The B Sc Quality for Industry Re-imagining Assessment





Our journey-by Ita Kelly, Marilla Keating, Trish O Connell

Guided by Emma and inspired from discussions with our colleagues in ATU Donegal and Sligo

- Overview of the B Sc Quality for Industry programmes at ATU Galway Mayo
- Why we signed up for this
- Capturing Assessment practices across all modules
- 4. Two Examples of re imagined assessments
 - Re-imagine Example 1: Final Assessment deployment from Moodle Quiz to Group **Assignment**
 - 2. Re-imagine Example 2: Moving towards Holistic Authentic Assessment
- 4. 5. What's happening next

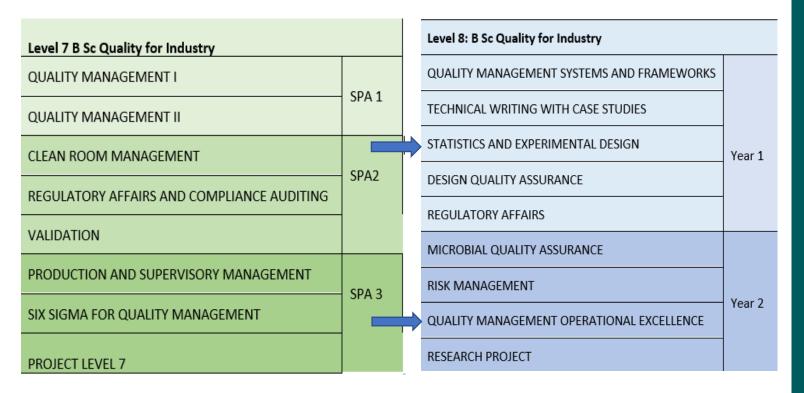
1. Overview of the Programme(s) and students

Level 7 is the BSc. in Quality for Industry (add on degree)

Level 8 is the BSc. (Honours) in Quality for Industry (add-on degree)

The aim of the programmes is to provide working adults with the skills to obtain key roles in quality management and quality engineering

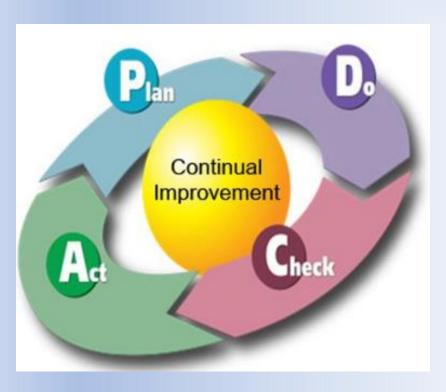






2. Why did we sign up for the re-imagine project?

Provided an opportunity to review Assessment Practices as it facilitated opportunities to review/reflect on current practice



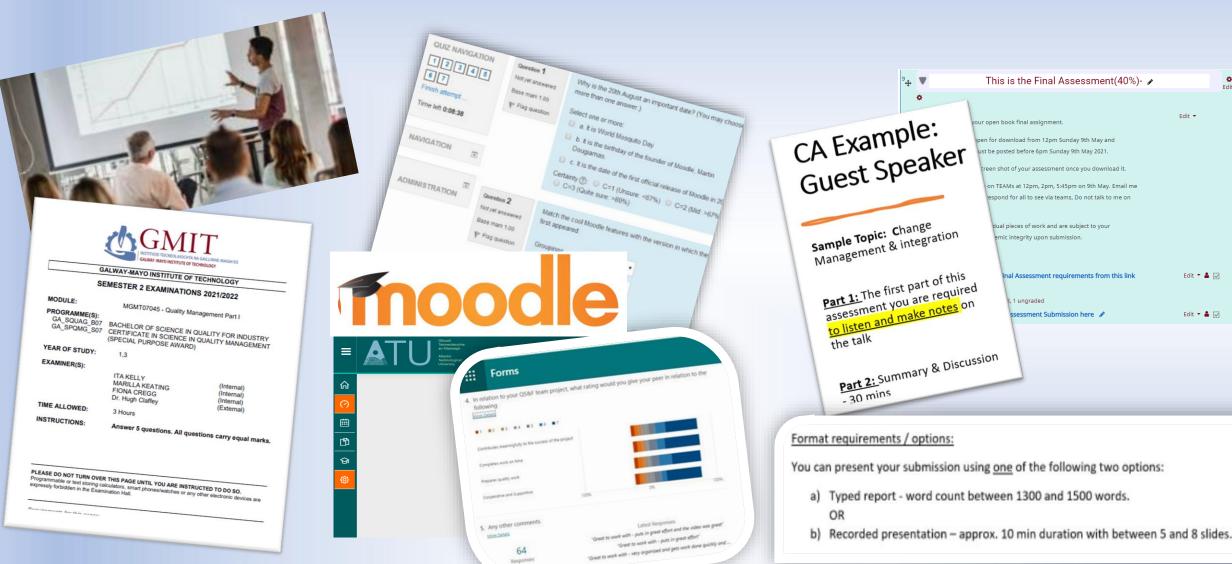
How has the re imagine project helped us?

