ECU Curriculum Framework:
Examples for Teachers

INTRODUCTION

This booklet of examples is one of many strategies to support the implementation of Curriculum 2012. It offers a brief outline of teaching and learning activities and assessment tasks which align with implementation requirements Curriculum 2012 and are intended to provide guidance for the review of your own teaching, learning and assessment activities for the 2013 implementation.

Each section begins with an elaboration of the Principle/Priority and a description of what it might look like when demonstrated by students. That is followed by two examples that are based on real units wherever possible, and adapted to incorporate the teaching, learning and assessment of the Principle/Priority. The examples describe a small portion only of the teaching, learning and assessment activities for the unit.

Examples in this booklet are based on real unit learning outcomes, learning activities and assessment tasks that have been revised to demonstrate how principles/priorities of the Framework might be embedded.

Each example describes:

- the context in which the teaching, learning and assessment activities take place
- how the learning activity is designed to scaffold student learning so that they develop their capacity to demonstrate the Principle/Priority; and
- how student demonstration of the Principle/Priority is to be assessed.

At the end of each section is a list of other ideas in other units/disciplines which may serve to spark your thinking regarding the review of your own unit.

When preparing your unit to incorporate the principles and priorities of the ECU 2012 Undergraduate Curriculum Framework the following guidelines may prove useful:

1. Use an authentic context wherever possible. That may range from fully authentic learning and assessment tasks in a workplace (Work Integrated Learning) to discussing authentic case studies discussed in class or preparing work for external audiences. This will raise the engagement profile of your unit too.

2. Use triggering events, articles, experiences, questions. Try to find something that engages students and provokes both thoughts and emotions. We learn best when we are emotively involved.

3. Use modelling or other scaffolding of student learning that is specifically focussed on developing the skill/capacity required for demonstration of the principle/priority.

4. Ensure that assessment also includes assessment of the principle/priority, integrated into the task assessment criteria. Employ assessment and feedback processes that actively engage staff and students in dialogue about standards. It is when learners share an understanding of academic and professional standards in an atmosphere of mutual trust that learning works best.

5. Try to include peer and/or self-assessment wherever possible. Self and peer assessment builds independent and collaborative learners and is a good way to demonstrate embedding of Principle 3.4: Assessment for learning. More professional development will be provided in this area during 2011.

(Revised March 2013)

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

3

CONTENTS

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

4

PRIORITY 1 & PRINCIPLE 1.3

ABILITY TO COMMUNICATE

Clarity of written and spoken expression, including in public fora, and through appropriate use of technology

This principle is about expressing complex ideas and information clearly, precisely and accurately in spoken and written communication. The inclusion of speaking and writing in public fora requires an ability to tailor communication to the audience and purpose of the communication. The ability to communicate includes an ability to use appropriate information communication technologies to support communication.

The Communications Process
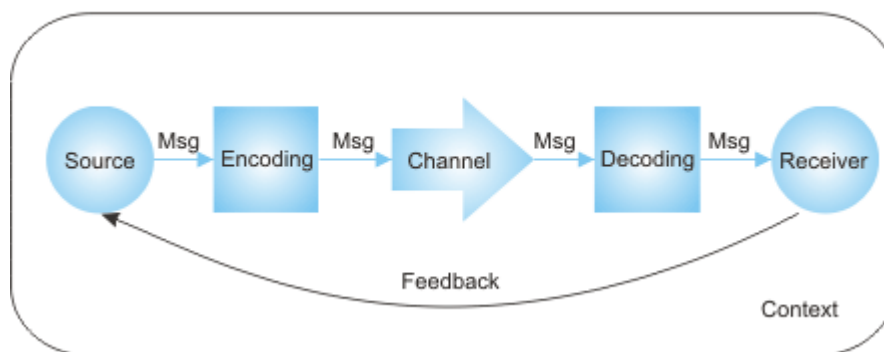
Source	The individual/organisation wishing to communicate something
Encoding	The process of translating the thought/idea into a message
Channel	The medium used to transmit the message. This may a single medium such as voice, or a combination of media.
Decoding	The process of interpreting the message received through the channel.
Receiver	The individual receiving the message

An outcome of good communication skills is that students as sources (see above) are able to express complex ideas clearly, precisely and accurately (encoding); are aware of the audience (context) in terms of the purpose of the communication; and use ICT or other media – even voice – to appropriately to support communication (channel).

As receivers, students with good communication skills will be able to interpret sources (decoding) and effectively provide feedback to the source to ensure the message has been clearly received.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

5

EXAMPLE 1

Developing clarity of written communication in a finance unit

Context

The Finance I unit in the West Australian Academy of Performing Arts (ADM1110) seeks to develop understanding of accounting principles and theory and applies these principles to modern practice.

The unit learning outcome addressed in this example is:

- identify and apply accounting practices most appropriate to the arts industry.

This example uses an *authentic context* (real arts project funding reports) to develop communication skills. The authentic context provides the *trigger* for discussion about ways of communicating information. Student learning is scaffolded by the tutor as they interpret and critique the reports, considering how the information has been *coded,* the *channel* used, *decoding* the message and discussing *feedback* before writing their own critique *(feedback on the communication instrument)* for the assessment task.

Learning Activity

In preparation for their minor assignment the lecturer provides students with a list of websites which contain reports on how government grants have been used in a range of arts projects. At this stage students have already been introduced to the nature, conventions, principles and purposes of accounting, as well as the form of income and expenditure statements and balance sheets appropriate to particular arts activities.

Each student selects one report to read and interpret in relation to the accounting practices used *(decoding)*. During a tutorial session they work in small groups to share the results of their investigation, assisting each other to clarify their thoughts *(feedback, encoding and decoding)* and explore the appropriateness of their conclusions *(considering the authentic context)*. They also

discuss the way in which the information was presented and whether this assisted or detracted from the clarity of the report *(channel)*. The tutor moves between groups, assisting with interpretation of reports and guiding student thinking with questions and suggestions where required.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

6

Assessment

The assessment scheme for the unit includes a minor assignment weighted at 10%. For this assignment students are required to explain the accounting practices used in the arts project report they investigated, to comment on their suitability for that particular arts project, and to recommend alternatives or to justify why the practices used were the most appropriate.

Students are assessed on their ability to identify accounting practices appropriate to a particular arts project *(the original unit outcome)*, as well as on their critique of the report as a communication channel *(feedback on the encoding, channel and decoding, thus integrating assessment of the communication outcome)*.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

7

EXAMPLE 2

Developing public speaking skills in a geography unit.

Context

GEO1104 *Introduction to Geography: Environment, Space, Place* introduces geographical concepts within the context of the Greater Perth Metropolitan Region. Geographic techniques are introduced as practical activities and in field investigations.

The specific unit learning outcome addressed in this example is:

▪ relate a current planning conflict to changes in the social structure.

Good oral communication skills are developed in this unit by investigating a current controversial topic *(trigger)* in the local community *(authentic context).* The tutor models the final assessment and guides student discussion about how to evaluate it. *Peer assessment* enhances students' ability to become self-directed learners.

Learning Activity

To start this activity students are introduced to the urban development and major planning strategies for the Joondalup region by a City of Joondalup town planning representative *(authentic context)*. In a subsequent tutorial, students are given a local newspaper article *(trigger)* which indicates that a

number of northern suburbs residents are concerned about a proposed high density housing and commercial development at the western end of Burns Beach Road. The tutor leads a discussion on how information is *encoded* in a newspaper *(channel)* considering the purpose and audience, and explores different ways the article could be interpreted, depending on the perspective of the reader *(decoding).*
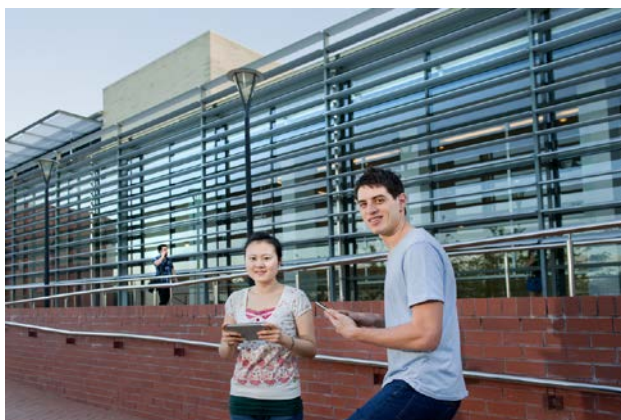
Students work in groups to examine the claims made in the article in the light of real data they obtain. At the end of the tutorial session each group reports back with their conclusion on the validity of the claims made in the article *(encoding to express complex ideas clearly)*, explaining what data they used to justify their conclusions *(express complex ideas precisely and accurately)*.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

8

Assessment

For the assessment task students take on the role of city councillor and are interviewed by a journalist (the tutor). Before interviewing students, roles are initially reversed and a sample interview is conducted with the tutor in the role of the Councillor. Students act as peer assessors, using an evaluation sheet provided by the tutor. The evaluation of the tutor's responses is discussed until consensus is reached regarding the mark. This exercise assists students to understand the assessment criteria.

The student interviews which follow are then peer assessed as consensus has been reached regarding criteria and students are well able to apply them. Completed peer assessment forms are collected for each student and averaged to provide the final mark for the task.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

9

IDEAS FOR EMBEDDING THIS PRIORITY/PRINCIPLE IN A UNIT

- Develop students' presentation skills and capabilities by setting assignments that require them to present – assist them with this by allowing them to submit drafts to you and/or peers for comment;

- Show students how to write a report in your particular discipline;

- Induct students to teaching technologies and ECU ICT;

- Ask students to write in various genres such as formal report, essay, business communications and structured argument; and

- Consider requiring students to present to external partners.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

10

PRIORITY 1 & PRINCIPLE 1.3

ABILITY TO WORK IN TEAMS

Collaborating and contributing effectively in diverse settings

Employers have identified the ability to work effectively in a team environment as one of the most important graduate attributes. In a global business environment, it is particularly important that students are given the opportunity to work together in teams from culturally diverse backgrounds. A key element of effective teams is the ability to resolve conflict in amicable and productive ways.

