



Scaffolding Success: Digitally Enhanced Learning for Civil Engineering Design Modules



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IDEAS

Inclusive & Digitally Enhanced
Assessment Support



WHY?



HOW?



WHAT?

Background



Support Strategies



Impact



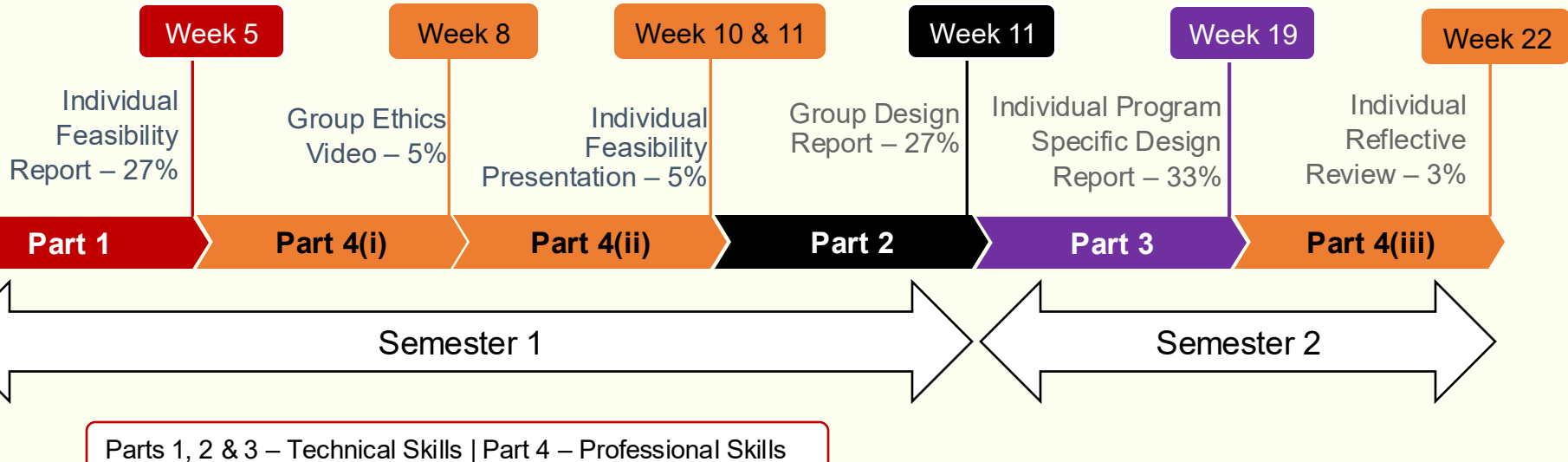
Actionable Tips

? Background



- Design project modules are crucial in the civil engineering curriculum, essential for meeting accreditation requirements and professional competencies.


Level 3 – Design Project Module (IDP3) Assessment Overview





? Key Challenges




 Complex, interconnected assessment tasks

 High skill-intensive

 Heavy reliance on self-directed learning

 Strong need for collaborative learning

 Limited early engagement with tasks



Blindly rely on AI



Scaffolding Success

- Providing students with the right kind of support to help them achieve rigorous learning goals.¹

Step 1: Provide Support

Step 2: Gradually Remove Support

Step 3: Foster Independence



¹Blackburn, B.R. (2024). *Scaffolding for Success: Helping Learners Meet Rigorous Expectations Across the Curriculum* (1st ed.). Routledge.
<https://doi.org/10.4324/9781003506560>