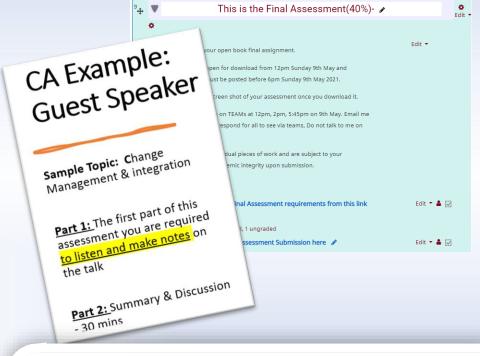
- Reminders about ATU wide masterclasses (on assessment)
- Opportunities to share with peers from Sligo & Letterkenny
- Opportunities to capture staff/student feedback on assessment practices
- Opportunities to grow/develop

Note: Our delivery had just been reviewed in 2022 from the INote project (Focus on digital enhancements), External Review (May 22), Post pandemic learnings so we thought it might be time to review our assessments

but....what was our starting point?

Here are a few screen shots of the type of assessments that were being practiced in 2021





3. Capturing assessment practices across all modules 2022-2023

Describe your a

used/planned f

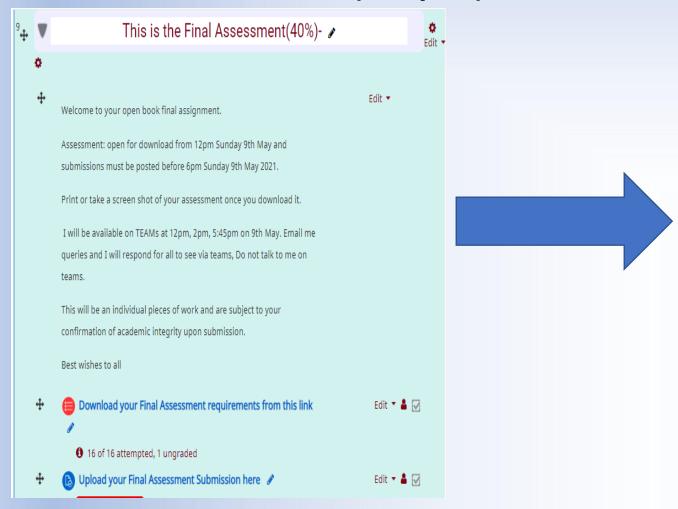


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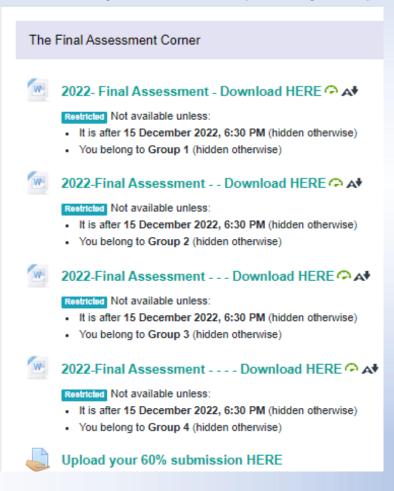
Re imagine example 1-Marilla- Review method of deployment

The Final Assessment -Scenario based final assessment- Unique scenario, same questions requiring students to apply theory to their allocated scenario. Open book. Open over 2 days (Fri-Sat) to suit schedule of working adult learners. Must be completed 6 hours from download.