Teamwork skills:

Communicating:	clearly, tactfully, openly, honestly
Listening:	actively and attentively, with an open mind
Respecting:	self and others
Responding:	objectively, with helpful and constructive feedback
Thinking:	intelligently, rigorously, based on facts
Committing:	to contributing to team goal/project, to supporting team members
Decision-making:	considering all points of view, agreeing priorities, committing to team decisions
Taking responsibility:	for own role and contribution to team, for assisting others to achieve team goals
Resolving conflict:	clarifying issues, exploring alternatives, agreeing priorities, finding a way to work together to achieve team goals

Groups formed into teams offer students the opportunity for discussion. During discussion, more knowledgeable peers can scaffold less knowledgeable students' learning. Working in groups can acquaint students with divergent ideas giving students an opportunity to articulate and test their knowledge against someone else's ideas. This also provides opportunity for practising the skills of negotiation and compromise. Interestingly working in teams or groups can also provide an opportunity for students to work independently.

Students with good teamwork skills respect and value their own contribution as well as the views and contributions of others. They exhibit highly developed skills in listening, questioning, persuading, respecting, helping, sharing and participating, and are adept at applying conflict resolution strategies to ensure team effectiveness.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

11

EXAMPLE 1

Developing teamwork in a sociology unit

Context

In the sociology unit SAN1104: Cultures of the World, students examine cultural 'differences' as a source of ignorance, ethnic conflict, and regional and international instability, in a context of globalisation.

The learning outcome addressed in this example is:

- analyse differences and similarities of kinship and political social structures in a number of modern tribal or indigenous, peasant, industrial and post-industrial societies.

The development of teamwork skills is integrated into this unit by examining the team-building and conflict resolution processes of a professional team-based organisation and using the results of that inquiry-based learning to develop students' own teamwork skills.

Learning Activity

In a tutorial activity students inquire into the Berghof Foundation for Peace Support (BPS) and its work. The Foundation's primary mission is to effectively transform the dynamics and structures of violent conflict in order to build peace.

Students are asked to examine in detail one of these projects. Students are specifically set the task, in teams, of describing the political social structures in their allocated country and how those structures, and the team-building practices of the Foundation, affect the Foundation's ability to carry out its mission. The Foundation has clear mediation and negotiation processes, facilitates dialogue and problem solving, and provides technical assistance and capacity building. This activity is designed to acquaint students with these processes.

As conflicts arise amongst team members to do with inequitable work, non-attendance and interpersonal relationships, the mediation, negotiation and conflict resolution processes used by the Foundation take on a new meaning and relevance. They get an opportunity to apply the learning from their jigsaw activity, guided by the tutor. Students experience for themselves the importance of *listening, questioning, persuading, respecting, helping, sharing and participating*. Their increased awareness of *conflict resolution strategies* in teams enables them to form an opinion as to the efficacy of the approach taken by the Foundation, and to consider how well their own teamwork skills are developed. This learning provides an excellent scaffold from which students can approach the assessment task that follows.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

12

Assessment

The assessment scheme for the unit includes a minor assignment (an essay worth 20%). Students are required to write an essay using resources and notes from their tutorial activities. They are also required to append a brief evaluation of *their own contribution as well as the contributions of others in their team*. Their evaluation refers to *listening, questioning, persuading, respecting, helping, sharing and participating, as well as conflict resolution.* The evaluation contributes to each student's final assignment mark.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

13

EXAMPLE 2

Collaborating effectively using virtual teams in management

Context

Management I (MAN1100) is offered online, as well as on campus. It provides an introduction to fundamental management concepts and principles. The unit examines a range of different approaches to the study of management.

The learning outcome addressed in this example is:

- know the standard management concepts and principles and be able to discuss a number of current issues confronting Australian managers.

Students' teamwork skills are developed in this unit by assisting them to reflect on previous experiences *(arousing emotions to engage students);* discussing and agreeing principles of good teamwork *(social construction of knowledge)*; and implementing the learning in a subsequent authentic activity.

Learning Activity

This activity takes place after students have been introduced to the concept of management and examined key management functions. One of these functions is team building. The tutor starts the activity during an on-campus tutorial session in which students are asked to reflect on a team project they have participated in with a view to identifying elements that enhanced teamwork and those which detracted from it. The tutor then leads the students in the construction of a PMI table (plus, minus, interesting) about teams they have participated in. The whiteboarded PMI table is used to create a Google document online, giving off-campus students an opportunity to contribute to it. The tutor then starts a discussion thread on Blackboard entitled "Do's and Don'ts of teamwork". Each student (on-campus and off-campus) contributes one of their favourite Do's or Don'ts to the discussion thread. Each contribution counts towards their participation mark.

For their next assessment task students are divided into teams consisting of both on-campus and off-campus students. In preparation for working in teams each team develops their own team behaviour agreement (using a Google online document). Each agreement outlines how team members intend to ensure mutual respect and equitable team contributions *(respect and value their own contribution as well as the views and contributions of others).* Each agreement also outlines the *conflict resolution strategies* the team intends to follow if required.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

14

Assessment

Each team being allocated a different organisation and has to report on a current issue confronting Australian managers. Along with the joint team report, each team member is asked to submit their individual reflection on the effectiveness of their collaboration in relation to their team behaviour agreement and their conflict resolution strategies. Marking criteria for the report relate to demonstrated knowledge and understanding of current issues confronting Australian managers; students' ability to apply knowledge and understanding of effective teamwork in a virtual environment *(including listening, questioning, persuading, respecting, helping, sharing and participating)* to their team project; and student insights into how to improve their team performance for the next project.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

15

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Set group work and collaborative assessments with metrics for cooperation and participation and structure the groups for diversity;

- Develop units that involve development of conflict resolution, mediation and negotiation skills;

- Demonstrate time-management skills to students; and

- Show students how to conduct self-audits on working with others

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

16

PRIORITY 1 & PRINCIPLE 1.3

CRITICAL APPRAISAL SKILLS

Planning, organising, problem solving and decision making

Critical thinking or 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.

Critical appraisal is the process by which a reader can evaluate a piece of written material and assess whether it possesses validity (i.e. is it close to the truth) and applicability (i.e. is it useful). If research is being examined, critical appraisal skills are vital to decide whether the research has been well conducted and whether, ultimately, the results of the research can be implemented into our everyday practice.

The purpose of carrying out a critical appraisal is to determine an unbiased opinion of the value of the object or idea being appraised. Research and analysis are important steps in carrying out a critical appraisal as they ensure that the evaluation is based on adequate information.

Elements of critical appraisal are:

- Clarifying the goal of the thinking/appraisal (this may require analysing a problem)
- Ensuring adequate information is available (locating and organising information)
- Determining the validity of that information
- Formulating inferences from the information
- Determining the relevance of the information (applicability)
- Making decisions in relation to the goal

Critical appraisal skills can be developed by:

- teaching students how to critique and evaluate source material;
- developing students' ability to create or generate solutions; and
- assisting students to try new and alternative approaches.

Creative thinking has been emphasised as a key critical appraisal skill that can be developed at university (Bonk and Smith, 1998). These skills are often successfully developed using Problem-Based Learning (PBL). This approach involves teaching methodologies that develop a student's knowledge, abilities, and skills through active participation in their learning.

An outcome of well-developed critical appraisal skills will be that students are able to plan, organise, approach a problem systematically, and think critically while considering the consequences of a range of possible decisions. In short they learn to make better decisions.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

17

EXAMPLE 1

Developing critical appraisal skills in a health course

Context

In NSP1204: Health Assessment in Nursing, students apply the principles underpinning physical assessment skills to nursing care situations. Research findings and a problem solving process are used to explore the principles and practices underpinning the assessment and management of clients in the areas of adult health.

Learning outcomes which are addressed in this example are:

- demonstrate beginning competency in physical assessment; and

- apply problem-solving skills in health assessment in the classroom and health care settings.

The development of critical appraisal skills is integrated into this unit by requiring that students *organise* their resources for a physical assessment, solve the problem of *identifying* the particular health issue and then *decide* on and *plan* possible courses of action.

Learning Activity

In this introductory nursing unit, physical assessment is defined as the application of the "classic" skills of inspection, palpation, percussion and auscultation. This learning activity is designed to assist students in applying their knowledge of these skills in practical situations, in preparation for their final test on physical assessment. Students *organise* their resources for assessing a patient

and then practice on each other. Another student takes on the role of patient giving feedback to the "nurse" while others in the group give peer feedback in their role as observers. Students are then given a number of real case studies containing results of inspection, palpation, percussion and auscultation which are chosen to indicate a specific health issue. They are guided through a Think-Pair-Share activity where they individually decide what health issue/s may be indicated by the data, *(problem-solving)* compare conclusions with a partner and

discuss differences and then report an agreed conclusion to the whole class *(decision-making)*. The tutor leads a whole class discussion on the processes students used to critically appraise the data and reach their conclusions. Students *plan* possible courses of action for each case.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

18

Assessment

One component of the unit assessment scheme is a physical assessment of an adult. Assessment of critical appraisal skills is embedded by adding a further step whereby each student is given a peer's test data and conclusions and asked to critically appraise them, indicating how well the student has *planned, organised, approached the problem,* considered the consequences of a range of possible *decisions*, and chosen and justified the best action for their case.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

19

Developing critical appraisal skills in physics

Context

This broadly based physics unit, designed for first years, introduces students to the physics used within a variety of contexts. Physics principles and methods applicable to motion, sound, heat, light, radioactivity and electricity are investigated. The activity (below) was designed to specifically address the following outcomes:

- describe, explain and apply concepts of elementary physics in context; and

- apply the process skills of physics in solving problems

The development of critical appraisal skills occurs in this unit when students *analyse* the scenario (with tutor guidance), *discuss* factors that influence the outcome, *plan* data collection, and *decide* what principles are most applicable to the scenario.

Learning Activity

Students are posed the following scenario:

> *There had been a serious automobile accident at the intersection of Lakeside Drive and Boas Avenue, with injuries involved. Lt. John Smith arrived at the scene 10 minutes after the phone call and found that two cars had collided at the intersection. In one car, the driver was unconscious and in the other car the driver and one passenger were injured.*

The tutor leads the class in a whole group discussion to answer the following questions: If two cars moving at right angles to each other collide, in what direction do you expect the cars to be moving after the collision?; What factors will influence the direction and distance travelled after impact?; and What factors would result in one person being injured but not another?

