



ENssentials Quick Guide: Assessment Design

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What's the problem?

Ineffective assessment design can negatively impact student learning, create unnecessary stress, and lead to inaccurate evaluations of student progress. Some common assessment design issues include:

- **Misalignment with learning outcomes:** Assessments that do not accurately measure the intended learning outcomes fail to provide meaningful evaluation of learning and feedback (Brown et al., 2013).
- **Lack of clarity and transparency:** Unclear assessment instructions, confusing grading criteria, and inadequate communication of assessment literacy and assessment completion expectations can lead to student/staff frustration and uncertainty (Johnston, 2010).
- **Overemphasis on rote memorization:** Assessments that solely focus on regurgitating facts and formulas do not encourage developing higher-order thinking skills, critical analysis, and creative problem-solving. These higher-order thinking skills are necessary for all 21st century workplaces. Staff are encouraged to closely align their assessment methods with PSRB requirements and industry expectations (Brown, 2020; McGunagle & Zizka, 2020).
- **Inequitable assessment methods:** Assessments that put specific groups of students at a disadvantage can create barriers to success for diverse student populations (Tai, 2023; Tai et al., 2021). At Edinburgh Napier, this means assessment design needs to cater for various student groups such as international students, mature students, and those with specific diagnosed learning needs as outlined in their student learning profiles.

Why is it important?

Effective assessment design plays a crucial role in achieving high-quality learning outcomes. It fosters:

- **Deep learning and understanding:** Well-designed assessments encourage students to

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engage with complex concepts, apply knowledge to new situations, and develop critical thinking skills (Bean & Melzer, 2021). The development of critical thinking skills is a key skill for Higher Education students as they engage with models of knowledge and subject theories. Fostering these skills is essential for both international and domestic home-based students (Graham, 2022).

- **Applied and Authentic Assessment:** Supporting students to apply their conceptual knowledge through assessing them in ways that allow their application of learning can support criticality development. Criticality, as an attribute, skill and disposition in graduates, is particularly important now in a time of increasing complexity helping prepare students to critically engage with their world. Use of authentic assessments that incorporate real-world tasks, relate to contemporary societal issues/topics can allow students to demonstrate their theoretical learning and development as critical thinkers.
- **Motivation and engagement:** Assessments that align with learning outcomes and provide clear feedback can motivate students to actively participate in their learning and pursue knowledge beyond the types of learning they experience at university. In sum, they promote lifelong learning.
- **Accurate assessment of student progress:** Effective assessments provide reliable and consistent measures of student achievement, enabling teaching staff to tailor lecture input and support accordingly.
- **Fair and inclusive learning environment:** Assessments that consider diverse learning preferences, cultural backgrounds, and accessibility needs promote equity and inclusion in the classroom (Fuentes et al., 2021).

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What can we do?

You can implement several strategies to design effective assessments:

1. **Align assessments with learning outcomes:** Ensure that assessments directly align with the intended knowledge, skills, and competencies mentioned in those outcomes.

