Description: Multi-modal Representations of Knowing

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
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<tr>
<td>EDU</td>
<td>8432</td>
<td>41207</td>
<td>1, 2005</td>
<td>WEB</td>
<td>1.00</td>
<td>Toowoomba</td>
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Academic group: FOEDU
Academic org: FOE003
Student contribution band: National Priority Teaching
ASCED code: 079999

STAFFING
Examiner: Bruce Waldrip
Moderator: John Green

RATIONALE
There is growing recognition of the key importance of understanding and integrating different representational modes in learning science concepts and methods. Students must understand different representations of science concepts and processes, to be able to translate these into one another, and co-ordinate their use in representing scientific knowledge. Students need to understand this process so that the effectiveness of their pedagogical practices is maximised.

SYNOPSIS
In this course, students will gain clear understanding of different representations of science concepts and processes, to be able to translate these into one another, and coordinate their use in representing scientific knowledge. Students will learn to identify multi-modal practices and to apply them to the classroom. This course will examine how teachers' and students' practices and beliefs develop by using multi-modal representations of concepts to support science and mathematics learning. NOTES: 1. This course (EDU5472) is available through INTERNET DELIVERY ONLY. There are NO print materials for this course. 2. For details of the technical requirements and accessing Internet study materials, please consult the following URL: http://usqconnect.usq.edu.au. IMPORTANT NOTE: Working with Children: State law in Queensland requires that all adults (including university students, pre-service educators, trainers, vocational teachers, industry educators) working with children under the age of 18, in the state of Queensland*, obtain approval before commencing such work. Many education courses include a practical component (professional experience, project work, research, assessment etc..) that may require engagement with children under the age of 18. It is your responsibility to ensure that you possess a current suitability card (Blue Card) before commencing any practical components of this course. DO NOT PARTICIPATE IN ANY PRACTICAL EXPERIENCE WITH CHILDREN UNDER 18 UNLESS YOU POSSESS A CURRENT 'BLUE CARD'. For further information: http://www.childcomm.qld.gov.au/employment/bluecard/informationSheets.html. *If you are undertaking practical experience outside the state of Queensland, Australia you should check local requirements.
OBJECTIVES

On completion of this course students will be able to:

1. recognise the key importance of understanding and integrating different representational modes in learning science concepts and methods
2. investigate learners' understanding of different representations of science and mathematical concepts and processes, and how learners co-ordinate their use in representing knowledge
3. identify teachers' and students' practices and beliefs in using multi-modal representations of concepts to support
4. develop and apply multiple modes in the classroom
5. investigate the implications for assessing student understandings.

TOPICS

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>Identification of multi-modal forms of learning and representations</td>
<td>15.00</td>
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<tr>
<td>Investigating relationships between different forms of multi-modal representations of knowledge</td>
<td>20.00</td>
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<tr>
<td>Evaluation of different forms of multi-modal representations of knowledge</td>
<td>25.00</td>
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<tr>
<td>Applying multi-modal representations of knowledge to classrooms and assessment processes</td>
<td>40.00</td>
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</table>

TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at http://bookshop.usq.edu.au click 'Semester', then enter your 'Course Code' (no spaces).

There is are no prescribed texts in this course.

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.


STUDENT WORKLOAD REQUIREMENTS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Assessment</td>
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<tr>
<td>Directed Study</td>
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<tr>
<td>Private Study</td>
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</table>

ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
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<tbody>
<tr>
<td>ASSIGNMENT</td>
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<td>30.00</td>
<td>01 Mar 2005</td>
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<tr>
<td>PROJECT</td>
<td>70.00</td>
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NOTES

1. Assignment is due in week 7
2. Project is due in week 14

IMPORTANT ASSESSMENT INFORMATION

1. Attendance requirements:
   There are no attendance requirements for this course. However, it is the students’ responsibility to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.

2. Requirements for students to complete each assessment item satisfactorily:
   To complete each of the assessment items satisfactorily, students must obtain at least 50% of the marks available for each assessment item.

3. Penalties for late submission of required work:
   If students submit assignments after the due date without prior approval then a penalty of 10% of the total marks available for the assignment will apply for each working day late.

4. Requirements for student to be awarded a passing grade in the course:
   To be assured of receiving a passing grade a student submit all of the summative assessment items and achieve at least 50% of the available weighted marks for the aggregate of those items.

5. Method used to combine assessment results to attain final grade:
   The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.

6. Examination information:
   There is no examination in this course.

7. Examination period when Deferred/Supplementary examinations will be held:
   There will be no Deferred or Supplementary examinations in this course.

8. University Regulations:
   Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL
1 The due date for an assignment is the date by which a student must despatch the
assignment to the USQ. The onus is on the student to provide proof of the despatch
date, if requested by the examiner.

2 Students must retain a copy of each item submitted for assessment. This must be
produced within twenty-four (24) hours of receipt of request being made by the
examiner. The student must retain this copy until the grade for this course has been
finalised.

3 In accordance with the University's assignment extension policy (Regulation 5.6.1),
the examiner may grant an extension of the due date of an assignment in extenuating
circumstances.

4 The Faculty will normally only accept assessments that have been written, typed or
printed on paper-based media, except for WEB courses.

5 The Faculty will NOT accept submission of assignments by facsimile.

6 Students who do not have regular access to postal services or who are otherwise
disadvantaged by these regulations may be given special consideration. They should
contact the examiner of the course to negotiate such special arrangements.

7 In the event that a due date for an assignment falls on a local public holiday in their
area, such as a Show holiday, the due date for the assignment will be the next working
day. Students are to note on the assignment cover the date of the public holiday for the
examiner's convenience.

8 Students who have undertaken all of the required assessments in a course but who have
failed to meet some of the specified objectives of a course within the normally prescribed
time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade
will only be awarded when, in the opinion of the examiner, a student will be able to
achieve the remaining objectives of the course after a period of non-directed personal
study.

9 Students who, for medical, family/personal, or employment-related reasons, are unable
to complete an assignment or to sit for an examination at the scheduled time may apply
to defer an assessment in a course. Such a request must be accompanied by appropriate
supporting documentation. One of the following temporary grades may be awarded
IDS (Incomplete - Deferred Examination); IDM (Incomplete - Deferred Make-up);
IDB (Incomplete - Both Deferred Examination and Deferred Make-up).

10 When there is more than one marker for a single item of assessment, the distributed
patterns and means for the different markers will be compared and marks adjusted if
necessary.

11 Marking criteria will depend upon the nature of individual projects.

12 Student workload requirements are as required for the completion of the study and as
negotiated between student and supervisor.

13 All assessment items must be submitted with a pass overall gained.

14 Summative assessment items will receive a numerical score. Any ungraded assessment
requirement will receive a Pass, Fail or Incomplete. The course examiner is responsible
for awarding grades.
OTHER REQUIREMENTS

1. Students will require access to e-mail and Internet access to USQConnect for this course.

2. Students enrolling in WEB courses MUST have ongoing convenient and reliable access to the Internet in order to access course materials and participate in activities that will affect assessment. The levels of equipment required may change from time to time, with the most recent specification listed at http://www.usq.edu.au/currentstudents/computingstandards/default.htm. You can check whether your computer system meets these requirements from USQAssist (http://usqassist.usq.edu.au/).

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