Students are then asked to plan their investigation *(planning).* They have to plan what questions John Smith had to answer, what measurements were relevant and what data needed to be collected and then organise how to gather the data *(organising).* They also had to decide what other information and Physics principles might assist the investigation *(problem solving).*

Assessment

This principle is assessed in the final examination by asking students a similar questions to those posed during the tutorial sessions: if two cars moving at opposite directions to each other collide, what factors determine the final direction of movement?; and how will you determine which factors are relevant *(decision making)*? Students are required to describe how they might approach solving these two problems, what resources they would require, what data needs to be collected and how the data might be organised in order to answer the question. *(planning, organising, problem solving).*

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

21

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Develop problem-based learning activities within units that require problem solving and analysis;

- Build in elements of reflection, meta-cognition and self-appraisal into teaching activities;

- Use team and peer-based learning and assessment;

- Learner-centred activities with learner-choices and decisions;

- Arrange occasional independent learning activities where students have a choice;

- Show students how to use a metric such as DIEP (describe, interpret, evaluate, plan) to develop their reflective abilities; and

- Construct an activity involving the gathering of primary and secondary data on a given topic, where students analyse the data and produce a report with recommendations. Give it an international perspective.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

22

PRIORITY 1 & PRINCIPLE 1.3

ABILITY TO GENERATE IDEAS

having the courage and confidence to be creative and innovative

Creativity is the ability to

- make something original,
- imagine things that don't exist, and
- come up with new ideas.

Innovation is the ability to look at everyday items and events in new ways.

Both creativity and innovation are about divergent thinking, exploring, discovering, and imagining.

The potential of activities to promote students' creativity and innovation skills is enhanced by framing projects around a significant and engaging question. The question should arouse students' curiosity in order to engender spontaneity and creativity. In answering the question, students' confidence can be enhanced. The ability to generate ideas is a skill that can be nurtured, developed, and practiced. To learn any skill, emphasis should be on active learning and extensive practice; the same is true of creativity.

International measures of creativity recognise three categories of creativity. These are: **fluency** (the number of ideas), **flexibility** (the range of ideas), and **originality**.

The following steps can assist students to generate ideas:

1. Define the goal: To generate ideas you need a goal to work towards. Consider all the positives of the goal so that it engages and excites you. If working in a group, ensure all group members are visualising the same goal.

2. Define the challenge: Define the problem of how to achieve your goal as a challenge (challenges are more positive than problems). The challenge is defined by the distance between your current location and your new goal.

3. Eliminate distractions: To give ideas the best chance to sprout you need to switch off outside influences and distractions

4. Brainstorm: Simply write down as many ideas as possible about how to reach your goal. Make sure that everybody is at their peak and has been instructed to "Think Big".

5. Suspend judgement: Think laterally, think vertically. Give your group plenty of opportunity to be creative by listening twice as much as speaking.

The outcome of being creative and innovative is enhanced ability to use divergent thinking to develop good solutions to challenging problems. It may be demonstrated by combining common materials, concepts or ideas in imaginative ways.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

24

EXAMPLE 1

Generating ideas in publication design

Context

This unit introduces students to the complex world of publication design. It explores the underlying principles, the use of images and illustrations, issues of copyright, client briefs and material outputs. On completing the unit students have to be able to:

- demonstrate a firm grasp of the principles of layout design and spatial arrangement; and

- understand and discuss the history and context of publication design.

Students' courage and confidence in their ability to be creative and innovative is developed in this unit by engaging them in a non-threatening activity where they *question* assumptions, break established thought patterns by *thinking laterally and vertically*, and shift perspective.

Learning Activity

Concentrating on the fundamental principles of two-dimensional design and composition, students have to use various media to investigate elements of design such as value, visual weight, form, scale, texture and rhythm. During this investigation students are guided through an exercise designed to enhance their creativity by firstly breaking established thought patterns.

For each two-dimensional design product students are asked a "what if" question, such as "what if we were to turn the white space into black space?". They discuss the possible effects of that change, then came up with "what if" statements of their own. That assists them to think more laterally about two-dimensional design and composition. Students then begin work on their assessment piece. They are posed the question/problem of how to combine common media to produce imaginative and innovative artwork *(develop good solutions to challenging problems)*.

The development of this artwork occurs over two lots of three hours of supervised studio and students are required to produce a finished piece utilising different media that demonstrates at least two key concepts of two-dimensional design *(combining common materials in imaginative ways)*. The tutor has ample time to scaffold student's work, giving them confidence in being able to succeed. The activity demonstrates to each student that they can be creative, thereby building their confidence and courage to be creative and innovative.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

25

Assessment

The finished product (utilising different media that demonstrated at least two key concepts of two dimensional design) was a component of the assessment scheme for the unit. Students were assessed on their application of concepts of two-dimensional design, as well as the extent to which their work displayed a creative and innovative solution.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

26

EXAMPLE 2

Being creative and innovative in a history unit

Context

A first year History unit aims to develop an understanding of the processes of historical change through the development of skills that may then be employed in the study of past and contemporary communities. These outcomes are addressed:

- Identify further aspects of the relationship between theory and practice in cultural practice; and
- Locate aspects of their own practice culturally.

Students' courage and confidence to be creative and innovative is developed in this history context when students *create connections* between physical and social changes and employ poetic thinking to portray those changes in *new and imaginative* ways. Building an explicit thinking activity into the teaching and learning programme for the unit supports this outcome.

Learning Activity

Starting with the statement that "Revolution is when a stick is stuck into the spinning spokes of the wheel of a society" students are asked to share a time when they, or someone they knew, suddenly changed the way they had been doing something and began to do it completely differently.

Students were then given their assessment task: to design a Metaphor Machine to represent a historical revolution of their choice. Each function of the Metaphor Machine had to be bound by a principle that existed in the physical world, but which was then figuratively connected by student analysis and imagination, to an aspect of the chosen revolution (portray in new and imaginative ways). This project encouraged students to explore, through artistic expression, the connections between physical and social changes (create connections between physical and social changes). They had to come to grips with the complexity, the brilliant and passionate people, the surprising events, and the bold actions that were the drivers for their chosen revolution, and portray them using their Metaphor Machine.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

27

Assessment

The minor assignment for the unit (worth 20%) was the creation of the Metaphor Machine, which was required to represent the student's chosen historical revolution and the connections evident between the physical world portrayed and their chosen revolution. These connections were assessed using the SOLO taxonomy (pre-structural, multi-structural thinking). Students were asked to hand in drafts demonstrating the progression of their thinking so that they could also be assessed on the fluency, flexibility and originality of their ideas (their creativity).

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

28

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Set activities involving problems with multiple solutions and coach and scaffold students;

- Construct projects and assessments with open-ended tasks and activities that promote novel solutions and ideas;

- Set activities that require higher order thinking – tasks that require students to assess, analyse, evaluate and synthesise ideas;

- Hold exhibitions of artistic and creative works in various media; and

- Allow students to take a multidisciplinary approach to provide creative solutions to problems in various contexts and media

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

29

PRIORITY 1 & PRINCIPLE 1.3

CROSS-CULTURAL AND INTERNATIONAL OUTLOOK

Engaging productively and harmoniously with diverse cultures

This priority addresses the important issue of how to develop in our students a genuine international outlook. It develops in students a respect for their own culture and that of others in our interdependent, global society. It develops the skills, attitudes and expectations necessary for a changing and increasingly multicultural society.

We can help students develop a cross-cultural and international outlook by assisting them to:

1. Understand cultural impact: Understand that our lives are culturally coded from when we were very young, so we all think differently about things. Our meanings for things are deeply buried in our subconscious mind.

2. Understand themselves: Know their cultural bias–>Listen & Observe–>Communicate… in that order!

3. Appreciate others: Research and appreciate the richness of other cultures.

4. Appreciate history: Appreciate historical backgrounds. Value experiences that might contradict their way of looking at life.

5. Understand cultural baggage: Cultural baggage can lead to wrong assumptions. These assumptions relate to what we find polite, kind, respectful, or friendly. Interact with different cultures with the knowledge that things you take for granted as true, are not universal.

6. Be curious: If you're curious, you're observing, listening, questioning, reflecting and learning.

Students who have a cross-cultural and international outlook are able to interpret issues of international consequence and global interdependence. They demonstrate respect for different cultures. They can communicate sensitively and effectively in cross-cultural and international contexts.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

30

EXAMPLE 1

Engaging productively and harmoniously with diverse cultures in an accounting unit

Context

An Accounting unit is designed to help students understand a range of financial and managerial accounting issues with an appropriate combination of theory and practice. The main outcome addressed is:

- the underlying concepts, principles, and characteristics of financial reporting systems; and

- the measurement of wealth and profit.

The teacher embeds cross-cultural and international outlook into the unit by explicitly putting students in *contact* with students in another country, presenting some *information* about that country, leading discussion about similarities and differences, and requiring *productive engagement* with those students in order to complete an assessment task.

Learning Activity

This particular inquiry activity is traditionally a small group exercise in this unit.

Students investigate the impact of recent Australian tax changes on profitability of global businesses with Australian operations. Tax has international implications as businesses shift operations to take advantage of different tax regimes. This aspect of globalisation gave an opportunity for the teacher to engage students with cross-cultural issues and with students in other countries.

The teacher moved the study of globalisation beyond the immediate classroom by connecting students with other students around the world. She put students in contact with students at other universities, studying similar units, by email. After establishing working communications with partners in another country, students engaged them in discourse about elements of globalisation.

Specific questions were handed out to the student at the beginning of the tutorial. The succeeding week students brought their international partner's responses back and the tutor led a discussion around the answers. The discussion addressed global issues.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

31

The purpose of this "global" discourse was to see if the same elements, or similar or related elements, are as important or can be seen differently in different cultures.

Assessment

Students were asked to provide a brief summary of their engagement with the student in another country in which they highlighted differences in cultural perspectives and described both what they had learned and what they had contributed to the other person's learning. This summary was to be supported with evidence from their email exchanges and was marked as part of their assignment on the impact of taxation on the profitability of small businesses.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

32

EXAMPLE 2

Developing a cross-cultural and international outlook in midwifery

Context

In a first year Midwifery unit students are introduced to the foundations of theory and practice underpinning midwifery practice. Students explore models of care and engage in reflective practice to build knowledge for their beginning midwifery practice. Content includes a study of cultural diversity in relation to the provision of midwifery care. Learning outcomes which are addressed in this example are:

- explore how emerging attitudes shape the development of a framework of midwifery practice; and

- interpret research findings and their impact on midwifery principles and practice.
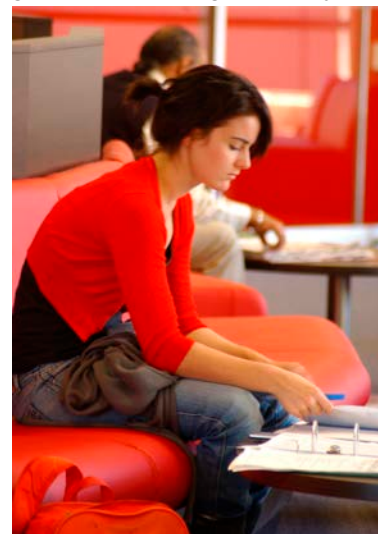
The development of a cross-cultural and international outlook will be integrated into this unit by requiring that students *interpret research* on breastfeeding in the *context of a different culture* and communicate their conclusions *sensitively* and effectively.