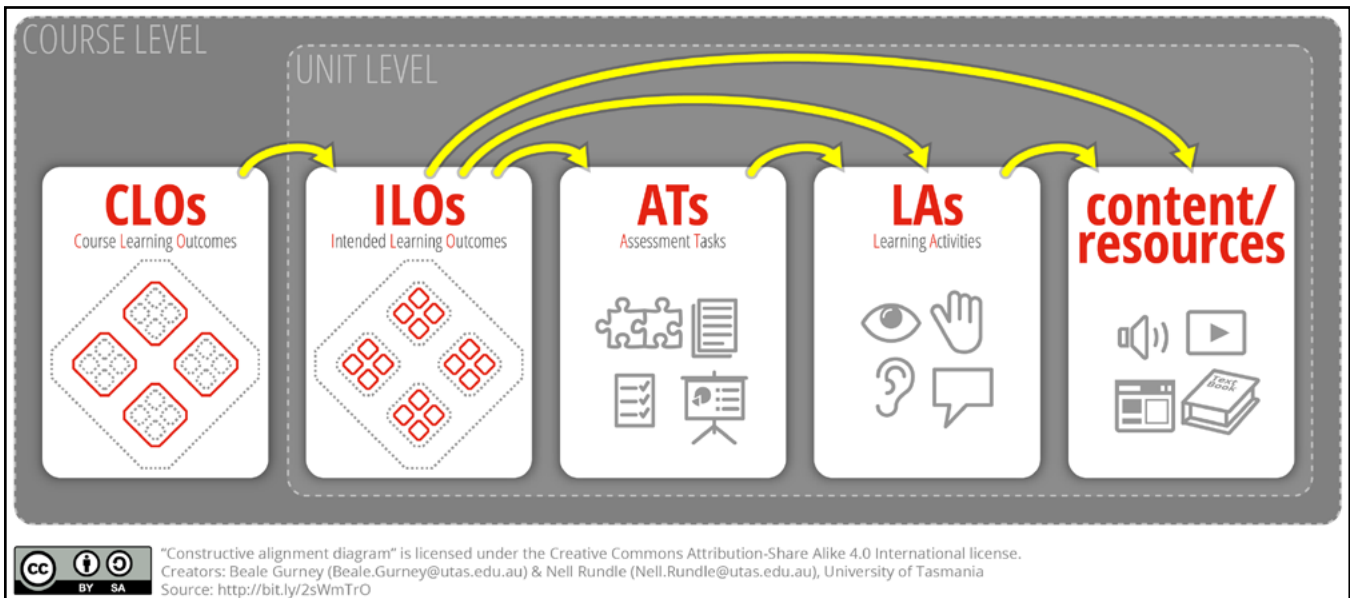


Figure 1. [Constructive alignment \(Gurney & Rundle, 2024\) CC BY-SA](#)

See also the programme level [mapping example](#) (Slide 14) from Dr. Jennifer Murray.

2. **Provide clear and transparent instructions:** Clearly communicate assessment expectations, including task requirements, grading criteria, submission deadlines, and rubrics (if applicable). You can check that your expectations and requirements match student understandings by using the [EAT framework](#) 'wheel' in Appendix B.

3. **Utilize a variety of assessment methods:** Employ a range of assessment formats, such as essays, problem-solving exercises, presentations, projects, and portfolios, to cater to different learning preferences and assess diverse skills (O'Neill & Padden, 2021). These methods should be underpinned by [Universal Design for Learning \(UDL\) principles](#). See exemplars of authentic assessment on the related Quick Guide and the work of [Dr. Catherine Mahoney in SHSC](#).

4. **Emphasise higher-order thinking skills:** Design assessments that require students to analyse information, synthesize ideas, evaluate evidence, and apply knowledge to solve problems or create new solutions. This emphasis should be appropriate for relevant SCQF levels and module/programme level learning outcomes.

5. **Incorporate formative and summative assessments:** Use formative assessments, such as quizzes and in-class activities, to provide regular feedback and guide student learning. Employ summative assessments, such as projects, to evaluate overall understanding and

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achievement.

6. **Consider accessibility and inclusivity:** [Design assessments](#) that are accessible to students with disabilities or other diverse learning needs. Provide alternative assessment formats or accommodations when necessary. Signpost students to relevant diversity and inclusion resources and rights on [My Napier](#).

7. **Seek feedback and feedforward:** Regularly solicit feedback from students, colleagues and external examiners on the effectiveness of assessments. Use this feedback to refine assessment design and improve student learning

Further Reading:

Bean, J. C., & Melzer, D. (2021). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom*. John Wiley & Sons.

Brown, G. A., Bull, J., & Pendlebury, M. (2013). *Assessing student learning in higher education*. Routledge.

Brown, S. (2020). *Learning, teaching and assessment in higher education*. Red Globe Press.

Fuentes, M. A., Zelaya, D. G., & Madsen, J. W. (2021). Rethinking the course syllabus: Considerations for promoting equity, diversity, and inclusion. *Teaching of Psychology*, 48(1), 69-79.