IDEAS

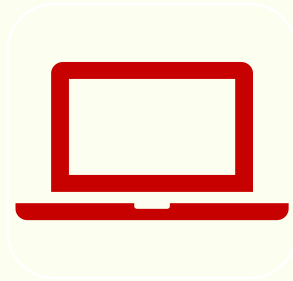
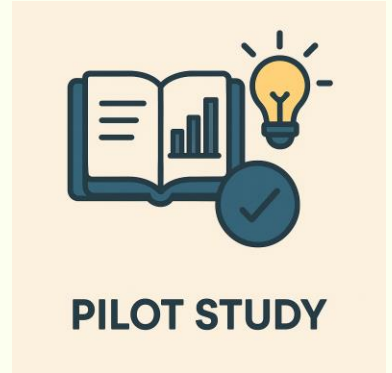
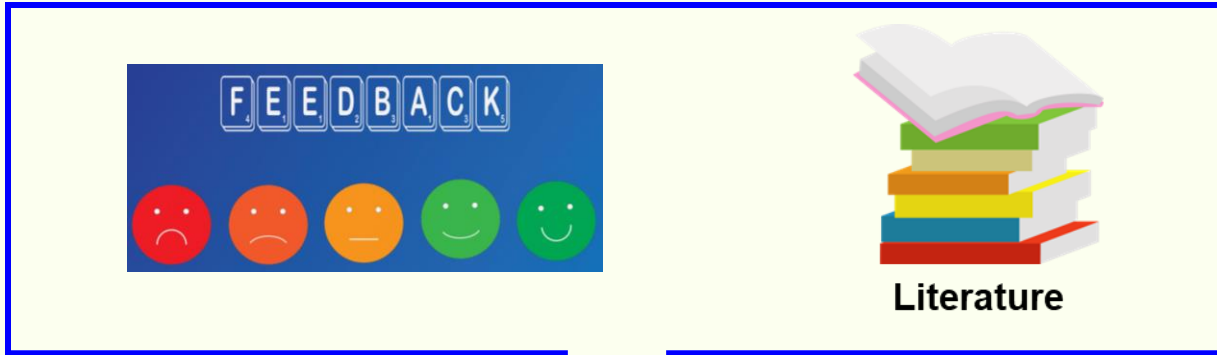
Inclusive & Digitally Enhanced
Assessment Support



Support Strategies



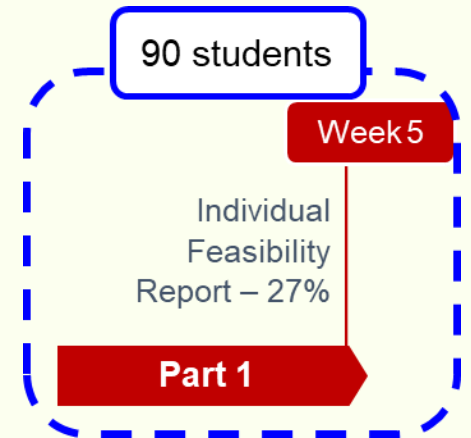
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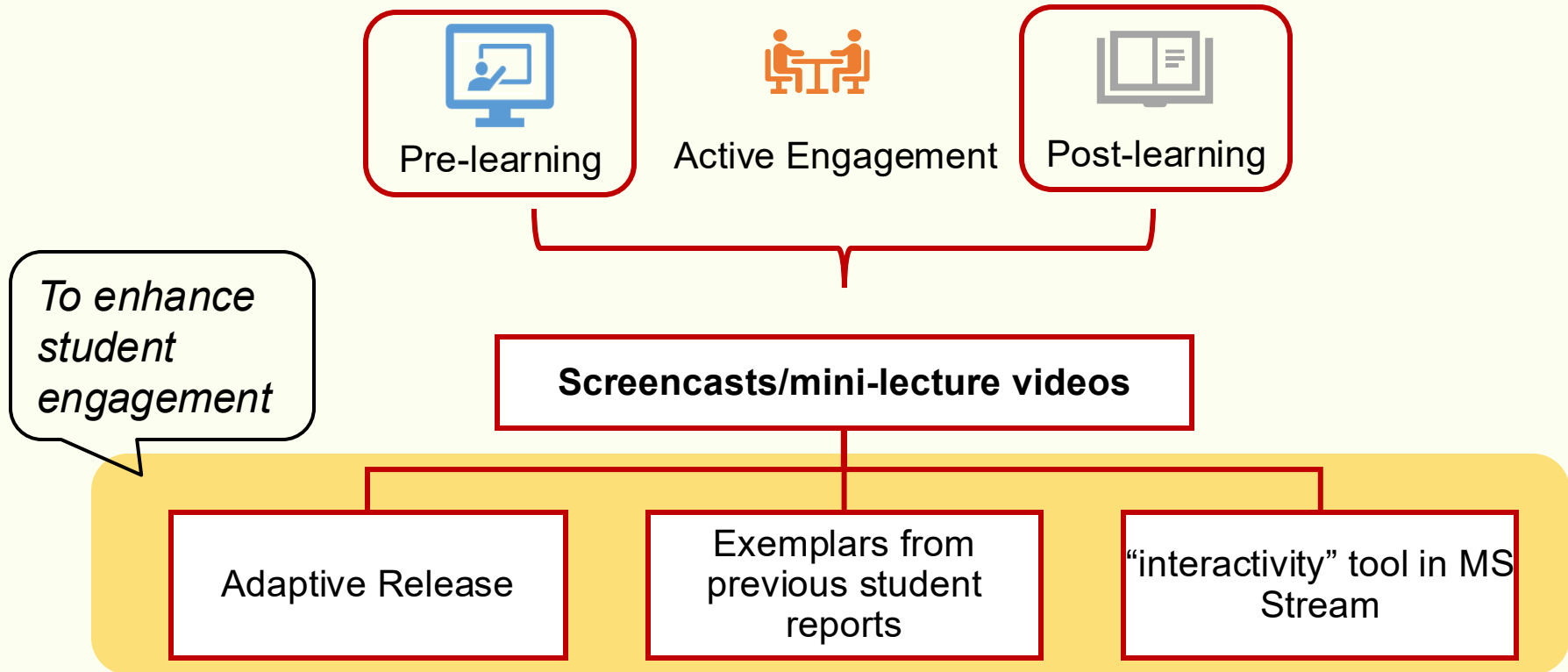
Digital Scaffolding