Learning Activity

The teacher handed out results of a recent study by The Telethon Institute for Child Health Research that found children who were breastfed for six months or longer achieved significantly higher academic scores, along with a newspaper article on the study quoting Institute director Professor Fiona Stanley saying the study showed the need for the community to provide more help and support to breastfeeding mothers (*interpret research*). The teacher guided a whole class critical appraisal of the study, examining the data collected and the validity of the findings. The class also discussed Professor Stanley's interpretation of action required as a result of the study (*interpret research*).

Students were then given an article published in the Irish Times that reported a recent World Health Organization survey indicating that Ireland has the lowest percentage of breastfeeding mothers in Europe (*interpret research on breastfeeding in the context of a different culture*). A study reported found that only one out of 450 woman in a particular hospital exclusively breastfed her baby for six months. (*interpret research on breastfeeding in the context of a different culture*).

In small groups students were asked to consider the extent to which midwives in Ireland might feel under pressure to promote or ignore the benefits of breastfeeding, whether their practice might differ according to the culture of their client, and to discuss the implications of the articles in relation to midwifery practice in Ireland.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

33

Assessment

Students had to produce a journal article (not more than three pages - due in Week 6) about attitudes to breastfeeding. The article was to include a report on an interview with a person of a different culture about breastfeeding. Students could choose whether to interview a real person or simply find an interview report on the Internet. Students were assessed on their ability to describe attitudes that shape breastfeeding practice in that culture and to effectively communicate the interviewee's responses to research findings (*communicate their conclusions sensitively and effectively*) on the benefits of breastfeeding in a culturally sensitive and respectful way.

- Develop resources that contain content and ideas from multiple cultures and perspectives;

- Use case studies and examples drawn from international settings;

- Study a multinational organisations and activities;

- Development of students through engagement in multidisciplinary and multi-cultural teams. Alternative perspectives and recommendations; and

- Develop activities that directly contrast different value systems and ethical contexts.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

35

PRINCIPLE 1.2

WORKPLACE INTEGRATED LEARNING (WIL)

Apply knowledge and skills from an ECU course to practice within a real workplace

Workplace Integrated Learning (WIL) integrates student learning into a workplace setting. Students apply much of the theoretical knowledge and skills acquired in units to a real workplace. WIL includes activities like a practicum, work experience, professional practice, placement, field experience and internship.

While WIL may not be appropriate for every unit, it can and does work well in every discipline. Learning in the workplace helps students identify and examine the "big questions" and the social context in which the disciplines are situated. It asks students to consider a discipline's knowledge base and how it is used in real practice, and to consider the larger questions that lie outside the boundaries of many traditional courses. With WIL, students see the interdisciplinary nature of problems and solutions. They see the complexity of the social fabric.

Students love seeing the relevance of course content to real-world issues. If you would like to add a workplace learning element to an existing unit it may be useful to consider the following:

- What do you want students to know as a result of taking the unit? This is probably already captured in your unit learning outcomes, but they may be worth reviewing to ensure they are stated in concrete, measurable terms.

- What learning outcomes are best achieved through workplace learning? Why?

- What new awarenesses do you want them to gain?

For Workplace Integrated Learning to successfully enhance learning we need to

- provide structures for students to analyse, discuss and evaluate the experience; and

- evaluate student learning, including it in formative and/or summative assessment for the unit/course.

The outcome of student participation in Workplace Integrated Learning is an enhanced ability to connect the theoretical knowledge base of their discipline to specific workplace situations, and to locate theoretical constructs within the broader context of their future professional practice.

EXAMPLE 1

Applying discipline-specific knowledge in a legal practice situation

Context

In the Community Legal Practice unit, LAW3602, law students gain experience and develop their practical skills under supervision in the on-campus Joondalup office of the Northern Suburbs Community Legal Centre (NSCLC). They provide legal information and advice for the community including legal information seminars to special needs groups (e.g. recent arrivals). Outcomes addressed in this WIL unit include:

- students gain, under supervision, experience and practical skills in the legal field; and
- connect with and engage the local community.

Learning Activity

The unit coordinator assists the students to develop an individual learning contract between themselves, the coordinator and the supervising solicitor. Under the supervision of qualified legal practitioners, students learn and do real-life practical legal tasks as assigned by the supervising legal practitioner (*collecting, analysing and organising information, communicating ideas and information, planning and organising activities)*. This provides an opportunity to apply discipline knowledge in practical situations.

Students learn, practise and experience first-hand many of the skills necessary for legal practice including interviewing skills; problem solving; legal research and analysis; file management (*organising information);* oral and written communication skills specific to the legal practice workplace (*communicating ideas and information)*. Oral communication skill development occurs through real-life client interviews.

Assessment

Students are assessed in two ways. Students' practical legal tasks as assigned and assessed by the supervising legal practitioner (70%) and students' reflective journals are assessed by the Unit Coordinator (30%).

Students write their reflections of their experiences in the legal practice into a journal. The journal contains a summary of the work performed by the student, how the student dealt with difficult situations that commonly arise in a community practice, what the student learnt from their assigned legal tasks and what they learned from dealing with difficult people in highly emotionally charged situations. Students are assisted to structure their reflections to indicate how they used discipline-specific knowledge in practical situations, as well as how their generic skills developed over the course of their WIL experience.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

37

EXAMPLE 2

Applying discipline-specific knowledge in a sports science organisation

Context

In a sports science unit students participate in a structured and supervised vocational experience, where they have the opportunity to experience firsthand the reality of the workplace. Students undertake 120 hours of industry practice utilising the skills and knowledge gained from their Exercise and Sports Science course. This unit enhances their understanding of future career opportunities in their chosen field.

The outcomes desired from students completing this unit include being able to:

- apply the theoretical knowledge and skills, developed from studying exercise and sports science, to practice in the workplace.

In this unit students are given structured guidelines to assist them in their observation of workplace practices and in their reflection on the connections between theory and practice.

Learning Activity

Students undertake placement in a sport organisation during this semester. While they are a part of the organisation in that they perform work, they are students. As such they are required to complete a systematic round of structured observations throughout their placement. These required observations are detailed in a set of notes given to students at the start of their placement. Students are required to find out elements like the composition of the workforce, how the company is structured and how work flows through the organisation.

As part of the work force during their placement they are they are required to participate in workplace activities like attend meetings, assist with the usual workplace activities and administration requirements. They also assist in the sports science work of their placement organisation, while under supervision of organisation staff. Students are required to gather systematic views of their performance from their supervisor and they have to complete their own appraisal of their performance.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

38

Assessment

Students have to write up a report on the cases they participated in under the guidance of the sport organisation where they were placed. This case study report is constructed in an ongoing fashion during placement and is built from their structured observations and from their Supervisor's reviews. The report includes their own appraisals that are linked to the activities completed during placement, drawing connections between the theoretical knowledge acquired during their sports science course and their practical application of that knowledge to the various cases with which they were involved.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

39

- Students monitor activities in a marine park in a Natural Sciences unit.

- Students work with a non-government conservation organisation in the Environmental Management field.

- Students learn a range of practical skills during placement in a chemical laboratory.

- Students attend a structured observation day at an education or health facility then do an oral and poster presentation.

- Students observe speech therapy sessions and report on one of the cases.

- Student placements in library, local and state government departments, graphic design offices, with film makers, literary journal and newspapers.

- Students complete 120 hours of work experience in a health /fitness /exercise and sports science related industry.

- Students work in a theatre, both in-house and an outside venue with choreographers who are selected on the basis of their experience in the industry as well as fellow student choreographers.

- Students work with a production and design staff and crew to perform to a live audience attending costume, lighting and technical calls.

- Students participate in a childcare setting, participating in all childcare routines and services.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

40

PRINCIPLE 3.2

COMMUNITY ENGAGEMENT

Mutually beneficial partnerships with ECU's external communities, for student learning, as part of a course

The focus of this priority is on ensuring that student learning is authentic in that it aligns with current work practices and workplaces. When students learn in these authentic settings they practise and develop their skills, increasing their employability and profession readiness as well as engendering a sense of community connection and consciousness.

The principle of community engagement can be embedded by:

- Incorporating a task that requires development of a product or delivery of a service for an external client;

- participating in events run by professional bodies, industry, or the local or wider community;

- involving external community members in evaluation, feedback and assessment of student work;

- involving external community members as guest speakers;

- involving external community members as coaches or mentors for individual students or groups of students on particular projects;

- incorporating a task that requires developing a solution to a real problem in the local or wider community;

- requiring student participation in on-line discussion with expert practitioners from our communities;

- supervising students in research activities, including data collection, interviews and site visits that are of value to external communities;

Students who have opportunities to engage with ECU's external communities as part of their course are more likely to display deep rather than surface learning, will have a better understanding of the relevance of their university studies for future professional practice, and are likely to display increased motivation and ability to articulate strong connections between theory and practice.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

41

Developing mutually beneficial partnerships in a business unit

Context

In this foundation business unit, all students learn, practice and apply their knowledge and skills to real workplaces. Student activities focus on the role of entrepreneurship and creativity. Students are directly taught how to summarise and synthesise information into various business documents. They also develop knowledge and professional skills, including interpersonal, teamwork and team building skills, critical thinking, and self-improvement through reflection, as well as organisational skills essential for university and employment success.

Some of the outcomes desired from this unit are that students will be able to:

- demonstrate effective team working skills including giving and receiving feedback, conflict resolution, communication, collaboration and cooperation; and

- summarise and synthesise information to produce coherent and professional oral presentations and written business documentation.

In this unit students collaborate to develop a real business plan for a member of ECU's external community.

Learning Activity

As part of this unit students had to prepare a real business plan for an industry partner *(develop their knowledge and professional skills).* The plan had to clearly describe how the business could be grown by 10% over the next year, the personnel required, the finance required, any infrastructure necessary and other industry relevant inputs. The plan concluded with a discussion of possible risks. As the plan had to be presented to an industry partner students had to prepare an executive summary and presentation (organisational skills essential for university and employment success).

