio of to run a retreat business with meditation classes and other disciplines improving emotional wellbeing!

Information:

- **About level of prior experience**
- Base additional tutorial scenario questions on student interest

Additional Question

i is considering opening a Yoga / Pilates studio as a small business. She has already decided that she does not want a business partner but is unsure if a Sole trader or Private company structure would be better. Please provide your friend advice on her decision.



PADLET: Digital Whiteboard – Sense of belonging – Welcome Activity

AE4 Two truths and a lie

Create a poll that includes three options. Two should be true, and one should be a lie. Then vote on each poll for which answer

		:
Gue	ess the lie	
0	I dislike spider	
0	I like playing games	
0	I have four pets in my home	
7 vc	otes	
7 vc	otes	

- When I was in high school, my favorite subject was world history.
 I have 2 younger sisters, one is 13 and the other is 6.
 I like birds especially parrot.
- Guess the lie

 I was born in the USA.

 I will study IT at Uni Adelaide.

 I like Sushi.

Т		:
Gue	ess the lie	
0	I am the only children in my family.	
0	I like cats.	
0	I have a dog in my home.	
6 vc	otes	

Using H5P Activities: Encourage Pre-class activities

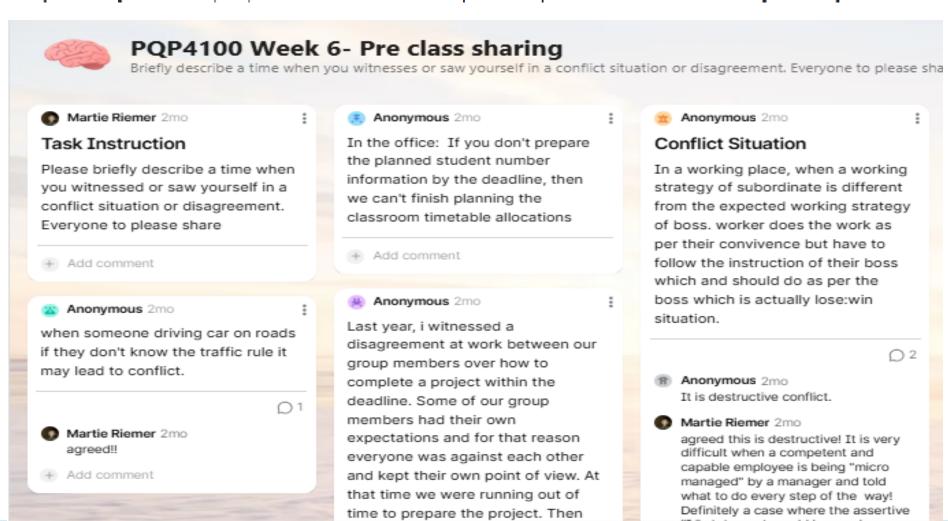
"While you wait for class activities" based on pre-class work / revise prior week's work

Drag the words in	to the correct boxes				
1) According to San	motivators				
towards the attainment of organisational goals.			inequity		
			influence		
2)	lishing a task	hygiene			
successfully.			social		
2) In Maclaula theor	ry the need to have positive relationships, relates to the	need	reinforcement		
3) III Masiow's trieor	ry, the need to have positive relationships, relates to the	need	Intrinsic		
4) Herzberg identifie	ed two sets of factors related to job satisfaction being	and			
dissatisfaction being	factors.				
5) In Adam's theory, individuals are motivated to address perceived when they feel					
unfairly treated com	pared to others.				
6) Organisational Be	ehavior Modification strategies aim to change employee behavi	or through the use			
of	and punishments.				
o onesk					



PADLET: activate prior knowledge, encourage preclass activity completion & in-class discussion

While you are waiting for class to start please post on the Padlet wall "an instance where you have found yourself in a conflict situation / been in a disagreement or argument or witnessed or





PADLET: In-class group collaboration & discussion

Martie Riemer + 14 * 1mo

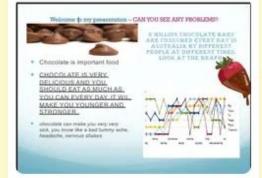
PQP4100 Week 9 - Analyse Power Point Slide

Group activity

- 1. Think individually
- 2. Pair & discuss in groups
- 3. Share group thoughts

Slide 1

Effective or not? Why /why not?



Comment below, with reasons, if the slide is effective?

Not effective

Too long sentences, no key point in this slide, the graph shows too much information and complex, different font sizes.

Not effective at all as the one graph is showing too many data and too many sentences

It is not effective

Slide 2

Effective or not?



Comment below with reasons if the slide is effective?

Not effective

Too many colors, The colors are too bright to make it difficult to read the text.

Not effective

The background is different colours and it is very disturbing.

The text is not visible to audience

Not effective.

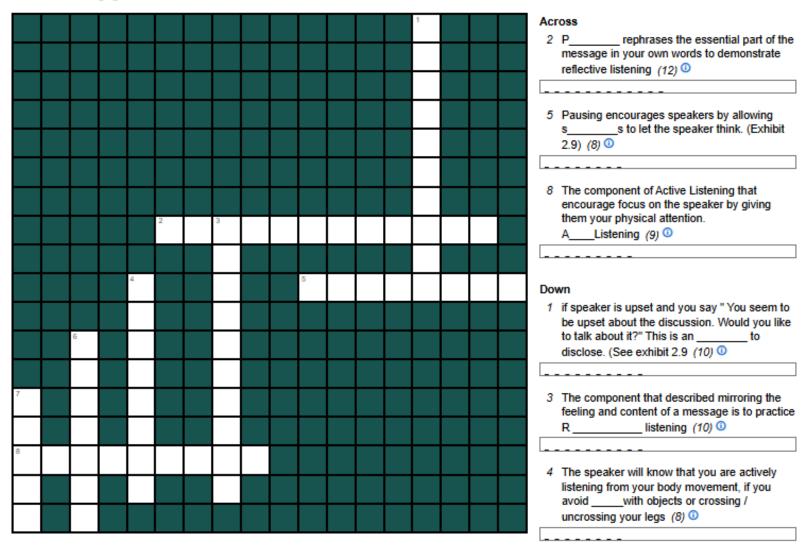
Too many colors. The texts are not clear. Full sentences are written in bullet points.