Graham, C.W (2022). *Preparing for uncertainty? Investigating the development of criticality amongst master's students at three UK universities*. [Unpublished PhD thesis], The University of Glasgow.

Gurney, B., & Rundle, N. (2024). *Constructive alignment*. <https://www.teaching-learning.utas.edu.au/unit-design/constructive-alignment>

Johnston, B. (2010). *The first year at university: Teaching students in transition*. McGraw-Hill Education.

McGunagle, D., & Zizka, L. (2020). Employability skills for 21st-century STEM students: the employers' perspective. *Higher Education, Skills and Work-Based Learning*, 10(3), 591-606.

O'Neill, G., & Padden, L. (2022). Diversifying assessment methods: Barriers, benefits and enablers, *Innovations in Education and Teaching International*, 59(4), 398-409, DOI: 10.1080/14703297.2021.1880462

Tai, J., Ajjawi, R., Bearman, M., Boud, D., Dawson, P., & Jorre de St Jorre, T. (2023). Assessment for inclusion: Rethinking contemporary strategies in assessment design. *Higher Education Research &*

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Development, 42(2), 483-497. <https://doi.org/10.1080/07294360.2022.2057451>

Tai, J., Ajjawi, R., & Umarova, A. (2021). How do students experience inclusive assessment? A critical review of contemporary literature. *International Journal of Inclusive Education*. <https://doi.org/10.1080/13603116.2021.2011441>

Any questions

Please get in touch with us at dlte@napier.ac.uk with any questions.

Appendices

Appendix A: Assessment Design Question Checklist for New Assessments

1. Alignment with Learning Outcomes:

Are the assessment tasks clearly linked to the specific learning outcomes of the module or course?

Does the assessment measure the intended knowledge, skills, and competencies?

2. Clarity and Transparency:

Are assessment instructions clear, concise, and easy to understand?

Are grading criteria clearly defined and communicated to students?

Are submission deadlines and expectations clearly stated?

Is a rubric or marking scheme provided to guide student understanding?

3. Variety of Assessment Methods:

Does the assessment employ a range of task formats to cater to different learning preferences and assess diverse skills?

Are there opportunities for individual and collaborative work?

Does the assessment allow for the demonstration of higher-order thinking skills?

4. Formative and Summative Assessments:

Are there opportunities for formative assessment to provide regular feedback and guide student learning?

Are summative assessments used to evaluate overall understanding and achievement?

5. Accessibility and Inclusivity:

Are assessments accessible to students with disabilities or other diverse learning needs?

Are alternative assessment formats or accommodations provided when necessary?

6. Feedback and Feedforward:

Do students receive timely and constructive feedback on their assessments?

Is there a mechanism for collecting feedback from students and colleagues on assessment effectiveness?

Is there a process for refining assessment design based on feedback?

Do students also receive feedforward guidance that they can use in future assessments?

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Appendix B: Assessment Design Evaluation for Existing Assessments

The [EAT Framework](#) can be used to encourage staff and students to evaluate existing assessments (Evans, 2016). The 'scoring' sheets below require staff to score their assessments under the three dimensions of: assessment design, assessment literacy and assessment feedback. Examples of how staff and student scoring may vary are provided. Variation indicates how staff and students may 'see' the success of their assessments very differently.

