2021 AWARDS INFO SESSION

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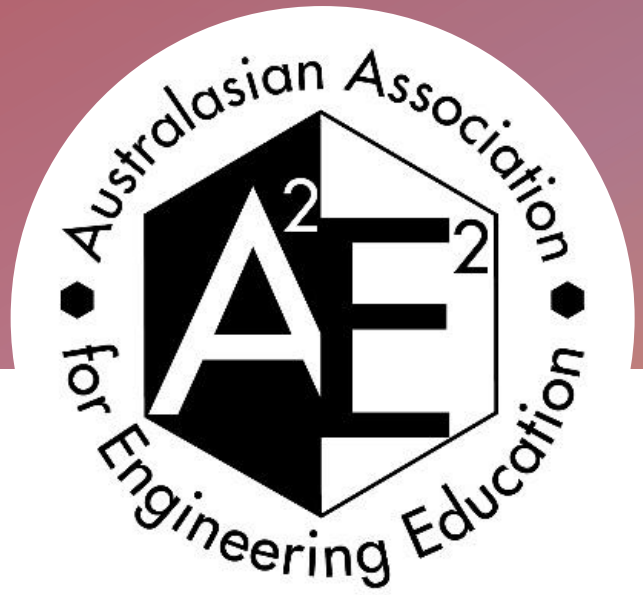
ACKNOWLEDGEMENT OF COUNTRY

PLAN FOR TODAY

- Overview of awards
- Advice for writing a strong application
    - General tips
    - Advice from Keith Willey
- Questions

OVERVIEW OF AWARDS



OVERVIEW OF AWARDS

- Engineering Education Excellence
- Engineering Education Engagement
- Engineering Education Research Design
- Citations for Outstanding Early Career Contributions to Engineering Education

GUIDELINES FOR EXCELLENCE, ENGAGEMENT & RESEARCH DESIGN AWARDS

- Nomination guidelines available at: www.engineersaustralia.org.au/AAEE-awards
- Check eligibility requirements.

GUIDELINES FOR ENGINEERING EDUCATION EXCELLENCE

- For demonstrated excellence in Engineering Education, which may include curriculum design, student support, peer support, or other significant initiatives with enduring positive impact. This award is intended to recognise significant and sustained contributions to Australasian Engineering Education at a multi-institutional or sector-wide level.
- Judging criteria:
  - Focus an relevance
  - Context and contribution
  - Evidence of continuous monitoring and evaluation
  - Clarity and readability
- Prize: $5000, plus a framed certificate

GUIDELINES FOR ENGINEERING EDUCATION ENGAGEMENT

- For fostering an excellent standard of purposeful and successful engagement with multiple stakeholders in Australasian Engineering Education, such as colleagues, industry, and students. The award recognises a collegiate approach to quality learning and teaching practice and/or research and a sharing of educational expertise across multiple contexts.
- Judging criteria:
  - Focus and relevance
  - Evidence of impact
  - Clarity and readability
- Prize: $2500 plus a framed certificate

GUIDELINES FOR ENGINEERING EDUCATION RESEARCH DESIGN

- Award for rigorous, innovative and transferable research design in the field of Engineering Education.
- Judging criteria:
  - Focus and relevance
  - Context and contribution
  - Research validity/credibility
  - Results and generalisability/transferability
  - Clarity and readability
- Prize: $2500, plus a framed certificate

GUIDELINES FOR EXCELLENCE, ENGAGEMENT & RESEARCH DESIGN AWARDS

You must provide the following for your submission:

- Profile image
- Short biography (200 words)
- Abstract summarising nomination (150 words)
- For team nominations: Statement communicating the percent contribution of each team member and a summary of what each team member's contribution was to the substantive work.
- Statement addressing the criteria (maximum of five A4 pages with minimum 12-point font)

GUIDELINES FOR CITATIONS

- Nomination guidelines available at: https://aaee.net.au/aaee-awards/
- Check eligibility requirements, which include:
    - Early career academics (within 5 years of gaining PhD or equivalent) or academics new to engineering education (less than 5 years in engineering education). The five years can be non-sequential and must be counted on a semester basis backwards from January 1 in the year of application. This includes all tutoring and part-time teaching.

GUIDELINES FOR CITATIONS

- Judging criteria:
  - Focus and relevance
  - Context
  - Evidence of impact and/or outcomes
  - Clarity and readability
- Prize: $1000 plus a framed certificate (up to 3 citations will be awarded in 2021)

GUIDELINES FOR CITATIONS

Nominees must select **ONE** of the following citation criteria to address in their application:

1. Approaches to teaching and the support of learning that influence, motivate and inspire engineering students to learn.
2. Development of engineering curricula, resources or services that reflect a command of the field.
3. Evaluation practices that bring about improvements in engineering teaching and learning. Evaluation comprises making judgements about the quality of programs and activities that are part of the academic, cultural and social experience of higher education.
4. Innovation or leadership that has influenced and enhanced engineering learning and teaching and/or the engineering student experience.
5. Engineering education research/scholarship of learning and teaching, that has contributed to student learning, the engineering education community, and the research literature.