H5P Activities: Group study & complete cross word puzzle

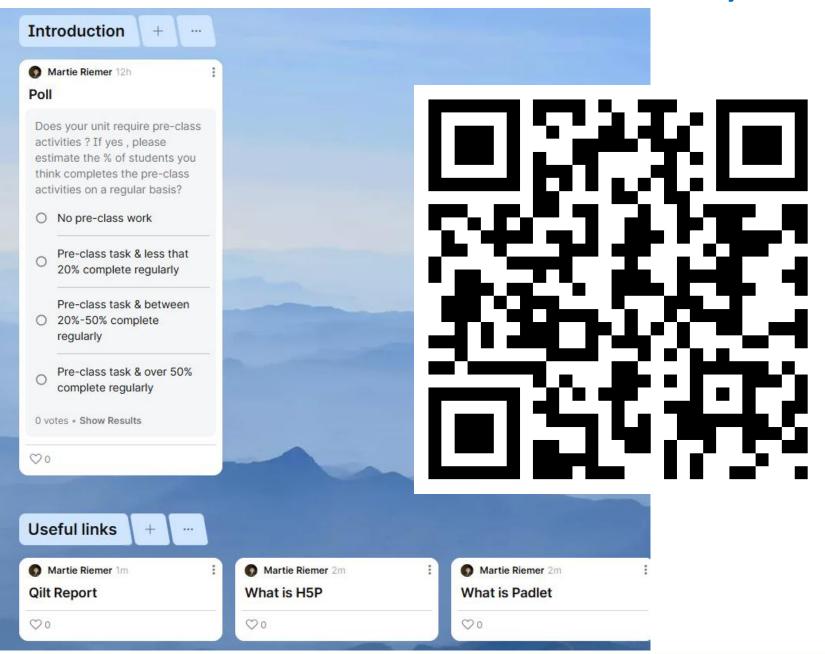
In-class activity

Refer to the Week 5 Pre-reading downloaded at the start of class to complete the following crossword. You may work in your groups.

Chapter 2 pages 45 - 48 and Exhibit 2.8; Exhibit 2.9 in Dwyer, J., & Hopwood, N. (2019). The business communication handbook. Cengage.



Padlet Polls and ease of accessibility



Concluding Thoughts Padlet & H5P Activities

Activities appear to be driving positive student behavior

- Punctuality has improved: student arrive to complete "while you wait activities:
- Improved completion of pre-class activities: to complete the "while you wait activities" & see link to in-class content
- Noisy classroom : increased discussions, participation & sharing

Happy Classroom: plenty of smiles & groups of friends forming

Application Of UDL to an Aviation Unit

Reflections from the Lecturer
Murray Terwey

Background



The Driver for Universal Design in SCA2116



ECU's Educational Experience Plan 2022-2026

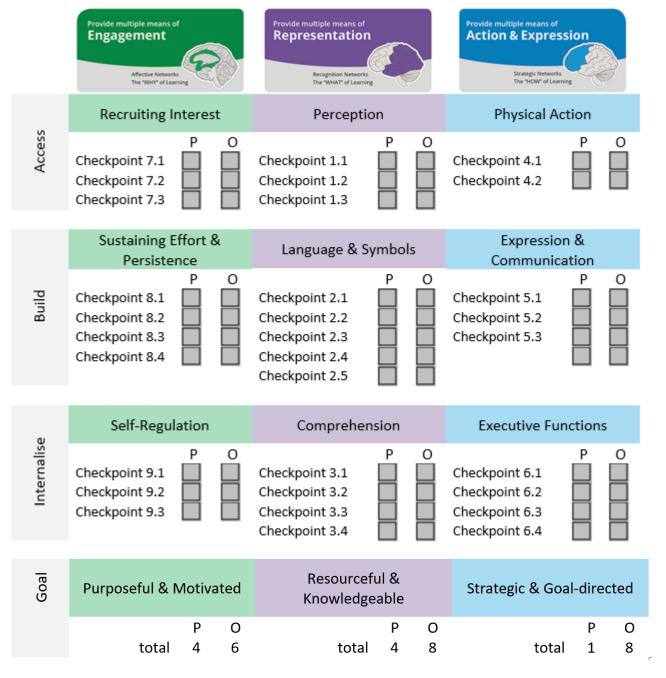
Objective 13.6: Adhere to Universal Design principles in 100% of units to improve learning outcomes for all students, including students with disabilities



MICRO-CREDENTIAL:

Universal Design for Learning
– Inclusive Curriculum

➤ Unit UDL Survey Tool





Universal Design for Learning in Practice



Checkpoint 5.2 • Use multiple tools for construction and composition

"Current media tools provide a more flexible and accessible toolkit ... successfully articulate what they know."

Checkpoint 7.1 Optimise individual choice and autonomy

"Offering learners choices can develop self-determination, pride in accomplishment, and ... feel connected to their learning."

Checkpoint 3.3 • Guide information processing and visualisation

"Successful transformation of information into useable knowledge... selection and manipulation of information ... it can be better summarized, categorized, prioritized, contextualized and remembered."

https://udlguidelines.cast.org/



Universal Design for Learning in Practice





ASSESSMENT RE-DESIGN

"DIGITAL INDEX"

Organise Aviation Legislation into a digital platform *of their own choosing*.

Checkpoint 5.2

Checkpoint 7.1

Checkpoint 3.3

2

Showcase (via video) using their Digital Index to find information to address authentic scenarios faced by the Aviation Profession.



Unit Assessment Design



- There were 4 groups of assessments in the unit:
 - o4 progress tests (30% weighting)
 - A report (30% weighting)
 - Creation of the Digital Index (20% weighting)
 - A video demonstrating the application of the Digital Index to a scenario (20% weighting)



Scaffolding to Assessment



- There were 2 workshops for the Digital Index:
 - On week 2 students were briefed on the digital index
 - This was recorded an uploaded to Canvas
 - The students were asked to evaluate a platform.
 - Then choose one they might like to use.
 - They were asked to reflect on why they chose that platform
 - Feedback was given on evaluation and choice.
 - A week 7 workshop on how to present a PowerPoint by video
 - Students were asked to create a Presentation using Panopto
 - This workshop was recorded and upload to Canvas.
 - Feedback was given on presentation.

Student Feedback

Average Responses - 0 not likely - 10 Likely

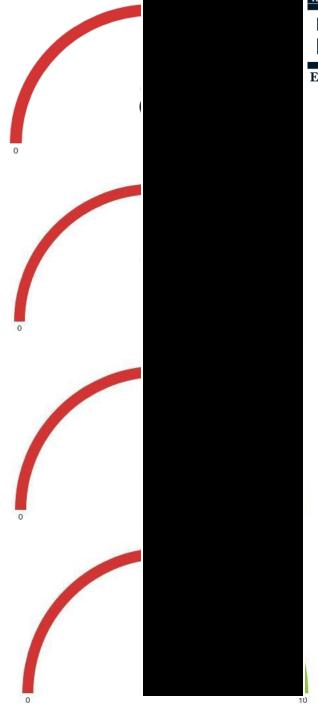
I found the Digital Index to be an interesting project.