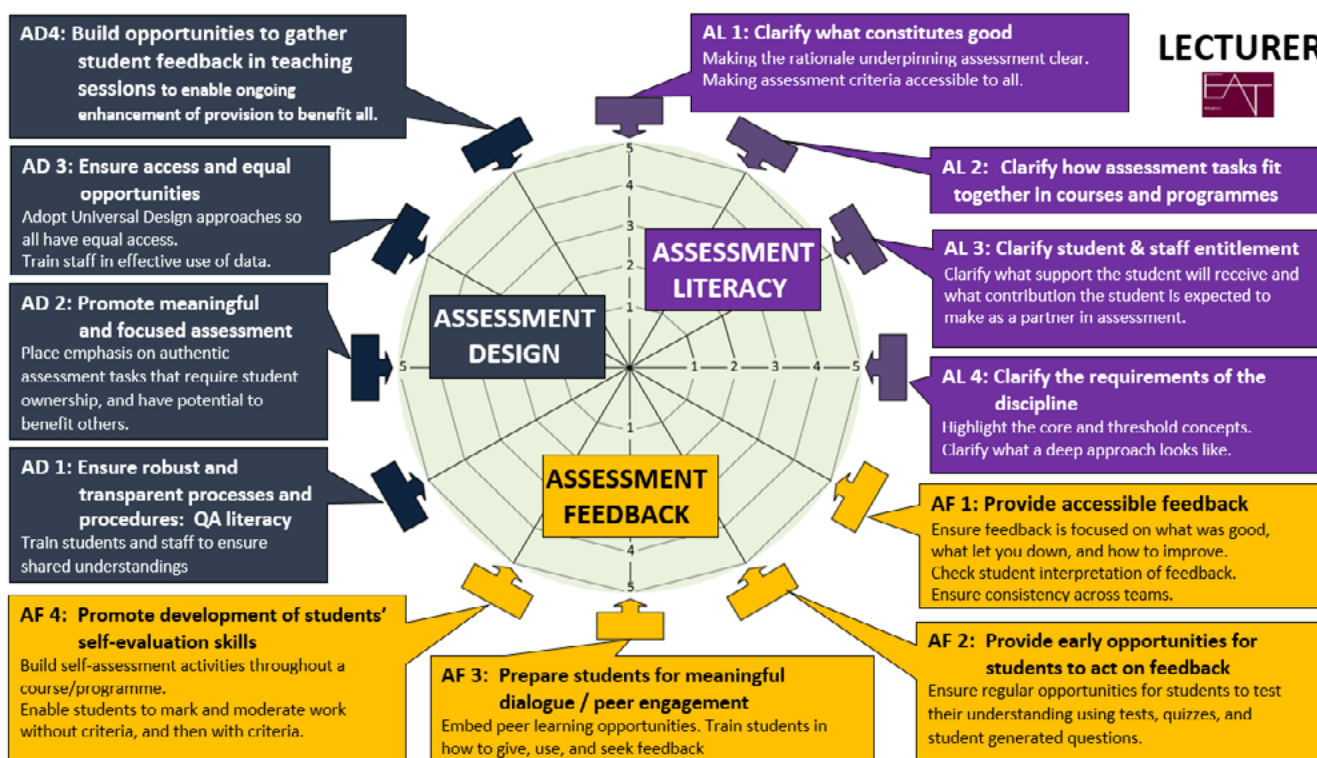


Figure 2. EAT Framework for Lecturers' Scoring Assessments