Collaborative learning



Used Flipped Micro-Learning





Digital Scaffolding (cont.)



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- Adaptive Release



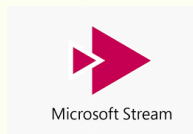
- Exemplars from previous student reports

[Example] Solution Characteristics Assessment

The attached table is an excerpt from a previous (23/24) student report, provided to show how they conducted their solution characteristics assessment. Please note that this student combined several assessments, covering four solution characteristics within those sections. As a result, they only had three remaining to address in their solution characteristics assessment table. Keep this in mind as you structure your own assessment.

Solution Characteristics Assessment - example from 23-24 student reports.pdf

- Active Learning

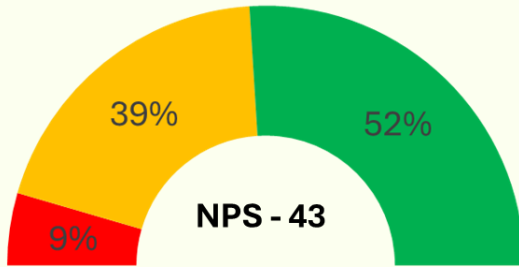


“Interactivity” tool

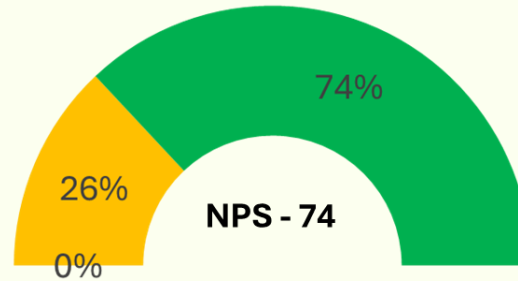
✓ Digital Scaffolding - Impact



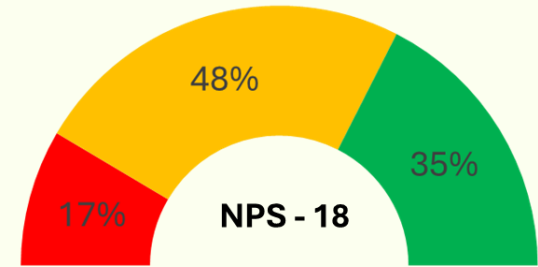
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Adaptive release