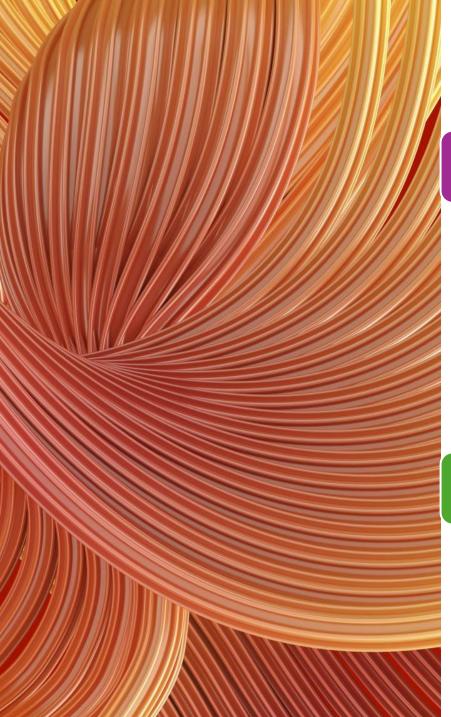
I found the Digital Index helped me learn the content of this unit.

I knew what was expected of me to complete the Digital Index.

I would prefer the Digital Index assessment instead of the End of Semester Exam.







Likes and Dislikes

What the students like about the assessment:

- thought it helped them research and learn the topic.
- liked the high use of digital technology.
- like that it was something different.
- thought it fairer (most likely because they had a choice of platforms)

What students didn't like about the Assessment:

- would like more instructions or direction.
- were uncomfortable making a video
- thought it wasn't practical enough
- thought it was hard work

Additional Points of Interest

3 students were found guilty of academic misconduct in report assessment

 Due to falsified resources, most likely from misunderstanding the limitation of AI. More resources will be put into ethical use of AI in 2025

No academic misconduct was detected in the Digital Index assessment.

Overall grades and participation rates were similar to pre–
Digital Index

Conclusions



- The vast majority of students enjoyed doing the digital index and found it interesting.
- The students generally agreed that the Digital Index helped them learn the subject matter.
- The students would like more instruction and feed back on the Digital platform creation.
- The vast majority of students prefer this type of assessment to the End of Semester Test.
- The Digital Index was successful:
 - Will stay with the digital index and look for improvements

Improvements



- Redo the reflection tool now that we have UDL 3.0
- Have a staged approach to all assessments which may:
 - Turn current formative tutorials into summative
 - Increase incentive for engagement and feedback to students
 - Reduce likelihood of academic misconduct as the process will be assessed as well as the artefact
 - Increase opportunity to collect artefacts for a programmatic assessment portfolio

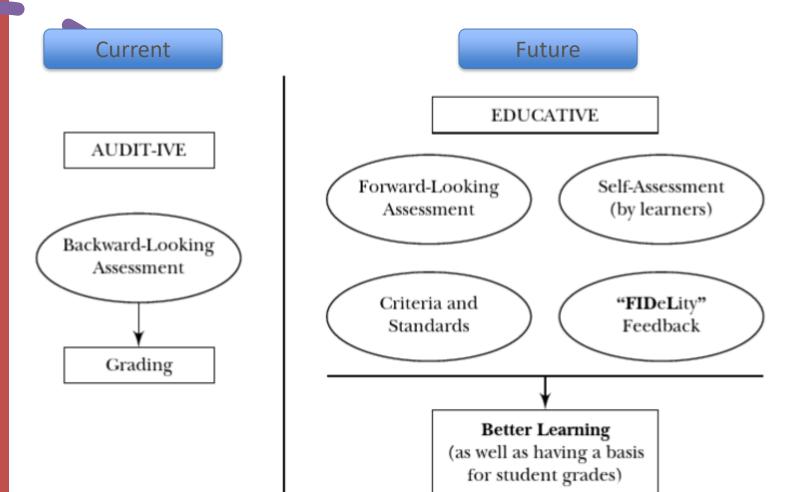




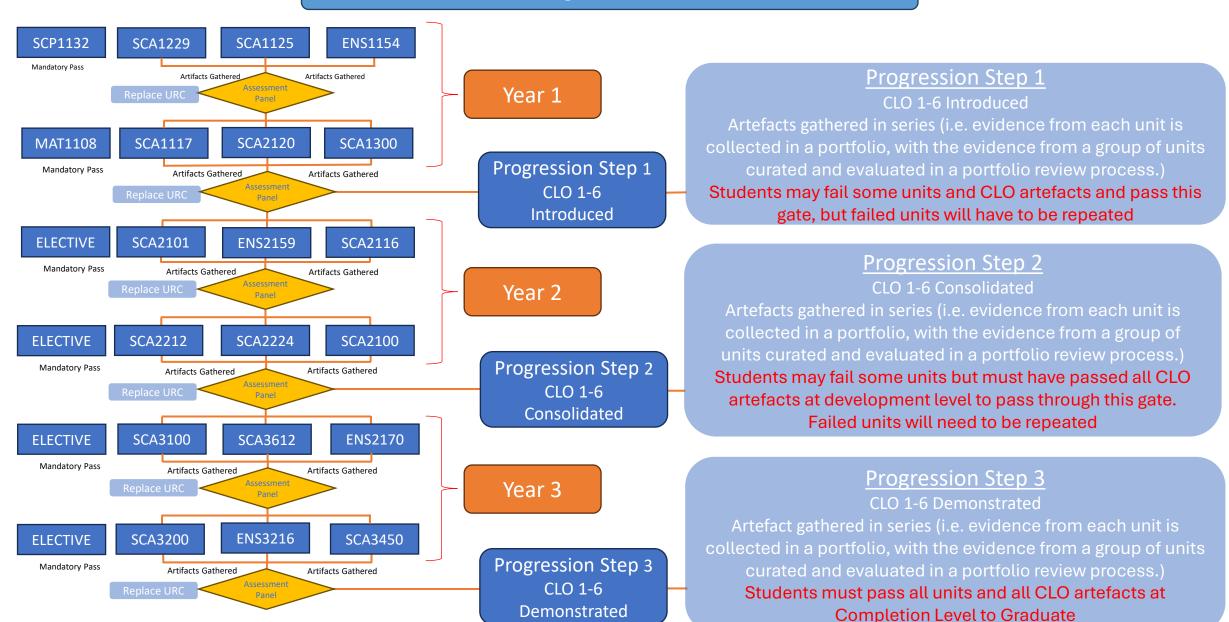
Cogniti as an Educative Assessment Tool



Shift to
Assessment
of Process
not Product



Bachelor of Aviation Programmatic Assessment Schematic





Thank you for Listening

References

CAST (2024). The UDL Guidelines. https://udlguidelines.cast.org/

Delves, L., Terwey, M. and Ellyard, M. (2024, February). *Universal Design for Learning* (UDL) in practice: A diagnostic approach to inclusive design [Oral presentation]. Western Australian Teach and Learning Forum, Crawley, WA, Australia.