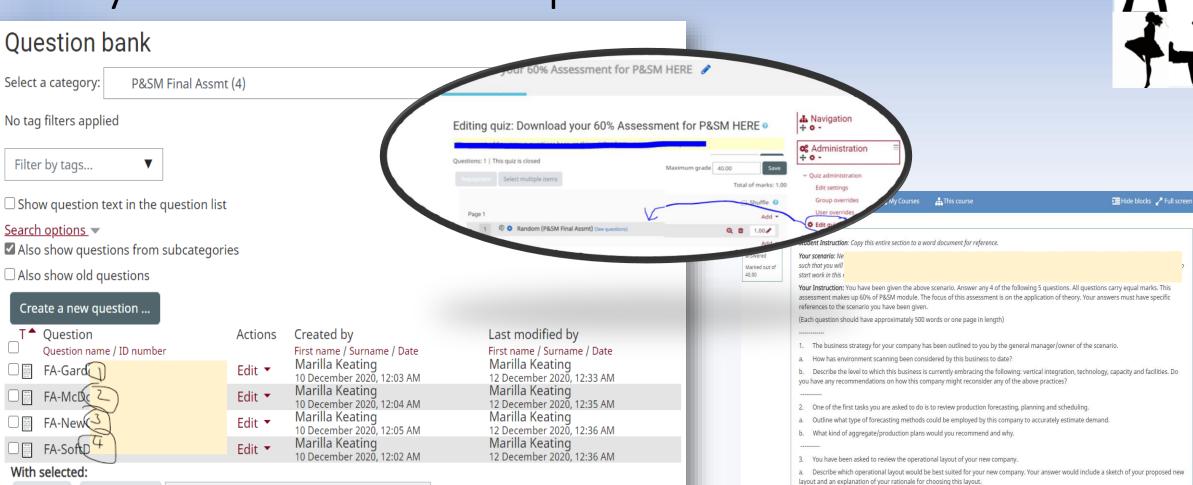
The Moodle Quiz method (last year)



The Group method (this year)



Last year: The moodle quiz method



X- Wifi dependent (as it's a moodle quiz)

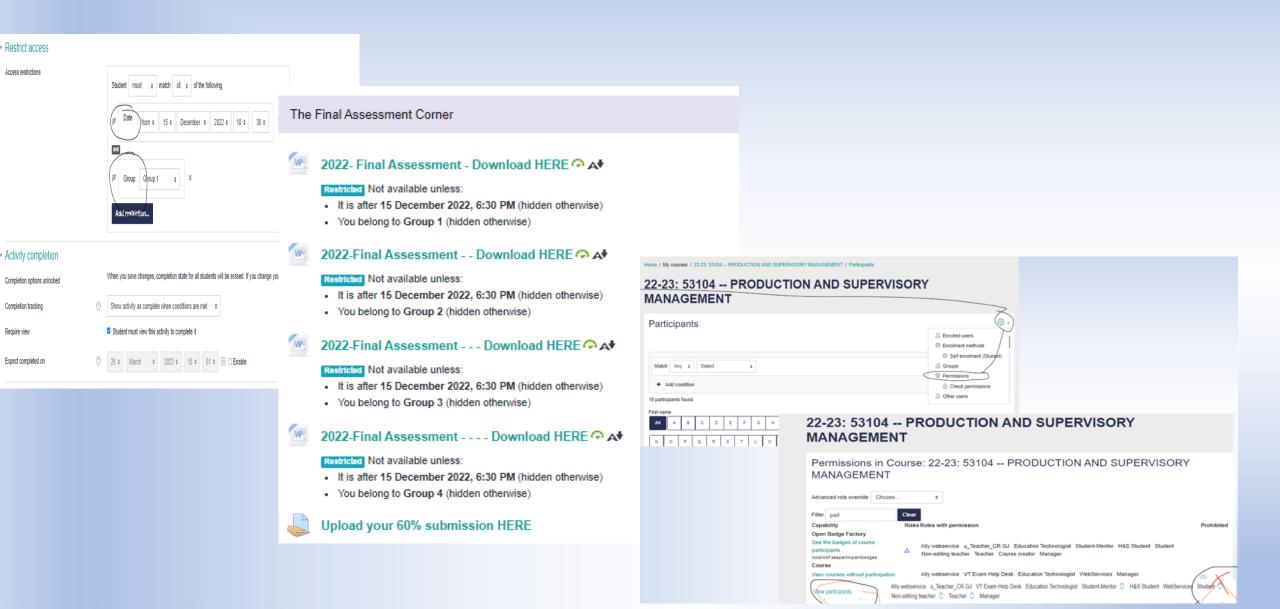
P&SM Final Assmt (4)