Students worked on this plan during the semester with explicit instruction from the tutor on communication skills, how to receive feedback, how to summarise and synthesise information and how to clearly communicate a vision *(organisational skills essential for university and employment success).* Drafts were submitted periodically to the tutor and revised before submission to the industry partner, who also reviewed working drafts *(knowledge and professional skills).* The final plan was submitted in the second last week of semester.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

42

Assessment

As students are doing a practical assignment that for an industry partner, industry practitioners acted as assessors and their feedback was received by the students. The assignment is marked using authentic criteria – Will it work in the particular workplace?

The industry plan is worth 60% of the final mark and students develop it over the semester with tutor assistance.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

43

EXAMPLE 2

Engaging with the broader ECU community in an education unit

Context

In this Education unit the lecturer aims to heighten awareness of the teaching-learning process and to develop a student teacher's skills as a facilitator and decision-maker. This process assumes a model of the classroom teacher as a rational autonomous educator able to make justifiable professional decisions and to develop appropriate strategies for the implementation. These outcomes are addressed:

- Conceptualise the teaching - learning process through the critical models presented;

- Evaluate theoretical perspectives of, and develop practical skills in the facilitation of the teaching - learning process, including gaining and maintaining interest, questioning, explaining and the use of feedback and reinforcement; and

- Discuss a number of alternative approaches to learning, including cognitive, behavioural and social learning, relate them to theoretical principles and use them in the classroom situation.

In this unit students engage with the broader ECU community, learning from others and interpreting that learning in the context of their own future professional practice.

Learning Activity

As part of this unit students were required to attend eCulture. This conference held at ECU provides staff and students with the opportunity to showcase innovation in the field of learning and teaching. It encourages scholarship in teaching, the demonstration of best practice and to facilitate the exchange of ideas.

Students had to attend three different sessions (*knowledge and professional skills)*. For each session they had to construct a one page summary that captured the main point of the presentation, linked the presentation to their own understandings in Education and concluded with what they would do in their future teaching practice as a consequence of listening to this latest research *(organisational skills essential for university and employment success)*.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

44

Assessment

Students were assessed on their three completed summary sheets and these were worth 40% of the unit. Marks were awarded for how well the students linked the paper to existing theories and for the cogency of their suggested future teaching practice. They were required to conceptualise how they would teach in the future after evaluating the alternatives available.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

45

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

Connections with external partners in teaching, learning and assessment processes link strongly to current workplace and work experiences.

- Students may be taught and learn off-campus during site visits, field trips, workshops or seminars, TAFE courses or units, performances, competitions, events run by professional bodies or industry, activity days in school or the community and exhibitions.

- Students may develop a product (as an assignment) for external use or provide a service that contributes positively to our community as part of their learning activities and assessment.

- Science students monitor activities in a marine park or a local bushland; and

- Students participate in on-line discussion with expert practitioners from our communities.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

46

PRINCIPLE 3.3

RESEARCH INFORMATION AND PROFESSIONAL INFORMED LEARNING AND TEACHING

Research informed learning and teaching links, and involves, research within learning settings

The focus of this principle is on students engaging in critical analysis of research literature while learning about their discipline through research or inquiry. This can help students to become aware of the research that teachers and colleagues are conducting.

When students find, examine, and discuss current research and insights from the discipline with teachers and peers it assists students to understand the role of research in learning and how knowledge is constructed and produced within their discipline. This creates a bridge between teaching and research for teacher and student. When students learn as researchers the emphasis is on inquiry-based learning and activities that mirror the research process. Students who have research capability are able to generate new knowledge and to communicate it – key skills for professional employment and a knowledge economy. The knowledge may be new to the individual (learning), to a group (collaborative learning), or worthy of wider dissemination or publication (research in the public sphere).

Engagement in research within learning settings involves:

- Locating

- Collecting

- Referencing

- Critiquing

- Applying evidence

- Challenging assumptions

- Questioning interpretations

These elements of research can be applied to many unit activities. Drawing them out and making them explicit makes it easier for students to understand the vital connection between research and learning.

An outcome of linking research-informed learning is that students engage in inquiry-based learning. Often they find, examine, and discuss current research; consider the validity and relevance of research evidence; identify gaps; and even engage in further research of their own.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

47

EXAMPLE 1

Developing research competence in engineering

Context

In an engineering unit that introduces students to the discipline and practice of professional engineering, to the role of engineers and to some of the important concepts that characterise the engineering approach to solving technical problems, these outcomes were addressed:

▪ identify the roles and responsibilities of a practicing engineer; and

▪ describe the importance of ethics and safety in engineering design, and embed these issues into their design processes;

The teacher sought to develop students' understanding of ethics and safety in engineering design through the following inquiry based activity that engaged students in finding, examining and discussing current research.

Learning Activity

The lecturer spent the first half of the lecture outlining a research problem: What system safety methods and techniques are used in the aircraft manufacture industry to prevent, eliminate and control hazards and risks; how important is the collaboration of key engineering disciplines and product team and setting it in a theoretical context, that of Safety Engineering.

She went on to outline some of the different methods and techniques that might be used to investigate the research question. Her students in small groups went to the library to undertake a literature-based investigation of the research problem and how it had previously been addressed (*inquiry based learning*). On their return she discussed with the students in their small groups how they had gone about searching the library *(finding research),* the methods used in the research studies they had found *(examine research),* the main findings *(discuss research)* and any unresolved issues.

Assessment

For the first assignment in the unit, students were required to analyse a specific research topic in the field of safety engineering. They were required to examine the specific research methods and techniques, discuss the validity of the findings, and to synthesise an improved research process.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

48

Developing research competence in a garment design unit

Context

This unit FAS1102 (Inquiry for Garment) encourages an exploration into design for the body and garment. Students use traditional and contemporary processes to investigate ideas of the body/object/image, and relationships between them. The aim is to develop basic design principles and ideas through a variety of practical and contextual projects. This visual enquiry is supported with associated historical and contemporary research in art, fashion and popular culture. These outcomes were relevant to the following activity:

- generate and develop design ideas; and

- create a range of design possibilities by manipulating a variety of materials and processes.

The teacher sought to develop students' understanding of how contemporary cultural issues (for example body image) are addressed by contemporary artists through the following inquiry based activity that engaged students in finding, examining and discussing current research

Learning Activity

In this unit the lecturer actively encourages students to participate in the co-production of knowledge through their historical and contemporary research in art. Students are set the task of identifying and describing how contemporary cultural issues (for example body image) are addressed by contemporary artists. By researching and examining the work of three different artists (*inquiry based learning - finding*) students are encouraged to apply the understandings they gain by producing an artwork of their own. This artwork becomes the description of how the issue is addressed *(find, examine, and discuss current research)*

In the research process leading to their artefact, students are encouraged to examine music, television, movies or other form of media that may be relevant *(examine)*.

This task is highly structured with work sheets issued to students each week describing the task for that week, the understandings that are developed and the outcome required for the week.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

49

Progress is regularly discussed (*discuss*). This allows the tutor to monitor students and to adjust the learning task for the next week.

In their discussions students are asked to provide real-life examples alongside research articles and theories.

Assessment

Students' research skills are assessed by requiring them to submit a short formal research report outlining the research that influenced their design choices and discussing its usefulness, validity and relevance. In particular the lecturer marks students on how well specified cultural theories are incorporated into their report about music, television, movies or other forms of media.

The art object produced is also assessed.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

50

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Inquiry-based, problem-based and authentic learning experiences provided to learners;

- Senior academics could teach or deliver guest lectures to undergraduates on School research approaches and research outcomes;

- Students near the end of their course could contribute to or participate in existing research projects (conducting literature review, collecting data) as part of their assessment;

- Demonstrated an innovative teaching method or approach that draws on evidence-based inquiries into learning and teaching;

- Develop an activity that requires students to gather primary and secondary data, analyse it and make recommendations;

- Develop an activity that involves students in critical analysis of the research literature;

- Allow students to critically reflect on your teaching and learning. Then close the feedback loop by incorporating their feedback into next week's lecture.

PRIORITY 2

ENGLISH LANGUAGE SKILLS DEVELOPMENT

The acquisition of high level oral and written English language knowledge and skills

Currently, more and more emphasis around employability of our graduates focuses on how to equip our students with advanced language skills to enhance their career and academic development. This indicates that teachers and learners alike have perceived a need for an improved grasp of English at higher levels to enable competent, professional participation in our economy and in society in general.

With widening participation across tertiary education and the increasing numbers of international students, it can no longer be assumed that students enter their university study with the level of academic language proficiency required to participate effectively in their studies. In addition different disciplines have different discourses of academic inquiry, making generic English language development courses of limited value.

Development of academic language and learning is more likely to occur when it is linked to need (e.g. academic activities, assessment tasks). Affective factors in English language skills development include anxiety and motivation. Good teachers will address both of these factors in creating a positive classroom environment for optimal learning to occur.

Teachers can assist students' English language skills development by:

- drawing attention to the language and style used in various texts within the discipline;

- modelling various forms of English language communication within the discipline;

- incorporating assessment of English language skills in assessment tasks for the unit;

- allocating class time to allow students to practice their skills;

- providing timely feedback in particular regard to these skills, during other activities, either personally or through a peer evaluation exercise.

Students who have high level oral and written English language knowledge and skills will communicate both orally and in writing, at the level required for active and effective participation in their discipline and future profession.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

52

EXAMPLE 1

English language skills development in Biology

Context

This Biology unit provides students with the opportunity to study molecular biology in depth. It deals with the application of molecular concepts and DNA techniques. Issues arising from the application of molecular techniques are examined. Some outcomes desired from the unit include:

- describe the application of molecular techniques in biological research;

- contribute to the discourse on ethical issues arising from the application of molecular techniques; and

- demonstrate proficiency in data handling, laboratory skills, group work and science communication.

The outcome of this unit activity described below is that students will develop their oral and written English language knowledge and skills within the science discipline.