Fink, L. D. (2013). Creating significant learning experiences: an integrated approach to designing college courses (Revised and updated edition). Jossey-Bass. http://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=403502

Teaching 'error' in medical laboratory sciences using instrumentation to promote student engagement

Dr Padraig Strappe

Senior Lecturer,

Medical Laboratory Sciences

Curtin Medical School

Journey of a Blood Sample



A doctor orders a number of tests relevant to many and investigated. The tests are listed on a on a new angle of tests.



2 A phlebotomist collects a sample from the patient after cross



Depending on the tests requested, the blood may be collected into a number of tubes with different additives or



The sample is transported to the lab: depending what is being analysed to the samples may need to be kept on ice, and some to.



As mentioned before, some samples may be stored away for later analysis or for re-secure



The methods used are calibrated against standards for accuracy. Also analysed alongside is patient samples are non-patient samples in own as painty some side on QC Materials)



but mer a analysed on autranaly as which read the barcode ID



At the lab sample are given a unique baseder ID number. This and the still a some, the tests requested, time/date on allection are entered onto a laboratory information system (LIS), and the sample is processed-some will be centrifuged to obtain serum or plasma, some blood samples will be analysed whole, and some others stored for later

nalysis (some at 4°C, some possible frizen).



Many different types of instruments may be gused to analyse the samples



Fesults on patients & QC materials are checked or error lags, patient results are reported, and terpretive comments added to patient reports



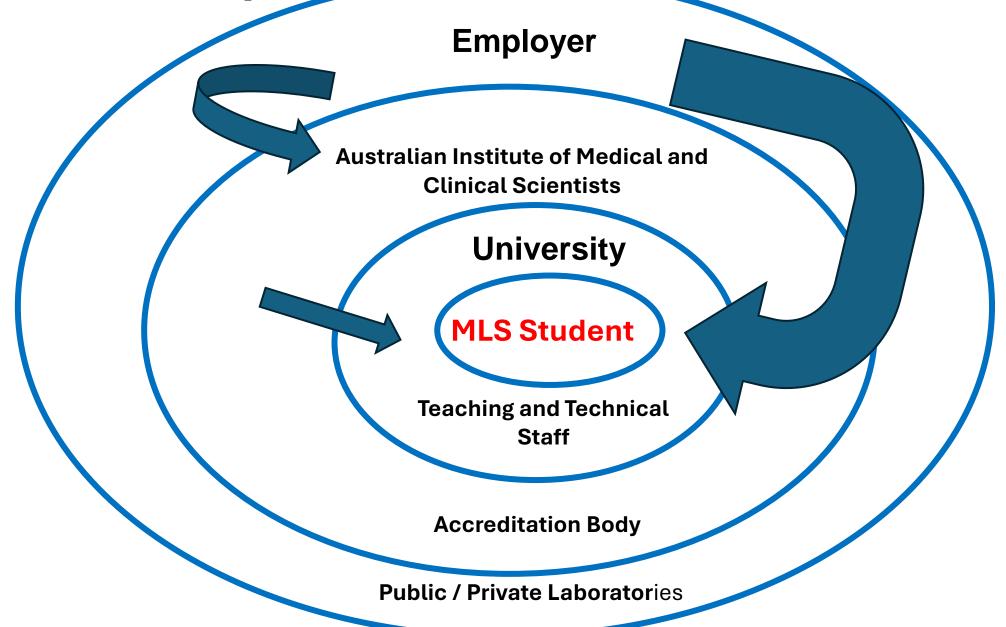
The doctor discusses the results with the patient, e.g. compared to expected values and sometimes aided by the interpulse comment.

Rational

- I asked FHS to review our clinical Biochemistry Curriculum
- Feedback Revealed how placement students and new graduates sometimes lacked a good knowledge of quality control and errors associated with sample analysis
- Review of how we teach quality control and error analysis

• Example of how an industry highlighted gap in graduate knowledge can be solved by guidance from industry and engaging students in a simulated workplace environment.

Stakeholder Map



Designing a workplace environment



WE COULD JUST GO BACK TO THE LECTURE NOTES



POINTS AND ASSESS



HOW COULD WE
UTILIZE THE
SIMULATION LAB
AND EQUIPMENT



RECREATE A
TYPICAL WORK
ENVIRONMENT
AND PRESSURE
POINTS FOR
ERROR

Specimen Handling and Checking



Proficiency Assessment: Pre-Analytical Error

- □ Check patient details on form and specimen matches:
 □ Unit number Note: UMRN does NOT match.
 □ Surname, Given name.
 □ Date of birth
 □ Gender
 □ Date of collection
 □ Time of collection
 □ Doctors signature
 □ Patients signature
- Sempling Conditions (i.g., fasting, postprandial)
 No Fasting Required

 Cinical Details relevant to the bests requested
 Drugs, Thedrand, Symptoms, History, Diagnosis ...

 Fatigue

 GEOUCESTERSHIRE HOSPITALS NHS F TRUST
 PAS LABELS ON ALL COPIES NHS
 Spocimen Time
 (9800)
 Sumpling Conditions (i.g., fasting, postprandial)
 No Fasting Required
 Cinical Details relevant to the bests requested
 Drugs, Thedrand, Symptoms, History, Diagnosis ...

 Fatigue

 GEOUCESTERSHIRE HOSPITALS NHS F TRUST
 PAS LABELS ON ALL COPIES NHS
 Spocimen Time
 (9800)
 Sumpling Conditions (i.g., fasting, postprandial)
 No Fasting Required
 Cinical Details relevant to the bests requested
 Drugs, Thedrand, Symptoms, History, Diagnosis ...
 Fatigue

 Fertaile
 20-05-73
 Patient's Home Address
 15 Blueberry Avenue,
 Postcoole
 1234
 TELIND 0345788
 March
 SMurphy

 Address for ReportWard/Cinic
 WARD 4A

 Copy to jor special instructions!