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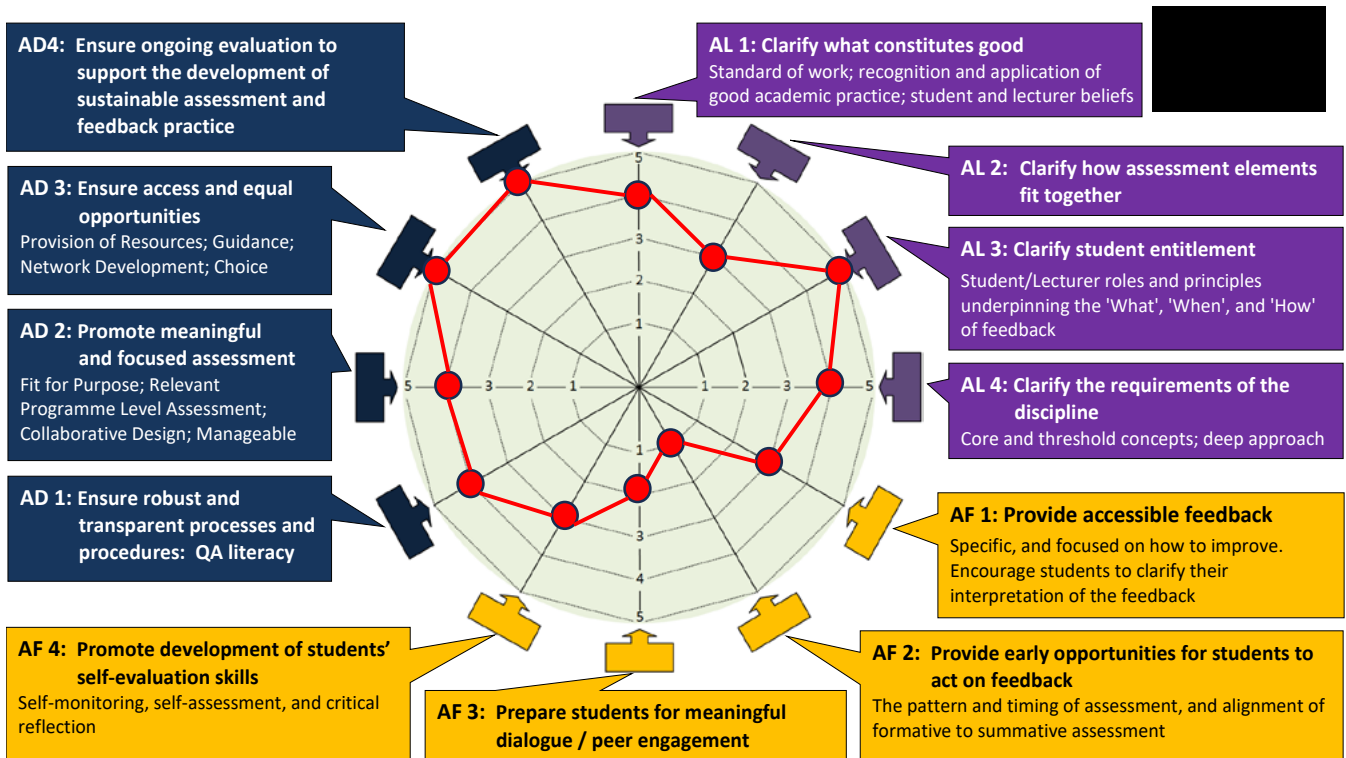