- X-If a students clicks on submit by mistake, it is not retrievable (as its 1 attempt)
- X- Tracking of the 6 hour timelimit is manual



The nocition of the product on the product life cycle affects operational decisions including operational launut so how has this influence.

This year: The Group method



This year: The group method



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Technological

ATLANTIC TECHNOLOGICAL UNIVERSITY

SEMESTER 1 FINAL ASSESSMENT 2022/2023

MGMT07049 -

PROGRAMME(S):

GA SQUAG B07

BACHELOR OF SCIENCE IN QUALITY FOR INDUSTRY GA SQSMG N07 CERTIFICATE IN SCIENCE IN QUALITY STATISTICS AND MANAGEMENT (MINOR AWARD)

YEAR OF STUDY: 1.3

EXAMINER(S):

MARILLA KEATING Dr. Adrienne Fleming

(Internal) (External)

Open Date: 6:30pm Thursday 15th December 2022 until 12pm Friday 16th December

Time allowed: 6 hours from download. All submissions must be uploaded by 6pm Friday 16th December 2022, Late submissions or submissions exceeding 6 hours may be subject to penalties.

This is an individual open book assessment. You can refer to external sources including lecture notes. Moodle page, and other external resources. All external resources must be acknowledged and correctly referenced with links provided for verification purposes.

Assessment-related conversations/interactions are not permitted with class members, work colleagues or other persons. All submissions are subject to further verification by interviews and/or via authentication systems such as ATU's plagiarism detection software systems.

You must document your responses to this assessment. Upload your 60% submission HI When you have completed your work, upload your submission as a single document in either a Word or PDF file and post to upload location in Moodle per screen shot opposite. Your responses can be typed or handwritten or a combination of both. Ensure you add you name/ID and page number in the format 'Name/ID P1 of 6' on each page of your document.

MGMT07049 - Production and Supervisory Management Semester 1 FINAL ASSESSMENT

Page 1 of 3

Instructions: Below is your scenario for this assignment. All questions must be answered making reference to your involvement in this company



Do that again

Your Instruction: You have been given the this scenario to understand your involvem answer any 4 of the following 5 question This assessment makes up 60% of P&SI assessment is on the application of theor references to the scenario you have bee

(Each question should have approximate

Question 1. The business strategy outlined to you by the general manar above scenario.

- To what extent has environment business to date and what do you recr its impact into the near future?
- Describe the level to which this following: vertical integration, technol any recommendations on how this or above practices?

- ✓ More accessible (EDI)
- ✓ Wont get lost- downloadable
- ✓ Wifi friendlier
- ✓ More professional looking presentation
 - ✓ Neat- word document.

But....still manual tracking...need to

revisit and improve



Holistic Authentic Assessment

Dr. Trish O'Connell

Then....