 FOR LAB
 USE ONLY
 Physis

 Category II

 Separate samples required for Haematology & Chemical Pathology
 Please use BLOCK LETTERS & BALL POINT PEN

 77777
 PRyan

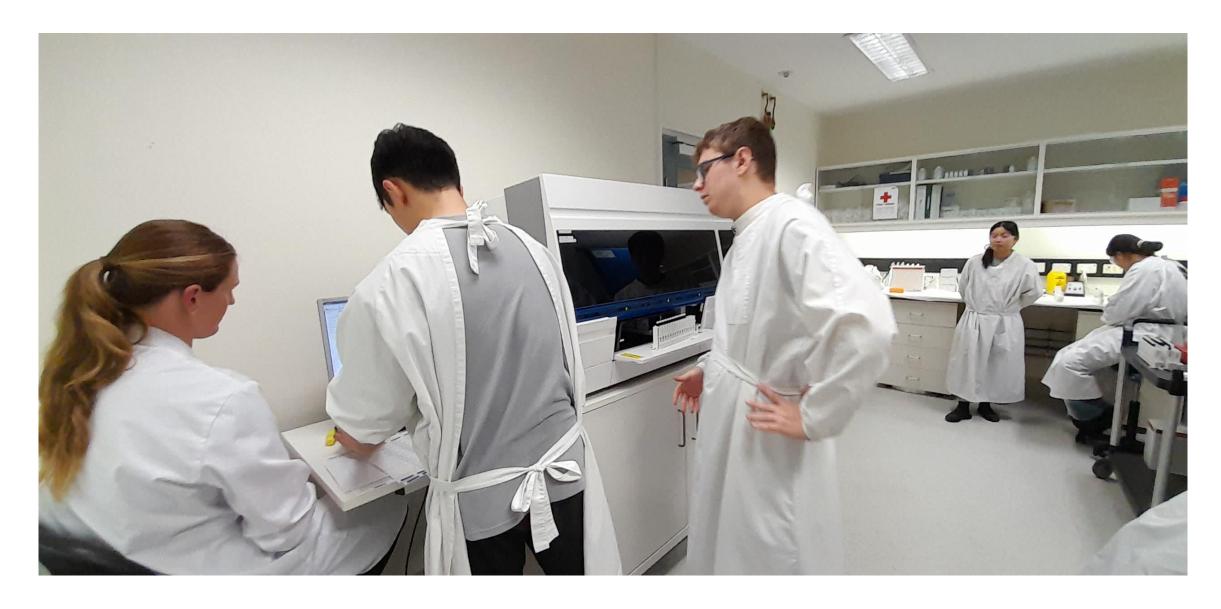
 Codor's Signature
- Aliquot specimen into a labelled white Cobas cup (label should include 3 points of identification name, DOB and UMRN)
- □ Place specimen into appropriate sample rack grey rack
- □ Program specimen sample
 - □ Orders>Sample>Fill in Patient ID, Name and Order ID>Change Sample type to Serum>Enter position (first box for rack number, second box for position number)>Select test of interests>Save>Start.

Test Request Form

Spot the Error



Proficiency Assessment Marked by Invigilator



Summary

 Exemplar in working with Industry to develop a simulated workplace environment

 Successfully created an engaging proficiency assessment enhancing student learning in types of analytical error

 Students who then went on placement, felt more confident in a busy diagnostic laboratory, we exposed them to an "Autoanalyser with Training Wheels"



In the Waiting Line for Ultra Transition: How to Innovate your Blackboard Original Courses

Michelle Katavatis
University of Notre Dame Australia

AT24

Acknowledgement of Country

We acknowledge and pay our respects to the First Peoples, traditional custodians of the lands and waterways and thank them for their continued hospitality. We acknowledge and celebrate the continuation of a living culture that has a unique role in every region of Australia. We acknowledge Elders, past and present, as well as our emerging leaders of tomorrow and thank them for their wisdom and guidance as we gather from different places to share, collaborate, and learn together.

Agenda

Kaya!

The Innovation & Design Team

Our Location

Understanding Us

Current State

Our Ultra 'Move' Plan

The Rollout of the Blackboard Course Site Template

Template Features

Faculty Training and Support

Feedback and Quotes



Kaya!

Michelle Katavatis

Head of Innovation & Design

University of Notre Dame Australia

Michelle.Katavatis@nd.edu.au



The Innovation & Design Team



- ✓ Pro Vice Chancellor Education portfolio
- ✓ Central team with embedded liaisons in faculty and departments driving more personalised need and professional development
- ✓ Includes Learning Designers, Educational Designers and a Digital Learning Advisor
- ✓ In brief is responsible for learning & teaching technology ecosystem and digital pedagogy and innovation

Our location



Our campuses extend from the:

- West Coast of Australia in historic Fremantle
- North-West town of Broome,
- The heart of Sydney
- Along with eight clinical schools in regional New South Wales and Victoria.

Video introducing the University of Notre Dame Australia

Understanding Us





of outstanding teaching delivered by industry professionals lecturers



Over 12,000 students

across Fremantle, Sydney and Broome Campuses



A unique, personalised approach

to education and pastoral care

Understanding Us

- Our Catholic identity is integral to who we are, but we're open to all beliefs and views
- Blackboard has been our LMS of choice since 2011
- Approximately 3000 courses delivered through Blackboard yearly
- Currently 11,914 active users accessing over 150,000 page views per day on average

Current State

- Recently signed a further 5-year commitment
- UBN active
- All original courses only
- Transition plan to Ultra in DRAFT with an anticipated go-live date early 2025

Our Ultra 'Move' Plan

- Core mission
- Project term/timelines
- Resourcing/investment
- Adoption support for academics

In the waiting line – so what happens to the courses waiting to be transitioned to Ultra?



The Rollout of the Blackboard Course Site Template

The Blackboard Course Site Template, a foundational structure for all courses, is a critical element in the student learning journey no matter what delivery mode.

Currently in pilot phase in over 300 courses and due for university wide rollout in 2025



But why is it important particularly on our journey to Ultra?