Figure 3. EAT Framework for Lecturers' Scoring Assessments – Example Scores

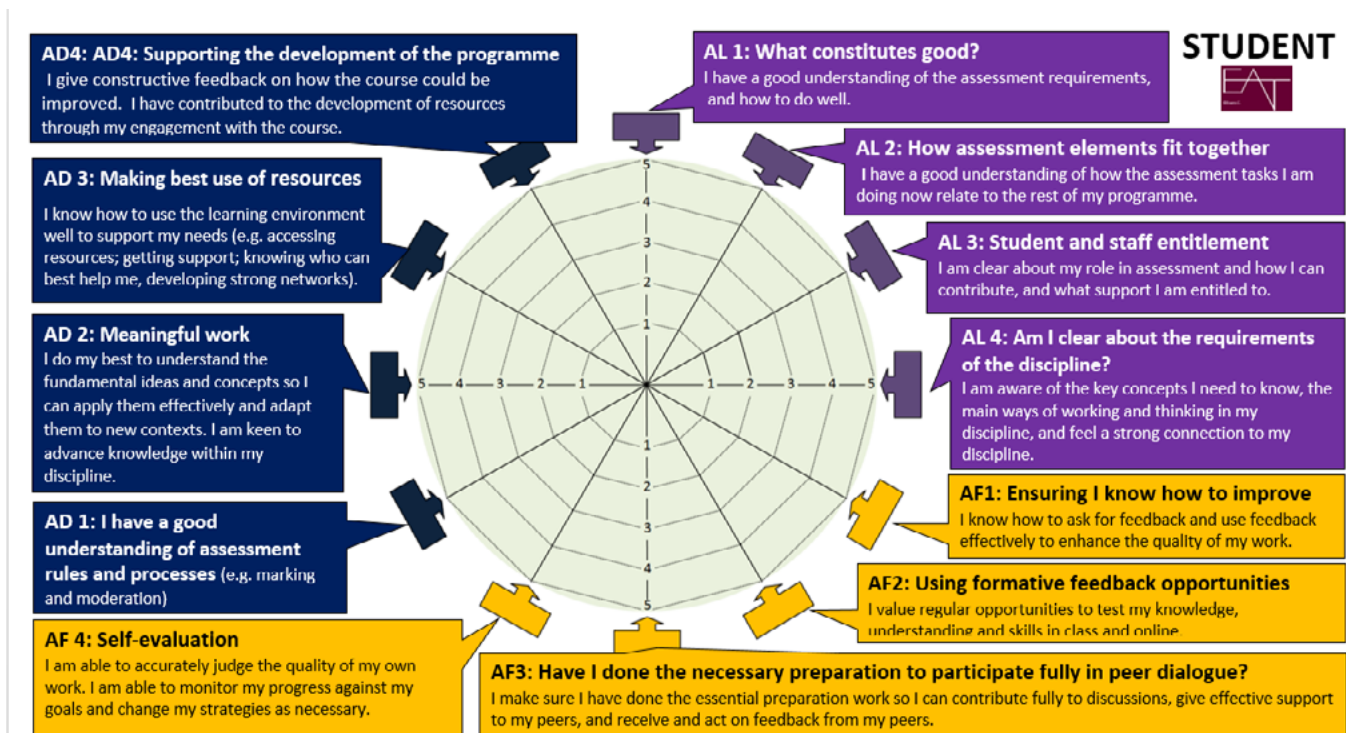


Figure 4. EAT Framework for Students' Scoring Assessments

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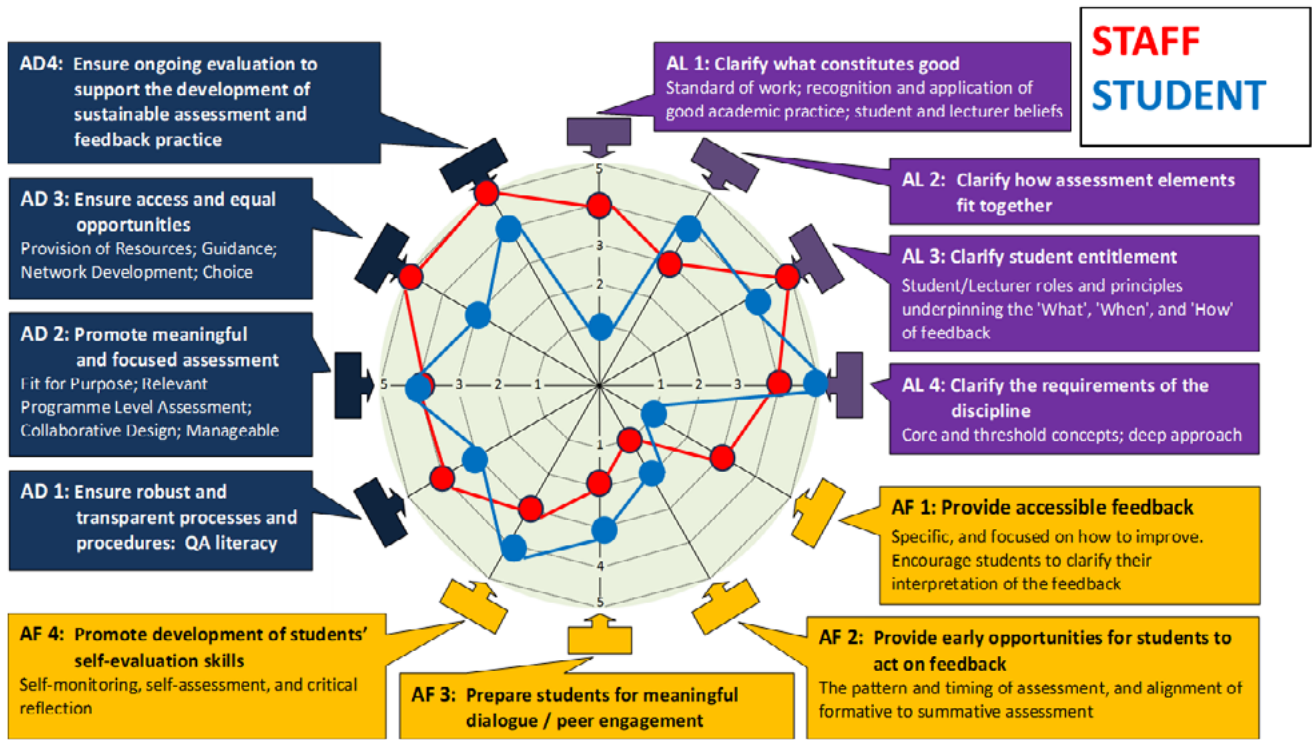