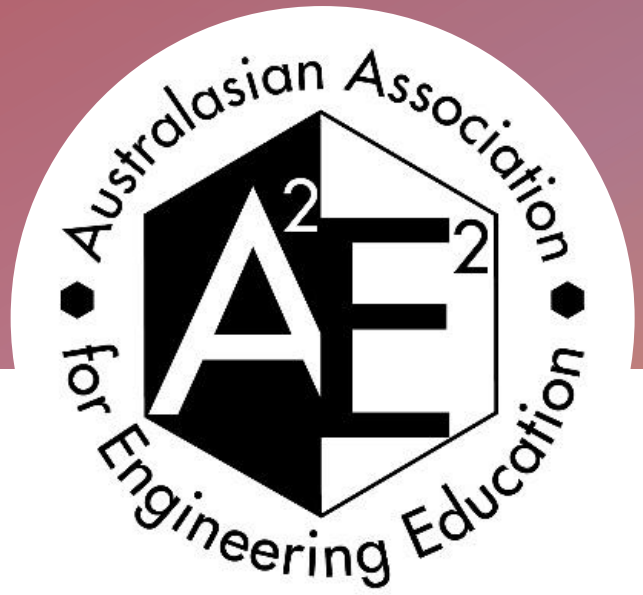
GUIDELINES FOR CITATIONS

- Submissions are limited to **THREE** A4 pages (minimum 12 point font)
- In this you should include:
    1. Citation criterion addressed by the application.
    2. Overview of the contribution and its context.
    3. Statement addressing the selected assessment criterion and providing evidence of the contribution and resulting impact.
    4. Reference list: nominees should use their preferred recognised reference style throughout and include a reference list within the page limit.

PROCESS

- Applications due September 1, 2021
- Judged by panel of experts
    - Conflicts of interest managed
- Do not always award in all categories
- Awards announced at AAEE conference
- For Excellence, Engagement and Research Design awards, apply via Engineer's Australian portal
- For citations, apply by emailing applications to AAEE@engineersaustralia.org.au

ADVICE FOR WRITING A STRONG APPLICATION



TIPS FOR DEVELOPING AN APPLICATION

1. Understand the requirements
   - Select most appropriate category
   - Focus on the assessment criteria
2. Develop a structure for your application
   - Identify an overarching theme or focus (rather than giving a list of loosely related activities)
   - Use a narrative structure (e.g. what was the problem, how did you fix it)

TIPS FOR DEVELOPING AN APPLICATION

3. Integrate evidence for demonstrating impact/significance of contribution
    - Identify qualitative and quantitative sources to support your impact claims
    - Weave evidence throughout submission (rather than locating all at end)
    - Explain the data in your application (don't leave it up to judges to interpret)

4. Incorporate appropriate language
    - Write for a general audience
    - Draw on language in assessment criteria

5. Seek out and incorporate feedback

EVIDENCING YOUR IMPACT

Consider a range of sources such as:

- **Self** – e.g. theoretical framework underpinning practice, benchmarking against others, leadership roles
- **Peers** – e.g. peer review of practice, teaching team perceptions of units, adoption of approaches by peers
- **Student Perceptions** – e.g. institutional surveys, focus groups and interviews with students
- **Student Learning & Outcomes** – e.g. exemplars of student work, instant response tools, graduate employment outcomes
- **Institutional** – e.g. institutional teaching awards, accreditation outcomes
- **External** – e.g. industry perceptions of students, teaching awards from external bodies, grants and fellowships, collaborations, influence on policy, media coverage

EXEMPLARS

Context - *situate the work within relevant bodies of knowledge and describe how it draws on this to address our understanding of teaching and learning in your context.*

The issues: In 2015, I taught Dynamics (DYN), a second-year mechanical engineering course and Mechanics (MEC), a first-year core engineering course. Both were regarded as highly challenging given large mathematical components, the complexity of threshold concepts such as free body diagrams, and limited in-class time to cover all content. Back then, the tutorials mainly consisted of the tutor demonstrating worked examples, which serve as a model solution for the learner to unpack and emulate. While research shows that worked examples are an effective tool for teaching complex problem solving skills [2], it is known that students must actively engage in learning to see the greatest improvements in understanding and performance.

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The beginning – transforming tutorials: To address the issues identified above, I set about transforming the tutorial activities in both courses the next year. I shifted to a focus on active learning by reducing the demonstration component and increasing the problem-solving students attempted in class. I also completed a review of the scholarly literature and settled upon a blended learning model involving “worked example videos” [5].