Template Features

Key features of the new template designed to enhance engagement

Tailored Faculty/School-specific templates address unique needs

Interface revamp that enhances aesthetics and functionality, elevating user experience and engagement

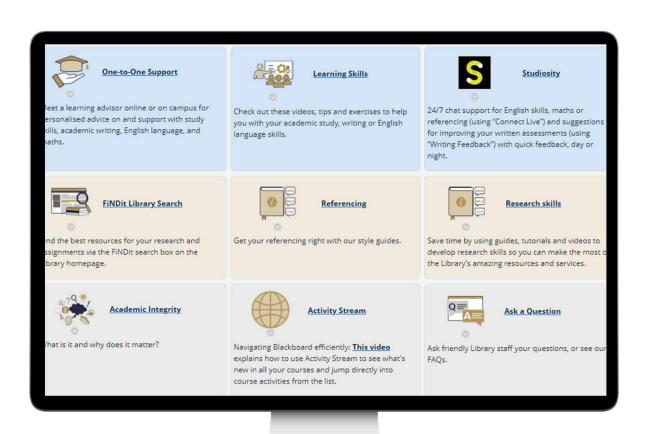
Includes 3 key feature – a Homepage Hub, Academic Support area and Pastoral Care area

Encourages academic digital upskilling

The Homepage Hub



Academic Support



Pastoral Care

Pastoral Care

The Provision of an excellent standard of pastoral care for students

"A Catholic University pursues its objectives through its formation of an authentic human community animated by the spirit of Christ. The source of its unity springs from a common dedication to the truth, a common vision of the dignity of the human person and, ultimately, the person and message of Christ which gives the Institution its distinctive character. As a result of this inspiration, the community is animated by a spirit of freedom and charity; it is characterized by mutual respect, sincere dialogue, and protection of the rights of individuals. It assists each of its members to achieve wholeness as human persons; in turn, everyone in the community helps in promoting unity. (Ex Corde Ecclesiae)"

As a Catholic university committed to the provision of excellent pastoral care, Notre Dame seeks to promote and enhance the wellbeing of each individual student; to help them achieve wholeness as human persons. To begin your pastoral care online journey of support make your way through the 3 areas below.



Counselling and Support Services

Supporting students to thrive at Notre Dame. We provide students with free, confidential counselling and psychological support in a safe, professional



Understanding Stress and Self-Care

This module was designed to help students understand and improve their personal health through self-care, and recognise their current state of being. To access this module, click on the image located on the left-hand side of this text.



Stress Support

This module will teach you how to recognise, prevent, and reduce stress. To access this module, click on the image located on the left-hand side of this text. students will find useful information and links here. To access this module, click



First Year Experience

This module will help you make the most of your time at Notre Dame. All on the image located on the left-hand side of this text.

Faculty Training and Support

How is the template adoption being supported?

Group training and adoption sessions

Leadership support, communication and drive

Through support materials provided on our Digital Asset Toolkit

Engagement and uplift of champions

The Digital Asset Toolkit



It is terrific, my students love it – can you apply it to all my courses?

Academic Feedback

It has changed my perception of Blackboard and the possibilities

Academic Feedback

It is user friendly, and I know where to find everything. Can I have every course like this?

Student Feedback

Is this even Blackboard?!

Student Feedback

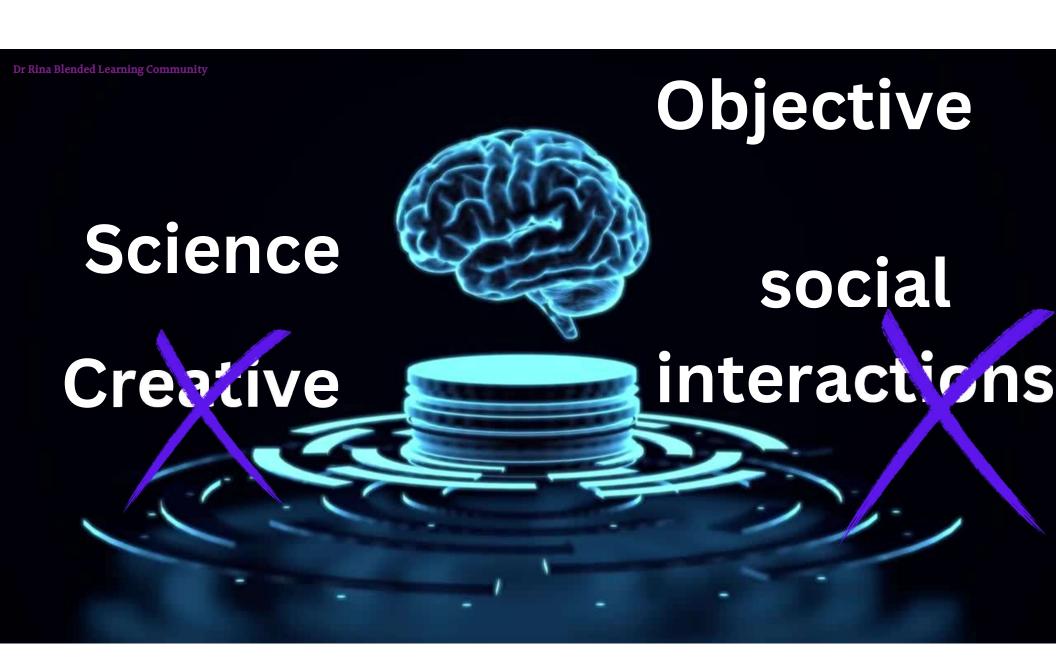
together

Fostering Collaborative & Creative Thinkers in Medical Science through Role Modelling and Scaffolded Assessment

Dr Rina Wong (Fu)

School of Medical & Health Sciences, Joondalup, Edith Cowan University Curtin Medical School, Curtin Health Innovation Research Institute (CHIRI)

Blended Learning Community 2024 - Notre Dame University



3-Step Assessment real-world case investigation

1. Diagnosis

Examine laboratory findings history, cell morphology, research, agree on a diagnosis with partner, 5 attempts
Provide **Feedback** per attempt (5 marks)

2. One Page Report

Distill information
Choice of information source
Write succinctly
Graded & provided with
written **feedback**.
Students amend & resubmit
report.

Serves as bonus study notes (8 marks)

3. Oral Presentation

Freedom of style (formal/prop)
Encouraged to engage the class

8 - 10 mins presentation (12 marks)

Role Modeling

Multimodal Pedagogical Approach

In addition to ppt, whiteboard, traditional modes...

- Music original science songs
- Props plushies cells, microbes, antibody
- Clay students make RBCs
- Hand-made 'authentic' giant blood cells
- Embed my research & outreach (triangulation)
- Short films, Stop motion & Animation
- Gamification



Dr Rina Blended Learning Community

Role Modeling Multimodal Engagement



INCLUSIVITY APPLIED KNOWLEDGE COMMUNITY #DrRina #InspiringAustralia National Science Week



Trainee-Scientist

MICRO TOONS

LAUNCH EVENT 2023





#spirit of microtoons #abc radio microtoons



MicroToons used by educators the annotated cartoon makes complex science accessible.

"biology teaching with the use of cartoons based on a constructivist learning approach significantly enhances retention test scores compared to the traditional method." Aslan et al (2021)

"My daughter loves MicroToons, she couldn't believe my lecturer created it. She said she has watched it 3 times at school (Beechboro) as part of health ed."

(micro student 2023, in-person communication May 2024).