- Statistics & Experimental Design
- 10 credit, year long
- Assessment Strategy:

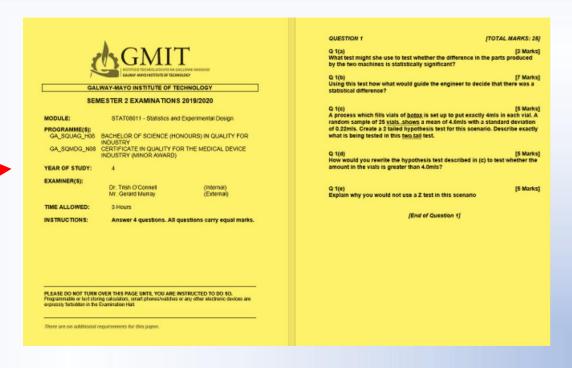
Coursework & Assessment Breakdown

Coursework & Continuous Assessment
30 %

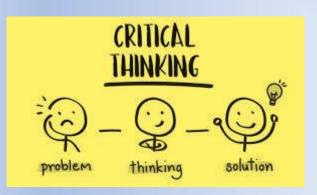
End of Semester / Year Formal Exam

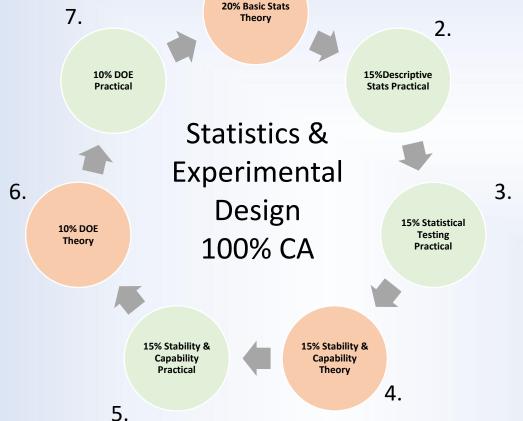
70 %

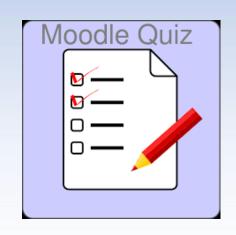
| Cou | rsework Assessment | | | | | | |
|-----|----------------------------|-----------------------|------------|---------|---------|--|--|
| | Title | Туре | Form | Percent | Week | | |
| 1 | Computer based Assessment | Coursework Assessment | Assignment | 15 % | Week 10 | | |
| 2 | Multiple Choice Assessment | Coursework Assessment | Assessment | 15 % | Week 16 | | |
| | | | | | | | |



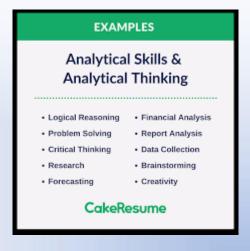
Now...Holistic Authentic Assessment











Authentic...

- Universal Design for Learning
 - Engagement
 - Representation
 - Action & Expression

Multiple Means of Engagement

Stimulate motivation and sustained enthusiasm for learning by promoting various ways of engaging with material.



Multiple Means of Representation

Present information and content in a variety of ways to support understanding by students with different learning styles/abilities.



Multiple Means of Action/Expression

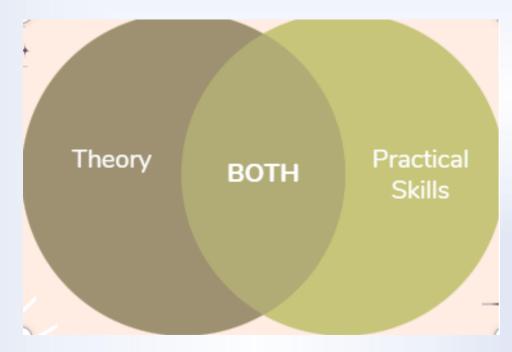
Offer options for students to demonstrate their learning in various ways (e.g. allow choice of assessment type).





Holistic...

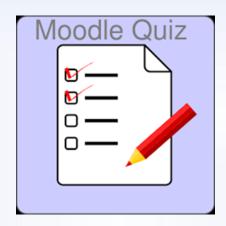
- A more integrated approach to evaluating student knowledge
- Previous approach somewhat fragmented
- Reimagined approach more cohesive and holistic

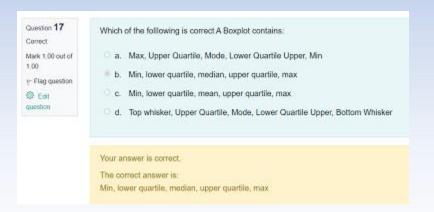


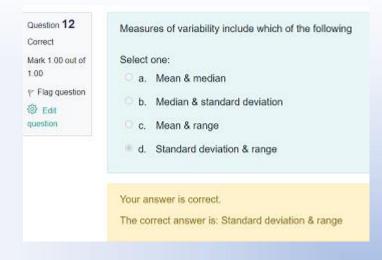
Integration better than fragmentation!!