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Sarah Dart

EXEMPLARS

Evidence of impact and/or outcomes - *Evidence should be compelling and supported by clear reasoning.*

My video resources proved extremely popular – over the first five semesters, the Mechanics and Dynamics videos had received a total of 52,000 views and 300 days of continuous viewing time (see Table 1 for summary across all courses). The videos also had a significant impact upon student satisfaction as measured on QUT institutional surveys using a 5-point Likert scale. In Mechanics the satisfaction score improved from 3.4 in 2015 to 3.8-4.1 over the next two years. In Dynamics, an increase from 3.7 in 2015 to 4.1-4.4 was observed over the next two years. I supplemented QUT surveys by conducting additional end-of-semester video surveys. Here over 90% of students agreed or strongly agreed that the videos had a positive impact on their technical content knowledge, and they perceived this would result in achieving a better grade in the course. This suggests the videos are being used for learning the content on a deeper level, supported by comments such as, *"It really helps to see and hear why a problem is solved in a certain way, sometimes just looking at solutions doesn't explain why/how they got to that solution"* (Survey comment, 2016).

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EXEMPLARS

Focus and relevance - *state clearly the initiatives addressed and the outcomes achieved, focusing on significance of the work to engineering education practice at an institutional and/or national level*

The Engineering Pathways for Regional Australia (EPRA) project is a response to a shortage of engineering skills in regional Australia and the need for opportunities for retraining/upskilling. There is a national untapped resource of potential students working, or seeking engineering related work, who do not have the opportunity to study. The University of Tasmania, together with Deakin University, the University of Southern Queensland, TafeSA, TasTAFE and the Geraldton Universities Centre (Western Australia) formed a partnership that was awarded a grant from the Australian Government Office of Learning and Teaching; the three year grant is to develop a learning platform for engineering to design a curriculum leading to Associate Degrees in Engineering that is accessible to students with a wide range of previous engineering experience and learning achievements and both meets Engineering Australia Officer standard and allows articulation to engineering technologist and professional engineering degrees.

A feature of the EPRA project deliverable is a website that allows potential students to choose a combination of subjects from any or all of the HE partners that they can access from anywhere in Australia, that matches their engineering experience, high school and/or TAFE qualifications and, importantly, meets EA accreditation and pathway requirements.

Mark Symes

EXEMPLARS

Evidence of continuous monitoring and evaluation - *present original ideas and results of significance supported by clear reasoning and compelling evidence over a sustained period*.

The Engineering Pathways for Regional Australia (EPRA) project is built on the learning platform built by knowledge partnering in a paper presented to the 2014 Australasian Association of Engineering Education conference (Symes et al., 2014). The Australian Government Office of Learning and Teaching (OLT) awarded a grant to the University of Tasmania to manage the project. The EPRA Partners, UTAS, University of Southern Queensland (USQ), Deakin University, TAFE Tasmania, South Australia TAFE and the Geraldton Universities Centre (Western Australia) collaborated to produce a framework for 2-year Associate Degrees in five disciplines: civil, mechanical, electrical, maritime and mining engineering.

An external evaluator has been overseeing the project since its inception. Evaluation has been ongoing throughout the project and findings were disseminated to the partners.

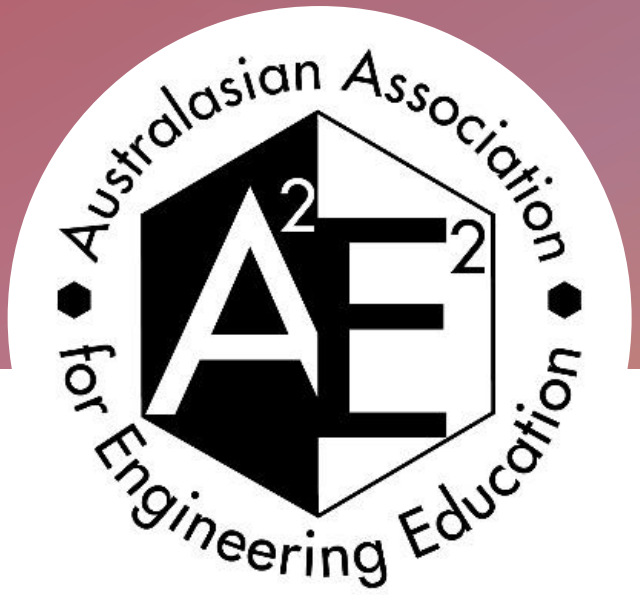
The following evaluation criteria were incorporated in the OLT Funding Agreement designed to engage key stakeholders in each stage of the project and as a guideline towards evaluating the overall project.

- Identification if key themes and trends
- Appropriateness of the platform in relation to key themes and trends identified in the literature and pilot - including technical issues
- Effectiveness of project processes
- Effectiveness of demonstration strategies
- Timeliness
- On Budget

Mark Symes

ADVICE FROM PREVIOUS AWARD WINNER, KEITH WILLEY

QUESTIONS


Australasian Association
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A2E2

ENGINEERS AUSTRALIA

Recognition Awards

AUSTRALASIAN ASSOCIATION FOR ENGINEERING EDUCATION AWARDS

Nominations close
1 September 2021

Australasian Association for Engineering Education

NOMINATE NOW