Students' work [Creative Thinkers made here]

Assignment outcome



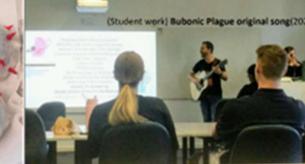
Hand crafted Virus models



Drama



Knitted bacteria (Bordetella pertussis)



COVID-Balls



Guitar & song - Bubonic Plague



Game Show & Badges

Student Feedback

'the diversity and the breadth of content delivery styles was genuinely unbelievable. You catered for everybody and their styles of learning in one way shape or form, everybody was connected to the content."

"Absolutely remarkable and inspiring.

As a student teacher I was inspired by the dynamic of how you taught that unit. It's was f**king awesome Rina"

Micro student 2020 2024, 4 years later





"With my ADHD and anxiety about presentations, ever since I did that assignment in your unit, I remember how confident I felt, and now I can cope doing presentations in other units."

(Former student 2022, in-person communication May 2024).

Conclusion

Fostering creativity made the subject matter highly engaging, with enhanced knowledge retention.

Hence, as teachers in the tertiary setting, we need not shy away as role models for our students to also become passionate learners of our subject.





Joanne Castelli, Ifeoluwa MacKenzie, Stephanie Vialle, Tommy Woodward, Alexandra Yeung and Chen Zheng

BLENDED LEARNING 31 OCTOBER 2024

A global university

Western Australia | Dubai | Malaysia | Mauritius | Singapore



Belonging and connection

- The need to belong is a fundamental motivation for humans, and influences behaviour, cognition, and emotion (Baumeister & Leary, 2017).
- A "positive university" uses strategies to enhance well-being, resilience, and personal development among students, faculty, and staff (Oades et al. 2014).
- A sense of belonging and connection can have positive impacts on wellbeing, student transition and retention and academic outcomes (Wilson & Morieson, 2022).
- Ensuring student safety and wellbeing is one of the priorities of the Australian Universities Accord 2024.







Belonging and connection

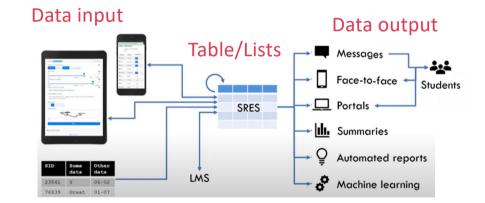
- It's also important for staff to feel a sense of belonging and connection and that they are supported by the university.
- Challenges to the wellbeing of both students and staff are exacerbated in predominantly online units and in units with large cohorts.
- For staff there can be a lack of connection with students, often coupled with a lack of feeling supported in the teaching and administration of large units.
- The prevalence of online learning has meant the use of technologies to provide online "pedagogies of care" has become even more important (Burke & Larmar, 2021).





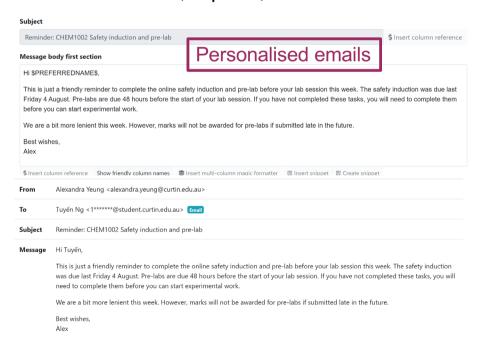
Strategies for belonging

- The Student Relationship Engagement
 System, or SRES, is an online tool that can be used to facilitate personalised engagement through features such as "getting-to-know-you" and "pulse checks".
- Through surveys and focus groups, we expect to assess the features of SRES that have the most impact on the promotion of inclusion, connection, belonging and wellbeing for both students and staff.

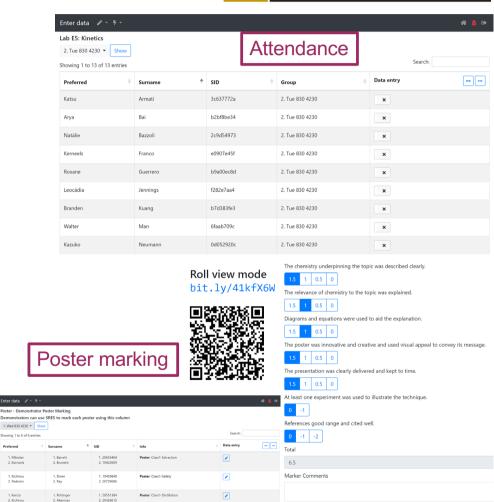


Undergraduate Chemistry

- Getting to know you (1st year)
- Attendance (1st year)
- Personalised emails (students and staff)
- Marking poster presentation, peerassessment, reports, lab notebooks







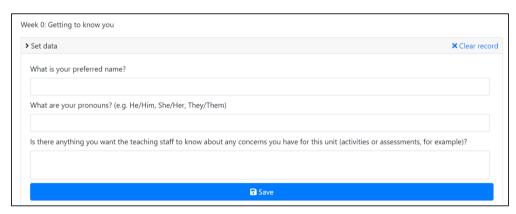
1, Wed 830 4230 - Show



STEM International Experiences Unit

- Games
- Social events
- Cultural events
- Group work
- SRES Getting to Know You

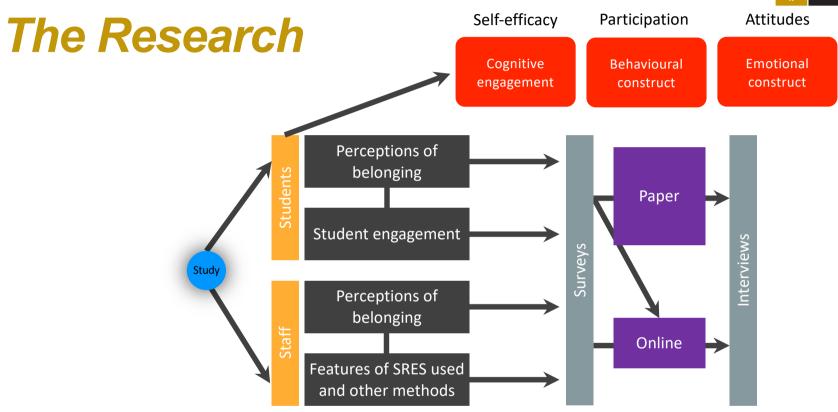






Find someone who				
B		N	G	
Find someone who fits each description and write their name in the corresponding spaces.				
Same birth month as you	Has a pet dog	Different faculty to you	Has 0 unread emails	Plays an instrument
Met a celebrity	Wearing glasses	Has helped you out on the trip	Best sense of style	Seen every season of the Office
Same number of siblings	Enjoyed the Niah Cave hike	Owned a Toyota Corolla	Born in the 2000s	Same hobby as you
Write your own item here	Changed degrees	Eaten something new on this trip	Doesn't have Instagram	You want to stay in touch with after the trip
Doesn't like humidity	Over 500 Curtin Oasis notifications	Knows how to say good morning in Malay	Has green eyes	Paid a parking fine on Campus