Assessment of Theory..Part A

- Statistics theory is unequivocal
- Moodle MCQ:
 - Large question bank
 - Randomised delivery
 - Timed @1.5 mins per question
 - Immediate feedback and result on completion

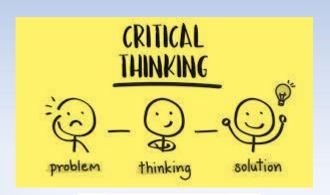






Assessment of Skill..Part B

- Authentic scenario
- Identify the issue
- Decide on appropriate statistical test
- Conduct the test using minitab
- Analyse the results
- Make informed conclusion





Minitab Statistical Software

Analytical Skills & Analytical Thinking - Logical Reasoning - Financial Analysis - Problem Solving - Report Analysis - Critical Thinking - Data Collection - Research - Brainstorming - Forecasting - Creativity CakeResume

Open the file AssessmentPartC.mpx

The data is taken from a <u>high volume</u> process that is running two production lines, line A and line B. Both machines <u>are</u> <u>identical</u> in every respect and are set up to run product which is effectively identical.. but is it?

- (a) Use your knowledge of Statistics AND Minitab to conduct an appropriate test to ascertain if product coming from Machine A is, in fact, statistically the same as product from Machine B
- (b) In addition to performing the test clearly state your conclusion referring to the null and alternate hypotheses that you used.

Task 1. Create a Yates Order Full factorial DOE for an experiment which has 4 factors at 2 levels.

Task 2. Using the same experiment create the half fractional factorial design

Task 3. For the final task consider the experiment that has 5 factors each at two levels as shown:

| Factor | Low level | High level |
|---------------|-----------|------------|
| Pressure | 50 | 80 |
| Temperature | 120 | 240 |
| Speed | 0.025 | 0.125 |
| Feed | 0.05 | 0.25 |
| Particle size | 200 | 400 |

Create the appropriate definitive screening experiment for this scenario.

Student Feedback

I really enjoyed the practical CAs that required some hands-on analysis with explanations. The MCQs were tough but fair

CAs were fair, a good mix of knowledge & practical.

the CAs felt fair and gave the opportunity to use my entire skill set

> CAs were designed well - they tested both my knowledge & skill

CAs were designed very comprehensively and I found them good to test the knowledge and practical ability of the students.

I enjoyed the balance of MCQs, Labs and the essay.

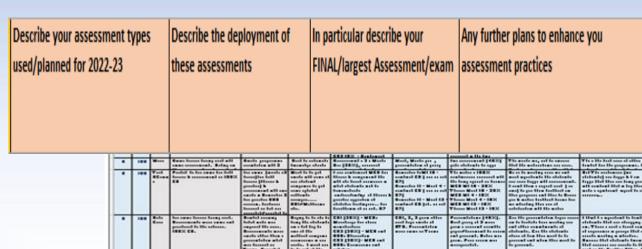
Good testing a theory in the MCQ's and the Minitab assessment were good at testing the ability to use the software

Back to our assessment practices across all modules

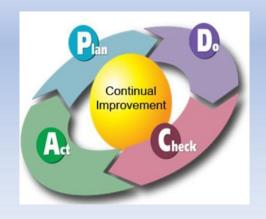
What has this Excel sheet informed us

- 1. There are a lot of assessments located during week 8-10
- 2. Assessments vary from on campus, to online to other
- 3. There is a lot of presentations as part of assessment
- 4. Some elements of cross module assessment practices are underway





What can we do next?



- √ Further digest this excel table
- ✓ Try to re balance the assessment load during week 8-10
- ✓ Consider other ways of cross module assessment opportunities.
- ✓ Looking forward to student feedback/colleague review of our programmes from 2022-2023
- ✓ Looking forward to exploring how to incorporate the presence/influence of AI

Thank you to Emma for your support