Figure 5. EAT Framework showing Staff and Student Score Variations

Appendix C: Effective Assessment Tasks and Task Reform with Artificial Intelligence

The following tasks can be used to provide alternatives to [traditional written essays](#) and reports. You may also find the [JISC examples](#) useful to tap into a variety of different skills and competencies.

1. Problem-Solving Exercises:

- Students are presented with a complex problem or scenario and asked to analyse the situation, develop a solution plan, and implement the solution.

2. Critical Thinking, Reasoning and Logic Tasks:

- Students are asked to critically evaluate a topic, analyse arguments, synthesize information from multiple sources, and form their own well-supported conclusions.

3. Presentations and Portfolios:

- Students present their research findings, creative projects, or reflections in a clear and organized manner. Portfolios allow students to showcase their cumulative work and progress over time.

4. Collaborative Group Projects:

- Students work together to research, design, and implement a project, demonstrating teamwork, communication, and problem-solving skills.

5. Practical Skills Assessments

- Students demonstrate their practical skills in a lab setting, clinical environment, or simulated workplace.

6. Supplement written assessments with dialogic conversations

- Students can be asked to support their written assessment with a viva which explores their approach to preparing their written assessment. This allows soft-skills to be assessed and showcased alongside written subject knowledge.

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Use and Non-use of Artificial Intelligence Tools in Assessments

Module leaders can freely decide where and how artificial intelligence tools (e.g., ChatGPT, Google Bard and Claude) should be used in supporting and completing assessments. The resources below can be used to help develop adaptable assessment tasks and statements of provision.

Supporting Resources at Napier

- [AI support resources](#)
- [AI support toolkit](#)
- [AI coversheet template](#)
- [Academic integrity and AI](#)

Appendix D: Rubric Development Guidelines

- 1. Define Performance Levels:** Clearly define the different levels of performance, such as excellent, good, satisfactory, and unsatisfactory.
- 2. Identify Key Criteria:** Identify the key criteria or competencies that will be assessed.
- 3. Develop Descriptors for Each Level:** For each performance level, provide clear and detailed descriptions of what students must demonstrate to achieve that level.
- 4. Use Consistent Language:** Use consistent language and terminology throughout the rubric to avoid ambiguity. Linking back to guideline 1, do your students share the same understanding of the differences between these levels of performance? Is this understanding shared by your whole module team? Language needs to aid consistency in student understanding and marking approaches.
- 5. Seek Feedback and Refinement:** Share the rubric with colleagues, external examiners and students to gather feedback and refine the criteria and descriptors. In this respect, ask your students to 'grade' sample assessments using your rubric. What problems and areas of questionable practice emerge? How can you tackle these in a student-centred open way?

Supporting Resources at Napier

[Rubric development support workshop](#)

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Appendix E: Inclusive Assessment Strategies

Strategies:

1. **Provide Multiple Assessment Formats:** Offer alternative assessment formats, such as oral exams, written assignments, or presentations, to accommodate different learning preferences.
2. **Consider Accommodations for Disabilities:** Provide accommodations, such as extended time, assistive technology, or alternative formats, for students with disabilities.
3. **Cultural Sensitivity:** Be mindful of cultural differences and avoid assessments that may disadvantage students from diverse backgrounds.
4. **Clear Communication and Support:** Clearly communicate assessment expectations and provide support to students who may need additional guidance or assistance.

Supporting Resources at Napier

[Providing timely and constructive feedback workshop](#)

Notes