

# Developing Critical Appraisal Skills

## What are graduate attributes?

Graduate attributes are the characteristics, qualities, skills and capabilities that we seek to develop in our students by the time they graduate. These attributes give ECU graduates a competitive advantage in the workplace and are desired 'Employability' skills. ECU's graduate attributes are developed within the context of units in a course.

## ECU's Graduate Attributes:

ECU graduates will be valued for their	Exemplified by
Ability to communicate	clarity of written and spoken expression, including in public fora, and through appropriate use of technology
Ability to work in teams	collaborating and contributing effectively in diverse settings
Critical appraisal skills	planning, organising, problem solving and decision making
Ability to generate ideas	having the courage and confidence to be creative and innovative
Cross-cultural and international outlook	engaging productively and harmoniously with diverse cultures

## What are Critical Appraisal Skills?

Critical appraisal is 'purposeful, reasoned, and goal-directed thinking... it is the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions' (Halpern, 1998). Critical appraisal involves interpreting information in a systematic and objective manner by considering its validity, results and relevance.

Employers value individuals who are able to plan and organise, approach a problem systematically, and think critically, while considering the consequences of a range of choices. Graduates who are adept at critical appraisal skills make better workplace decisions.

Students who possess critical appraisal skills can:

- Swiftly identify the goal of the appraisal (this may require analysing a problem);
- Ensure adequate information is available;
- Determine the validity of the results of their research;
- Formulate inferences from the results of their research;
- Determine the relevance (applicability) of the information; and
- Make decisions in relation to their goal.

## How do I develop this attribute in my students?

Critical appraisal skills need to be explicitly taught, practiced and assessed in units in every course. Below are some ways to embed development of critical appraisal skills in your unit:

- Teach students how to critique and evaluate research to assess whether it possesses

validity (i.e. is it close to the truth) and applicability (i.e. is it useful);

- Use Problem-Based Learning (PBL). This approach involves teaching methodologies that develop a student's knowledge, abilities, and skills through working on authentic (work-based) problems
- When setting problem-solving challenges, encourage students to evaluate their chosen solutions and to identify alternative approaches
- Teach students problem solving and identification strategies so that they are able to spot opportunities or potential problems before they occur (and are able to solve problems if they arise)
- Offer students who submit a personal work plan, before an assignment is due, an extra 5% in order to value the process of planning
- Teach students how to support their conclusions with reasoned arguments and evidence, in both written and verbal communication
- Encourage the development of students' critical reasoning skills by requiring them to argue different sides of an issue in written work or class discussion
- Deliberately give students conflicting or ambiguous information or perspectives to think through (remember to let students know that this is a deliberate strategy to encourage their critical thinking)
- Challenge students to analyse their own, or a peer's, writing. Have them highlight examples of critical thinking concepts such as bias, validity, applicability, evidence (or lack thereof), inference and errors in reasoning

When developing this attribute, it is important to make sure you provide clear rubrics for assessing critical appraisal skills so that students know what is expected.

## Where can I learn more about ECU Graduate Attributes?

If you'd like to learn more about including ECU's graduate attributes in your teaching, or any of the points outlined in this fact sheet, you can:

- Look out for Professional Development opportunities (all teaching staff are introduced to the Graduate Attributes in PDC 111);
- Read the examples included in the CLD Curriculum 2012 example booklet; and
- Contact the Centre for Learning and Development for advice

Before using the system please read the following. The first step is to plan.

## Recommended reading

[Centre for Learning and Development Publications:](#)

- ECU Curriculum Framework – Examples for Teachers
- Course Coordinator Handbook - An Introduction to Course Coordination

ECU Policy on [Graduate Attributes](#).

Gross Davis, B. (1993). Tools for Teaching. San Francisco: Jossey-Bass Publishers.

Hargie, O. (2006). The Handbook of Communication Skills. London: Routledge

Harper, S. R., & Quaye, S. J. (Eds.). (2009). Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations. New York: Routledge.

- Isaacs, G. (2002). *Assessing group tasks* (Teaching and Learning in Higher Education Series). The University of Queensland, Brisbane.
- Qualifications and Curriculum Authority (2007). *Personal Learning and Thinking Skills Framework*. London: QCA.