Learning Activity

Team-based, problem-based learning is used in this final-year unit to give students experience in research and science communication. Staff solicit suitable problems and clients among their

contacts, for instance from government agencies, non-governmental organisations, land care groups or the private sector. Students work in groups of about six as consultants to these clients. The clients come to campus at least twice, for an initial briefing to their students (*high level oral – listening)* and for presentations by the students (*high level oral presentation skills)* at the end of the semester. They liaise with the students all semester, usually off campus at their offices, and by phone and email (*high level oral and written skills)*. The academic staff give a flexible programme of lectures in the first weeks, to directly reach and prepare the students with skills they need towards each forthcoming step of their tasks (*high level oral and written English language knowledge and skills)*.

Students have to provide a finished report for their client by the end of semester. The writing task is authentic and students gain practice in high-level communication and writing skills and the use of language to convey meaning. (*high level written English language knowledge and skills*)

At the end of the semester the students' reports are published for all clients.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

53

Assessment

The published reports that students provided to clients were included in the assessment scheme for the unit. In addition to the normal marking in regard to the mastery of content (60%), some marks were allocated to the standard of language skills (*high level written English language knowledge and skills)* demonstrated in the report (40%).

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

54

EXAMPLE 2

English language skills development in Psychology

Context

This first year psychology unit focuses on the biological factors that enable behaviours to occur by examining the adult and developing nervous, endocrine, immunological, and musculoskeletal systems and their contributions to automatic functions; to basic drives such as thirst, hunger, and sex; and to higher functions such as emotion, learning, and memory. The unit also provides an in-depth understanding of the structures and processes that allow humans to have sensory and perceptual experiences, along with a focus on psychophysical methods of investigation. The following unit outcomes were addressed in this activity.

- identify various structures within the central and peripheral nervous systems, and

- have a working knowledge of the five senses, with an emphasis on the visual and auditory systems, and psychophysical methods of investigation.

- develop their oral and written English language knowledge and skills within this science discipline

Learning Activity

The lecturer integrated a required poster session into this unit's requirements. The required poster that had to provide a clear description of a visual system, an auditory system, or a key structure in the CNS, was due in the second last week of semester (*high level written*). Before this due date, students had to present and discuss an initial outline of their work in tutorials (*high level oral*). As a requirement for this discussion students were required to construct a two-page handout encapsulating the main ideas for their poster and how they may be presented (*high level written*). This forced students to get their ideas into terse, cohesive and communicable form. Students received feedback from the tutor and other students in these sessions

The poster had to combine visual and written elements to clearly convey the essential features of their chosen system (*high level written English language knowledge and skills*).

At various allocated times during the semester the tutor demonstrated how to write effectively and a guest speaker spoke about how to present effectively. Students had the opportunity to obtain feedback on the draft of their poster from the tutor.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

55

Assessment

Students were required to construct a two-page handout encapsulating the main ideas for their poster and how they may be presented. The poster had to combine visual and written elements to clearly convey the essential features of their chosen system.

Students were assessed on how well their initial ideas were communicated on their two page handout and then again on their poster. Criteria for assessing the poster included clarity of expression, inclusion of relevant elements, provision of clear diagrams and cohesion between written and visual elements.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

56

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

For students who do not meet the minimum requirements for PELA, course coordinators can choose from 3 models:

- Academic literacy communications unit provided by the course (e.g., one hour additional workshop, English language skills [ELS] seminar) OR
- Contextualised ELS elective as part of a course; OR
- Bridging ELS unit.

For students who are assessed as borderline on the PELA:

- An ELS unit or the ELS seminar in academic literacy or a communication skills unit
- Language Skills Workshops
- Embedded language support in core units.

Learning advisers can help all students with these aspects:

- General workshops on a range of academic skills
- Overcoming writing anxiety
- Developing support for writing
- Developing an idea into writing
- Dealing with first assignment
- Dealing with falling behind (time management)
- Dealing with finding things difficult
- Structuring writing
- Referencing
- Plagiarism
- Writing for different audiences
- Employability links

PRIORITY 3

NUMERACY AND MATHEMATICS SKILLS DEVELOPMENT

The acquisition of functional numerical, spatial and statistical concepts and skills

In all programs we as teachers need to ensure that we can continue to develop the numeracy and mathematical competencies in all students. One compelling reason is to ensure our future prosperity and to remain a successful modern society.

In line with the OECD's definition of mathematical literacy, one aspect of being numerate means an ability to identify and understand the role mathematics plays in the world. Our students need to be able to use mathematics effectively in order to meet the demands of life in general and paid work in particular.

Numeracy involves the practical application of mathematical skills to

- understand,
- use, and
- critically evaluate

information in numerical or graphical form.

Depending on the context this practical application can include

- basic number skills;
- spatial and graphical concepts;
- practice in basic operations;
- familiarity with basic statistical concepts;
- ability to use numeracy based software like MathLab;
- the use of measurement; and
- problem solving.

Numeracy may also involve literacy, for example when extracting mathematical information from written text. In different disciplines the methods used to achieve certain numeracy tasks will differ according to the discipline requirements, the practical situation, technology and culture.

If students have these skills then, for example, they are able to gather data, select appropriate data for analysis and acquire concepts through analysis of that data.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

58

EXAMPLE 1

Acquiring basic statistical understandings in a social science unit

Context

An outcome of this unit is that students are able to enter data into a statistical package, select appropriate data for analysis and acquire basic statistical concepts such as mean and standard deviation.

This unit provides an introduction to a range of models of how to work with communities. Distinctions are made between the community work processes used in service provision; events organisation; social and political activism; community development; leadership development; and social impact assessment. The unit provides an introduction to working with the personal and social environment.

A particular focus of the unit is on the social environment - the influence that other people, rules, customs and the environment have on our behaviour. The lecturer was focussing particularly on social perception and cognition. This outcome was relevant to this activity:

- demonstrate an understanding of the skills and processes relevant to community work

In the following learning activity and assessment task the teacher set students a project designed to gather data about how people's attitudes towards homeless people.

Learning Activity

The students undertook an eight-week project in which they collected data from themselves and other students using four short standard inventories and a biographical questionnaire. This project provided students with the opportunity to collect "live" data, contribute to a developing database *(enter data into a statistical package)*, select data for analysis *(select appropriate data for analysis)* and write up findings *(basic statistical concepts such as mean and standard deviation)*. The lecturers and tutors provided assistance with questionnaire design, the development and maintenance of a database, data entry and tutoring on analysis of the data.

Assessment

In the subsequent marking of the project the teacher allocated marks for appropriate selection of data and the correct use of appropriate statistical functions.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

59

EXAMPLE 2

Developing proportional reasoning and basic understandings of probability and chance in an economics unit

Context

This unit's (ECF1110) main focus is "economic literacy" - being able to recognise, understand and apply the economic principles, which give us insight into personal, corporate, and government behaviour (nationally and internationally). Its secondary focus is to introduce techniques that economists use to help them think logically about problems and their solutions. The following outcomes were addressed in this activity:

- demonstrate understanding of the fundamental methodology and principles of economic theory and practice; and

- use and apply mathematical skills as appropriate – data analysis, graphs; rates of change etc.

An outcome of students completing this unit is that they have developed higher level mathematical understandings of value, currency, proportional reasoning, chance and probability.

Learning Activity

Students were placed into groups of four. Then using the computer game Pokémon and through participating in their game play students collected information on which to base their decisions about exchanging (trading). To do this they had to develop sound understandings of the principles and

conditions related to trading within the context of the game and the implications of trading through time. Such knowledge then enabled them to develop quite complex understandings of what constituted *"value"* and *"currency"* within this environment. These complex ideas of value and currency were linked to conceptual understandings of the mathematical principal of proportional reasoning. The tutor helped students derive these understandings from their results through scaffolding and through the use of structured work sheets.

Students who seemingly ignored data (in the form of Pokémon profiles) from the Handbook made problematic numerical decisions. However the students used other contextual knowledge to determine appropriate (those which are likely to succeed) Pokémon for battle. Notions of important economic concepts of *chance* and *probability* emerged from such decision-making, as students were able to see the immediate consequences of their decisions and the more likely outcomes that ensued. (Adapted from Lowrie and Clancy, 2003).

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

60

Assessment

At the conclusion students were required to discuss in groups their ideas of value, currency, proportional reasoning, chance and probability. They were then required to individually define these ideas, after consulting standard references and mathematics books and then describe why these ideas were important in trading in the game. Students were assessed as to the accuracy of their definitions (the extent to which they agreed with standard definitions) and how well they related these ideas to the game. Marks for this activity counted as a portfolio activity contributing 30% of their final mark.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

61

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Test, and if required, remediate students' numeracy and basic mathematics competence early in course;

- Implement a basic mathematics self-assessment test to gauge students' mathematical skills and capabilities;

- Provide voluntary optional units for students who do not meet the minimum level of mathematical competence;

- Specifically develop students' ability to complete basic mathematical operations with and without calculators with short exercises in tutorials

- Like the example above, develop authentic case studies that use existing data and which directly target interpretation and manipulation of numerical data; and

- Provide practical in-class activities which use mathematical tools such as graphing tools, MathLab, statistics packages, vector packages and MYOB.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

62

PRIORITY 4

ACADEMIC LITERACY SKILLS INCLUDING ICT SKILLS

Skills in academic conventions and processes associated with research, reading, and writing etc.

Development of capabilities to use technology for productivity.

A major part of a student's academic life is spent on writing in an academic genre. This discourse form an integral part of the course curriculum and skills in this area contributes significantly to a good degree.

ICT skills are essential if a student wishes to participate in the knowledge society.

These necessary academic skills include (but are not limited to):

- writing an essay or a report in the academic genre related to their discipline;

- reading for analysis and interaction with the text;

- comprehending, interpreting and synthesising information from disparate sources;

- reviewing and editing academic work;

- citing works correctly; and

- referencing articles, journals and internet resources.

Students who have well developed skills in this area will be able to articulate a clear thesis, identify, evaluate, and use evidence to support or challenge that thesis, and be attentive to diction, syntax, and organisation. They will be critical listeners and readers and will be able to synthesise information into new forms and communicate those ideas to others within their discipline and outside of their field.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

63

EXAMPLE 1

Building academic literacy through report writing and peer review in education

Context

This Education unit covers knowledge and understanding of the growth and learning of young children aged 5-8 years. Theories of learning and development, and early childhood pedagogy are critically examined in the context of effective early childhood practice. Skills are developed in planning, implementing and evaluating experiences and environments appropriate to the early years of schooling. These outcomes were closely related to this activity

- describe the sequence of development of children 5-8 in physical, psychosocial and cognitive domains;

- explain theories underpinning early childhood pedagogy and teaching and learning theories with particular reference to 5-8 year olds; and

- apply theory of child development and pedagogy to principles of guiding children's behaviour 5-8

An outcome of this activity was that students would develop their ability to write a report, summarise readings, edit work, cite works, and reference articles, journals and internet resources in regard to all three of the above outcomes.