Exemplars



"interactivity" tool



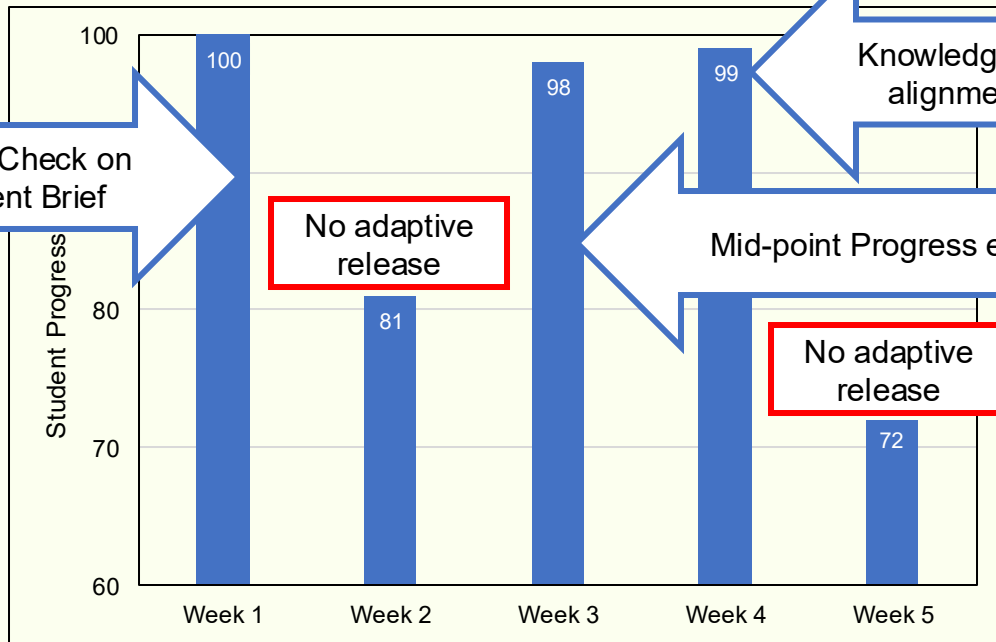
✓ Digital Scaffolding - Tips



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✓ Plan Adaptive Release Strategically to enhance student engagement



Preliminary Design Resources

Knowledge Check on Assessment Brief

No adaptive release

Mid-point Progress evaluation

No adaptive release

Knowledge Check on alignment design

Previous student exemplars



Collaborative Learning




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A co-created FAQ board on Padlet, promoting student interaction and collaborative learning.

Part 1 - Feasibility Study Q&A Board [2024/25]
Please post any questions related to the feasibility study here. Make them specific and clear to receive the most helpful response. Click the plus icon. Be sure to add a subject line for easy navigation. You can also upvote any question sn to yours.



About the Project	Stakeholder requirements	Criteria used to select the routes	Preliminary Alignment Design	Report Content	Report formatting and structure	Referen
<p>Financial Appraisal and Cost Benefit Analysis</p> <p>Is there a budget/ time scale for the project?</p> <p>Ashani Ranathunga 1mo</p> <p>Ashani Ranathunga 22d</p>	<p>Who is our Client?</p> <p>You can consider Department for Transport (DfT) and North Yorkshire Council as the clients.</p> <p>Ashani Ranathunga 22d</p> <p>Client requirements</p> <p>what are the general requirements of the client for the project and what considerations are most important to you.</p> <p>Ashani Ranathunga 22d</p>	<p>Need separate assessment tables for each route?</p> <p>Do we do an assessment table for each route, so in total, we would have 3 tables related to each assessment section of the report?</p> <p>Ashani Ranathunga 22d</p> <p>Ashani Ranathunga 22d</p> <p>Ashani Ranathunga 16d</p>	<p>Using existing roads for the bypass</p> <p>Can we use an existing road as a section of the bypass?</p> <p>Ashani Ranathunga 1mo</p> <p>Ashani Ranathunga 22d</p> <p>Ashani Ranathunga 16d</p>	<p>Assessment Tables</p> <p>Once we do the EIA assessment for each proposed route, do we put this in the appendix and only include a summary table in the main body of work? or do we just put the tables in the appendix act towards my final word count?</p> <p>Ashani Ranathunga 22d</p> <p>Ashani Ranathunga 22d</p> <p>Section 3 & 4 contents</p> <p>I just wanted to confirm that for criteria used to select routes, are we only supposed to be talking about how we are going to select the routes and what goes into consideration and that we actually talk about the routes in the next section (3 alternative options).</p>	<p>Tables word count</p> <p>Regarding the word count for the feasibility report, it mentions in the brief that the appendix doesn't count towards the word count, but the tables do count. Do the tables in the appendix act towards my final word count?</p> <p>Ashani Ranathunga 22d</p> <p>Flow charts words count</p> <p>Are the words in flow charts included for the final word count?</p> <p>Ashani Ranathunga 22d</p>	<p>Are there besides to research and refer and recommen</p> <p>Ashani We have matter you get additional reason. Please acaden addtio support</p> <p>Ashani Link to https://project-projekt-23002-auth-3-00511/</p> <p>Copyrig</p> <p>I have a nersal however, to put it i</p>