- Mixed-method study
- Diverse units
- Cross-disciplinary



Strategies for belonging

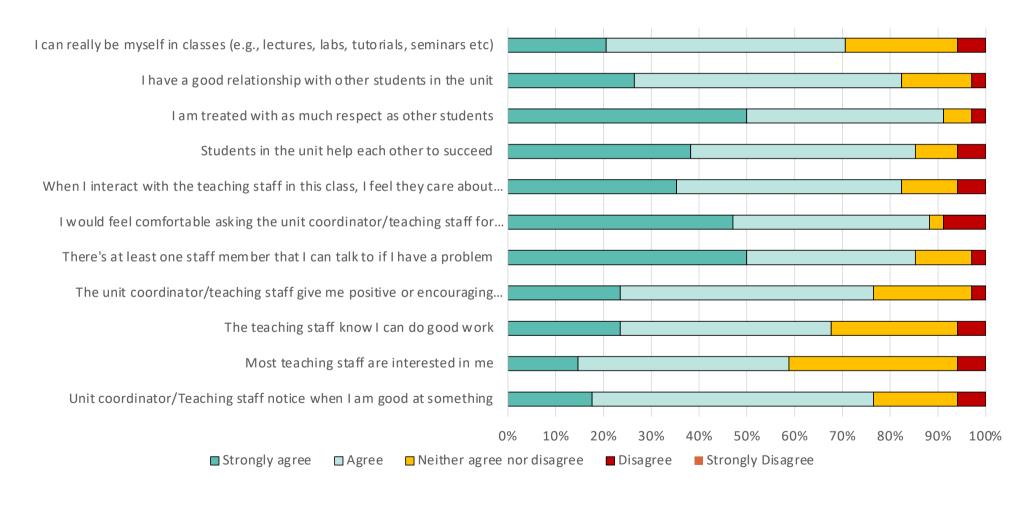
We will also gather information about other tools, strategies and pedagogies that:

- Promote belonging and connection
- Are effective for positive student and staff engagement and support, and
- Have the potential to alleviate staff workload and stress and enhance work efficiency.





The Data - Students





The Data - Students

What did the unit coordinator/teaching staff do to make you feel like you belonged in the unit?



"The teaching staff frequently check on the progression and understanding of students throughout class work. This interaction familiarises the students with the teaching staff, creating a sense of belonging"

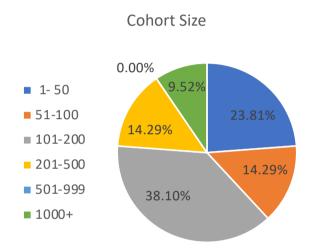
Please describe why the personalised emails were helpful/unhelpful.

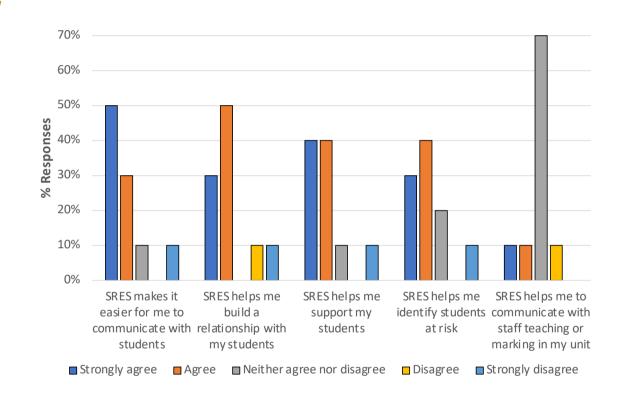


"Showed that the unit coordinator cared about us and that they pay attention to the students directly".



The Data – Staff



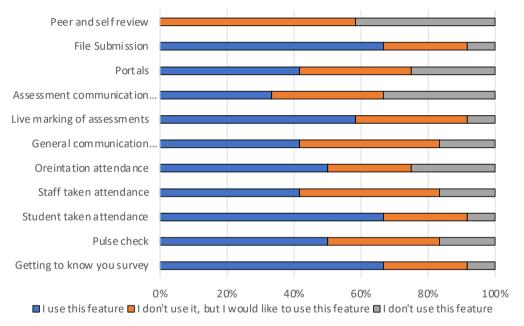


"The features allow me to reach out to all students, while tailoring the personalised email depending on individual situations"



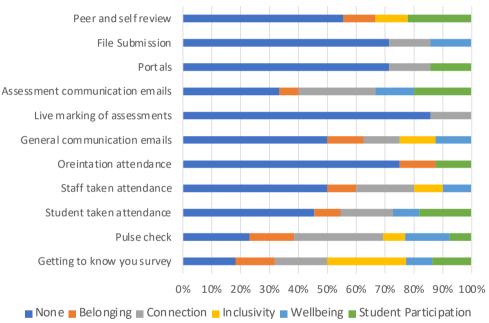
The Data - Staff

Features of SRES used by staff



"Assessment communication email is used to encourage student to seek more feedback after an assessment is completed, depending on their performance"

Behaviours each SRES feature you utilise promotes



"We have a highly variable cohort, so the survey allows us to gain useful context on individual students that we can be mindful of (e.g. anything about themselves they'd like us to be aware of)"

What's next?

- Focus groups with staff and students modelled on a semi-structured interview approach (Adeoye-Olatunde & Olenik, 2021).
- Quantitative analysis of student attendance, performance, retention and progression data, as indicators of student engagement, sense of belonging and feelings of self-efficacy (Kahu & Nelson, 2018).
- Continuing to Phase 2 of our research study, starting with modifying the current survey for wider distribution.



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Chanelle Wilson: Data Analysis
All our participating staff and students

Thank you

Make tomorrow better.

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Want to be part of our Blended Learning Community?

Join us for our next event and **forward** this to other colleagues at ECU and any of Perth's based Uni's who may want to join the BLC



y.al-abdeli@ecu.edu.au or e.leitner1@ecu.edu.au

Co-coordinators, BLC

Acknowledgements: Thank you to our presenters for consenting to share their slides which reflect their own experiences and personal opinions. **Access:** Summary notes (slides) of earlier BLC activities:

https://intranet.ecu.edu.au/learning/academic-development/learning-communities/blended-learning-community