Learning activity

All students had to do a group assignment in which they interviewed a member of academic staff about their research, related to either pedagogy or child development. Each tutorial group was allocated a particular staff member. Tutorial groups were given three representative pieces of writing by the member of staff along with a brief copy of their CV, and a date was arranged for the interview. Before the interview, students read these materials and develop an interview schedule (*summarise readings)* about some particular aspect of the theory(s) used in the paper.

On the basis of their reading and the interview, each student individually wrote a brief report (*write a report)* on: a) the objectives of the interviewee's research; b) how that research relates to their earlier studies; and c) how the interviewee's research relates to recent developments in early education theory and education as a whole. Reports had to include links to other works and reference articles (*summarise readings, cite works, and reference articles, journals and internet resources).* After the reports had been handed in the teacher redistributed

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

64

them so that another student could conduct a peer review (which had to be done using ICT, for example using track comments in Word) on someone else's work *(use technology for productivity)*.

Assessment

The final mark for the brief report was made up of two parts. The first part was related to the student's demonstrated understanding of significant themes and recent developments in early childhood education. In the second part of the assessment some marks were allocated for the peer review based on elements including appropriate use of technology.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

65

EXAMPLE 2

Developing academic literacy using disparate sources and technologies in a history unit

Context

This unit HIS1000 considers key aspects of the history of the Twentieth Century and how Australia and Australians responded to the challenges of global issues such as: world wars; decolonisation of European empires; the global impact of ideologies such as communism and capitalism; the establishment of international organisations such as the League of Nations and the United Nations. It also considers the impact of poverty, disease and migration on the history of the Twentieth Century. These outcomes were addressed in this activity:

- explain the main developments that occurred in the 20th Century; and
- apply analytical skills to understanding historical processes.

In teacher integrated development of academic literacy skills through the following activity and assessment task in which students were required to summarise readings, cite reference articles, journals and internet resources and use technology for productivity.

Learning Activity

In this first year unit students had to construct a digital narrative (http://en.wikipedia.org/wiki/Digital_storytelling) illustrating, describing and explaining the impact of the rise of communism and its affect on Australian society during the 1950s (*summarise readings, cite reference articles, journals and internet resources and use technology for productivity)*. Two tutorials were allocated for this task and a computer lab was booked for students during tutorials (*use technology for productivity)*.

By combining text, images and video students had to construct a five-minute story that would relate to other students (*summarise readings)*. Media could be obtained from newspaper clippings from interviews, from You Tube or other sources. Vibrant pictures, age-appropriate music and narration were required in the story (*cite reference articles, journals and internet resources)*. The digital stories had to help students understand abstract concepts surrounding Communism in Australia.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

66

Assessment

Students had to produce a five-minute story that connected with other students and that bought to life the key impacts of communism on Australian Society in the 1950s.

Marks were allocated for the extent to which the narrative was engaging, the number and extent of concepts covered and the extent to which the narrative was cohesive.

Marks were also allocated for correct citing, using a range of references and appropriately summarising readings.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

67

- Incorporating a contextualised discipline-specific unit on topics like report structure and terminology linked strongly to discipline and/or industry requirements;

- Including discipline specific workshops in-class tutorials, or as separately timetabled workshops, with content that is linked to discipline and/or industry requirements;

- Embed academic literacy skills in tutorials. Let students in on your thinking and planning about how the lecture/tutorial is structured, why certain evidence is used, and how it is logically presented;

- Provide online activities in early units that might target a series of academic skills and that provide online exercises for the students to complete;

- Utilise peer assessment marking to focus on academic literacy elements such as the quality of formal English or the structure of the reference list;

- Together with Library staff, work with students to develop information literacy;

- Require students as part of their assessment in a unit to demonstrate the ability to locate resources, synthesise findings and prepare a report; and

- Require students to evaluate the validity of the information from sources like Google and Wikipedia.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

68

PRIORITY 5

AWARENESS AND UNDERSTANDING OF SUSTAINABILITY

Consider environmental, social, cultural and economic implications of issues and decisions

This ability is about having the knowledge, skills, understanding and motivation to make decisions by taking into account the impact on interdependent social, economic and environmental systems.

Sustainability is about demonstrating respect:

- respecting the planet and what it provides for us (e.g. fauna, flora and habitat);

- respect for the finite resources that require careful management for future generations; and

- respect for all people.

This awareness can be demonstrated by, for example, students considering the impact on sustainability of the use of particular materials in a unit or assignment, by considering their transport options to and from University, by attending to sustainability issues as part of their assignments.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

69

Embedding sustainability principles in a Visual Arts Sculpture unit

Context

In this Visual Arts Sculpture unit students are introduced to a variety of materials, techniques, core concepts and processes of constructing and assembling objects or objects that articulate space. Conceptual development skills are combined with a variety of practical introductory technical skills workshops and spatial and sensory investigations. Students are introduced to installation art, environmental art and commissioned art projects.

The following outcomes were addressed:

- create3D artworks using a range of materials, objects and sites that show evidence of research and informed practice;
- produce artworks that demonstrate technical skills development as well as spatial and sensory investigations; and
- articulate the technical processes, material choices and historical contexts of their work.

A further desired outcome was that students have the opportunity to learn, practise and experience first-hand the skills necessary for decision-making in their choice of materials by taking into account the environmental, social, cultural and economic implications.

Learning Activity

Students complete a long-term environmental art project in which they create a work in response to a specific outdoor site where much of the class is conducted. Several illustrated lectures for this unit introduce the work of artists and writers whose philosophy it is to be mindful of sustainable practice or issues surrounding sustainability. In the accompanying tutorial to these lectures students explore environmental art initiatives such as: Green Museum http://www.greenmuseum.org/and Environmental Art http://www.environmentalart.net/
.

Students were encouraged to engage with local businesses and industries for free materials that would otherwise go to landfill (*decision-making in their choice of materials)*. They are also directed to the REmida Creative Reuse Centre that uses art and aesthetics to help people see waste materials as valuable treasure. Students were required to read about environmental art initiatives (*considering the impact on sustainability of the use of particular materials)*.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

70

As part of the unit students had to construct an exegesis explaining how they put into practice the environmental principles that their artwork was about, during their gathering of materials for their sculpture (*choice of materials by taking into account the environmental, social, cultural and economic implications*).

Assessment

Students were marked on both their artwork and their exegesis. The exegesis had to demonstrate clear links between the principles inherent in their artwork and their own practice in material gathering.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

71

EXAMPLE 2

Developing a sustainable solution in urban planning

Context

Sustainable urban planning is a major theme of a first year planning unit. Key urban planning models are taught: new urbanism and transit-orientated developments (TOD) where environmental, social and economic considerations are paramount. This unit asks the questions what is planning and why do we plan. It provides an introduction to the contributions to planning knowledge and skills, the development of planning thought and its application and to the influences and outcomes for traditional and contemporary planning in Australia and Western Australia. The following outcomes are addressed in this learning activity:

- interpret and communicate the foundations of planning knowledge and skills; and contemporary developments; and

- apply the fundamental planning knowledge and skill to simple development issues.

A further desired outcome was that students have the opportunity to learn, practise and experience first-hand the skills necessary for decision-making in sustainability in planning by taking into account the environmental, social, cultural and economic implications.

Learning Activity

A major project consolidates learning by requiring students to apply planning concepts developed in the unit. Student groups had to prepare a planning document for a (hypothetical) new urban development located near Yanchep beach (*learn, practise and experience first-hand the skills necessary for decision-making in regard to sustainability)*. The document was developed over the semester with advice and feedback from tutors. The lecturer planned the task so that students had clear tasks for each week and tutors ensured that students had sufficient resources to complete the task.

Students had to produce a site analysis that demonstrated that the urban form was a sustainable urban form. The planning document had to demonstrate that they had allowed for social and economic infrastructure while maintaining biodiversity and groundwater and minimising energy consumption (*learn, practise and experience first-hand the skills necessary for decision-making)*.

Assessment

Marks were allocated in three main areas: planning essay; site analysis and report; and site plan. In each section students had to explain their decision making process that led them to their sustainable solution.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

72

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Require students to source found objects and materials (window panes, unwanted domestic glassware) to encourage recycling glass waste into fine grained crushed glass for casting pate de verre objects.

- Focus readings on environmental sustainability or on social obligations for designers.

- Devote a week to sustainability as a business model (e.g. triple bottom line, supply chain audits, cradle to grave/cradle) and a week to carbon trading (e.g. what is Kyoto/Copenhagen and the COPs, what are the 3 flexible mechanisms of the Kyoto Protocol, what is an ets/carbon market).

- Use a truly paperless essay submission, marking and feedback system. Use Blackboard's digital dropbox system. The system saves the paper equivalent of around 400 major essays each semester across more than six units.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

73

PRIORITY 6

AUSTRALIAN INDIGENOUS STUDIES, CULTURAL COMPETENCE

An appreciation and understanding of indigenous Australian and international cross-cultural issues within the discipline and the wider society.

The focus of this priority is on students' understanding of indigenous Australian and international cross-cultural issues in the particular context of their discipline. Students build conceptual frameworks that include foundational, professional, and socially responsive knowledge and that can be used to validate the experiences of members of different social and cultural groups

Teachers can support the development of cultural competence by encouraging students be aware of the need to:

- communicate respect;

- be non-judgemental;

- accept the relativity of their own knowledge and perceptions;

- display empathy;

- be flexible;

- take turns; and

- tolerate ambiguity. (Hofstede, 1980).

Abilities, attitudes and traits that relate to successful cross-cultural functioning are:

- interpersonal and communication skills;

- ability to deal with communication misunderstandings and different communication styles;

- ability to speak other languages (or demonstrate interest in other languages and cultures);

- a relativistic orientation to knowledge; and

- tolerance, courtesy and persistence.