A deadline for inquiries was introduced (end of the 4th week) to reduce last-minute questions:

- minimising student stress and anxiety
- promoting timely engagement with tasks

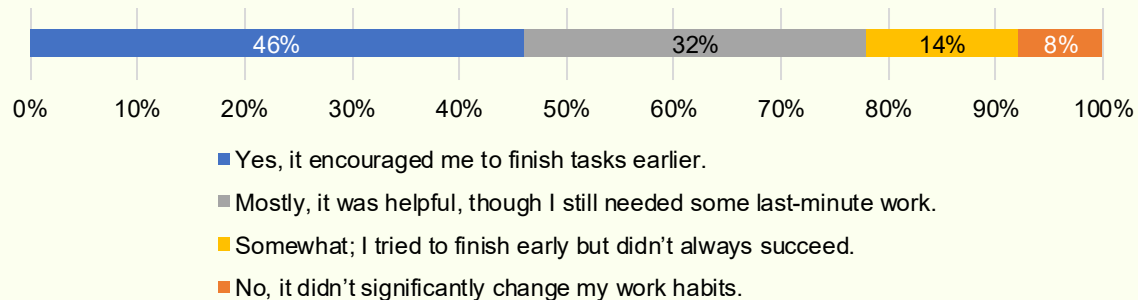


The Q&A board was super helpful, not just for asking questions but also for getting clarification on things I was unsure about.

The organised layout made it easy to find the sections I needed quickly.

Being able to collaborate on Padlet was great since we could discuss and dive deeper into some really useful questions together.

Did setting a deadline for inquiries motivate you to complete tasks in advance and avoid last-minute stress?



- ✓ Suitable for large classes
- ✓ Reduce workload

Be mindful of students who may need extra support, even beyond the deadline.



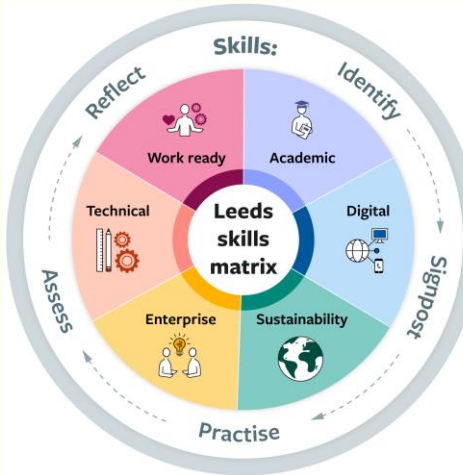
Actionable Tips...



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Encourage students to identify key skills early on.

Provide sample ideas to help kick-start the process.



Skill Review for the Feasibility Study

As you prepare for the **Feasibility Report** and **Presentation**, reflecting on the key skills needed to complete these tasks successfully is crucial. The following review will help you assess your competency in each skill area, identify areas for improvement, and align them with the specific parts of the assessment.

This skill review aligns with the [Leeds Skills Matrix](#), encompassing key domains such as **Academic**, **Digital**, **Sustainability**, **Enterprise**, **Technical**, and **Work-Ready** skills. Each of these skill areas is crucial for the successful completion of your feasibility study and presentation, providing a structured approach to reflect on your current capabilities and identify areas for development.

Choose one of the following for each skill to evaluate your current proficiency level.

- **Beginner:** I am not confident in this skill and will need support or guidance.
- **Intermediate:** I am somewhat confident, but I could improve with more practice or resources.
- **Advanced:** I am confident in my ability to perform tasks related to this skill independently (100% marks)

Please reflect on how it relates to the various tasks in the report and presentation. This will guide you in seeking additional resources or support where necessary.

Skills@Library

Take your learning to the next level with Skills@Library. We help you to develop your academic skills in a way that suits your learning, including one-to-one sessions, workshops and online resources.