Students' increased awareness, appreciation and understanding of indigenous Australian and international cross-cultural issues can be demonstrated through students' behaviours and attitudes in addressing these issues within their discipline and beyond, applying practical information imparted to their understandings of other cultures.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

74

EXAMPLE 1

Exploring multiple perspectives to develop cultural competence in a criminal justice unit

Context

In a unit dealing with Cultural Competence and the Criminal Justice System, students acquire the knowledge and skills required to engage professionally with Indigenous Australians. Students explore a range of historical, cultural and other factors that contribute to current interactions between Indigenous people and the criminal justice system. A desired outcome from this learning activity is:

▪ Describe the relationship between Indigenous people and the criminal justice system

A key outcome of the unit should be an enhanced ability to empathise, communicate and work with Indigenous Australians. By completing this exercise students' ability to view the relationship from *multiple perspectives*, to *question* taken for granted knowledge and assumptions and to *act* in a deliberate and intentional fashion in the future was developed.

Learning Activity

Students were set the following topic as part of their tutorial work and were given several weeks to complete it. Drawing on media sources, they had to select an issue that they considered important concerning any aspect of Indigenous people and the criminal justice system. Issues could be taken from newspapers, television, radio, books, magazines or the Internet (*view the relationship from multiple perspectives*).

Students were required to critique the media sources identified and to support or oppose the arguments they put forward (*question taken for granted knowledge and assumptions*). They had to consider what is not said as well as what is said and develop their own position regarding the issue and the way it was represented in the media (*question taken for granted knowledge and assumptions*). Finally they had to justify their position by referring to other sources of information and debate and to consider the implications for Indigenous people and the criminal justice system (*act in a deliberate and intentional fashion in the future*).

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

75

Assessment

Students had to write the essay described above. Criteria for marking the essay centred on the issue selected and the students' ability to view it from multiple perspectives. Other criteria involved the student's ability to question granted assumptions, routines, rationalizations, and explanations. Other judgements made were about the student's ability to analyse and synthesise the issues according to their perspectives, encouraging reflection and enabling them to act in a deliberate and intentional fashion in the future.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

76

EXAMPLE 2

Responding to texts from multiple cultural perspectives in an English and Media unit

Context

In an English and Media unit which included such learning outcomes as developing learners' capabilities to:

- analyse the ideological implications in a range of media texts; and
- analyse media texts using current gender and racial critical paradigms;

the teacher sought to embed Australian indigenous cultural competence and added the following learning outcome:

- Students and graduates have an enhanced ability to empathise, communicate and work with Indigenous Australians.

Learning Activity

The unit was designed to introduce students to strategies for analysing media texts. In order to develop the new learning outcome, Aboriginal texts were added to the existing list of texts. When studying poems for example, students were given two poems, one by Kath Walker out of Dreamtime, and the other by Rudyard Kipling.

The poems were issued to students without annotations or supporting detailed biographical information. Students were placed in groups to discuss the values/belief systems revealed in each poem and to consider how their own cultural perspective might influence their interpretation of the poem (*enhanced ability to empathise)*.
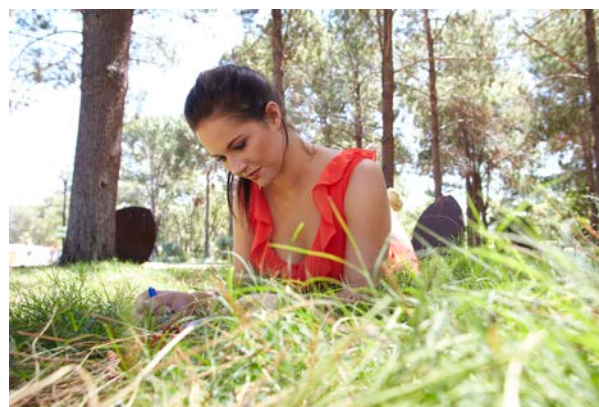
The diversity of cultures within the groups provided many cultural perspectives to be heard as students attempted to find answers to the above questions. The juxtaposition of an Indigenous Aboriginal poem with one from a British Colonial perspective highlighted differences of language and cultural values (*ability to empathise, communicate and work with Indigenous Australians)*. The multiple perspectives in student answers, and the communication across cultures, helped to develop students' appreciation and awareness of Australian indigenous culture. This form of activity and analysis was repeated for a range of different texts and forms studied in the unit across the semester.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

77

Assessment

One of the components of the assessment program for this unit was analysis of newspaper articles. Students were required to respond to the articles from at least three cultural perspectives, one of which had to be an Australian indigenous perspective. This enabled the teacher was able to assess the extent to which students demonstrated appreciation of Australian indigenous cultural issues.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

78

IDEAS FOR EMBEDDING THIS PRIORITY IN A UNIT

- Include an indigenous cultural competency unit conducted in conjunction with Kurongkurl Katitjin staff as a core unit in the course

- Include an elective unit in the courses offered through Kurongkurl Katitjin and in conjunction with Kurongkurl Katitjin staff;

- Include activities on value systems, society needs and land use, specifically from an indigenous point of view (yellowcake mining, onshore gas processing, nuclear waste);

- Exposure to indigenous art, music and theatre and its place in contemporary Australian society;

- Activity on critical reflection involving nations of colonisation and the impact on traditional and current cultures (Indigenous and non-indigenous) and

- Case based approach to the negotiation of land use with traditional owners for industrial purpose.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

79

PRIORITY 7

OPPORTUNITIES FOR INTER-DISCIPLINARY STUDIES

Opportunities for students to complement discipline studies with studies across programs and disciplines

The interdisciplinary approach has become an important and challenging technique in the modern curriculum and develops much needed lifelong learning skills that are essential to a student's future learning.

It describes an approach to teaching that uses methods and insights of several established disciplines or traditional fields of study. Interdisciplinarity involves researchers, students, and teachers in the goals of connecting and integrating several academic schools of thought, professions, or technologies - along with their specific perspectives in the teaching process.

It is often used in educational circles when teachers from two or more disciplines pool their approaches and modify them so that they are better suited to the problem at hand, including the case of the team-taught course where students are required to understand a given subject in terms of multiple traditional disciplines (adapted from Wikipedia).

The outcome of an interdisciplinary approach is that a subject is taught from the viewpoint of at least two different disciplines and students gain a more holistic view of the subject.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

80

Drawing on multiple disciplinary perspectives to discuss art

Context

This unit examines the role that various political ideologies, beliefs and values play in shaping ideas about social issues. Links are also made to the epistemological foundations of different ideologies. Students from many different courses take this elective and over several weeks the lecturer uses the question "what is art" to allow students to examine their own attitudes, beliefs and values. The following outcomes are addressed in this activity:

- How does an object become accepted as Art?;
- What is the relationship between Art and Meaning?; and
- What is the role of critics in the Art process?

Learning Activity

Engineering, Arts and Business students take this compulsory foundation unit. The unit begins with a "hook" or "grabber". On the opening day, a handout which asks students to respond to the question of "What is Art?". Then a 60 minutes video exposé on the modern art world, "Yes, but is it Art?" is shown. This video explores several examples of modern art and interviews some well-known critics who either support or do not support the artistic merits of these works. The video raises numerous issues about what criteria delineate a work of art from a piece of junk or a simple functional object without artistic merit. Among the issues it raises are:

- Is the level of skill of the creator relevant to deciding whether something is a work of art or not?;
- Is the meaning of the work relevant? Are things whose symbolism complex more meritorious from an artistic point of view than those whose symbolism is simple and transparent?;
- If the meaning of a work requires explication by a "critic" and does not speak to the general audience, does this affect its value as a work of art?; and

- Must a work of art have meaning that endures beyond the immediate context?

During the course of the rest of the semester, students continue to explore these issues with hopes that the students will refine their responses to the questions. The final exam presents students with their last opportunity to respond to this question.

(Adapted from http://www.faculty.de.gcsu.edu/~dvess/ids/courseportfolios/2310/2310f99e.htm)

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

81

Assessment

In the final exam students presented the latest version of their responses to the above questions. The assessment scheme for the unit included an assignment in which students had to combine three different points of view, for example from engineers, sociologists and artists into an essay describing their answer to the question "What is art". This ensured that students were assessed on their ability to view their own discipline area from the perspective of multiple disciplines.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

82

Using problem-based learning to develop multi-disciplinary solutions

Context

The Enabling University Success unit integrates elements from various different School's orientation offerings into one unit for all students. Such offerings include research and writing skills, transition to academic writings and learning adviser offerings. The outcomes sought from the unit include improving student knowledge and ability with the aim of eventually improving longer-term student outcomes. Outcomes desired from this unit include:

- Increased understanding of the genre of academic writing; and
- Ability to view circumstances from different points of view

Students who successfully complete this unit can write a solution to a problem in the academic genre, can reflect on their writing process and can integrate different points of view.

Learning Activity

This Explorations unit introduces first-year undergraduates to University life, to inquiry and to academic writing. The team involved with the unit has created 100 to 120 different "experiences", for groups of six to eight students. Most of these are designed to introduce students to contemporary problems such as where should an onshore gas processing plant be located and what kind of public transport should the city have. These Experiences and questions cannot be adequately answered from a single disciplinary viewpoint so students need to take engineering, science and social perspectives into account, for example (*integrate different points of view)*. The Arts are also important, as each solution has to be presented in an engaging and innovative way. Students work for the semester on the problem.

Each Experience is carefully structured with tutorials designed so that students can get feedback on their progress, can present details of their progress and can discuss problems they may have had (*reflect on their writing process)*. Time was allocated in tutorials that students were scaffolded in their final writing task

The outcome of the Experience is a group report describing their multi disciplinary solution (if there is one) to the problem and their reflections on their approach (*integrate different points of view)*.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

83

Assessment

Each group was given a Self Reflection Report to complete. These assessment forms were distributed to the students every alternate week to report on their progress and the development of the solution to their problem. Space on the sheet was prepared to allow students to describe problems encountered to be discussed during group discussion. These self-reflection reports allowed students to produce evidence of their task accomplishments. The assessment reports were compiled and submitted to their respective tutor with the Final Report.

In the Final Report students had to describe the final development of their solution in essay form. The two sections of the report formed the assessment for the unit and students were assigned a pass or fail grade. Fail students subsequently received targeted learning assistance.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

84

- Create electives that run across faculties;

- Set up academic dialogue with inter-disciplinary peers such as debates and panel discussions;

- Require students to bring together two or more disciplines to consider the pros and cons of an argument in the context of an assignment;

- Set up double majors within and across a program(s) - for example, Bachelor of Business, Accounting/Finance); and

- Set up double degrees.

Centre for Learning and Development   Telephone: +61 8 6304 2554 | Fax: +61 8 6304 2344
Email: cld@ecu.edu.au | Web: www.ecu.edu.au/centres/centre-for-learning-and-development/

85