Weekly Work Plan: How to Effectively Organize Your Feasibility Study

You may refer to this weekly work plan to help you complete the report efficiently and submit it on time. It is designed to guide you in planning your work over the next five weeks, aligning with the module's teaching and learning activities. Feel free to modify the plan to suit your circumstances.

The resources are organized week by week, starting with an introduction to help you get started. Please note that the available captions in the MS Stream are auto-generated and may contain errors.

Introduction

Weekly Work Plan for Feasibility Study UNIVERSITY OF LEEDS

Week 1: Preparation	Week 2: Analyse Alternatives	Week 3: Draft the Report	Week 4: Optimization	Week 5: Submission
<ul style="list-style-type: none"> Review assessment brief and resources Draft report outline with main sections Research project area and gather references. 	<ul style="list-style-type: none"> Select three route options using Google Earth Pro. Preliminary design for each route. Establish selection criteria and draft assessment tables. Conduct background reading to support analysis. 	<ul style="list-style-type: none"> Start drafting key sections (Introduction, Stakeholder Requirements, Routes). Create and integrate visuals (maps, tables, figures). Refine route designs as needed. 	<ul style="list-style-type: none"> Complete route assessments and select the best option. Create A3 alignment drawing for the chosen route. Finalize content and ensure smooth report flow. Verify references for accuracy and style. 	<ul style="list-style-type: none"> Proofread and ensure clarity. Cross-check with assessment rubric. Complete self-assessment form. Submit report by 21st October 2024 before 23:59

0:00 / 7:43 Deadline for inquiries: 24th October 2024 before 23:59



Actionable Tips...



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Provide opportunities for understanding and improving work → **FORMATIVE FEEDBACK**

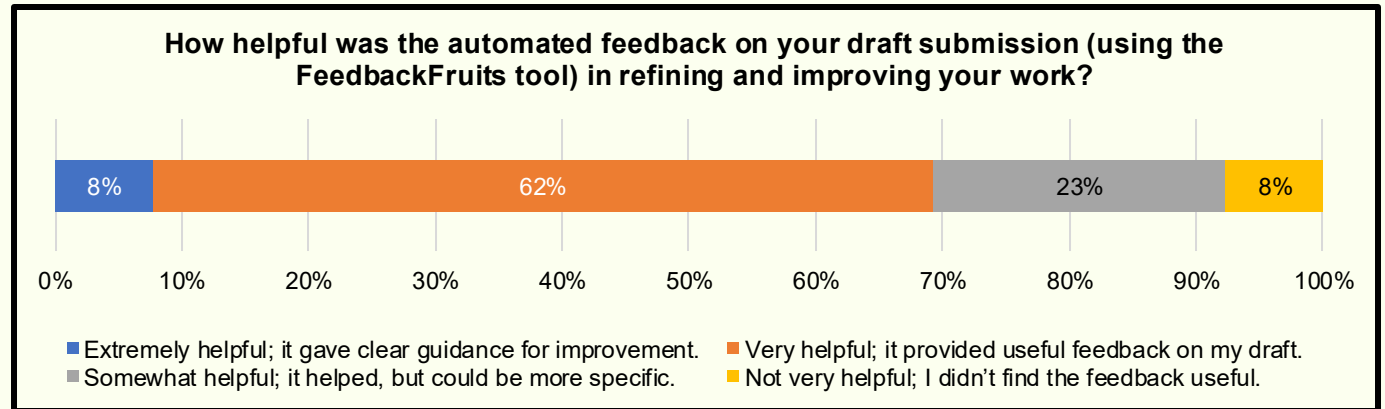


FeedbackFruits

Can be used to
provide peer
feedback
opportunities

Automated Formative Feedback

To support diverse students in developing writing skills.





Actionable Tips...



Provide opportunities for understanding and improving work

Self-Assessment

- Students used the summative assessment rubric
 - ✓ to improve assessment literacy
 - ✓ to identify specific criteria for targeted lecturer feedback



“It gave me a clear understanding of what was expected and let me identify areas to improve before submitting my report. It felt like a good way to check my own work and make sure I was on the right track!”

A Call to Action



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*Inclusive practice is **not a static goal**; it remains **a continuous and evolving journey**.*

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Please feel free to reach out...



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