FIT3033
Principles of educational multimedia

Unit guide

Semester 1, 2009

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Unit leader :

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Lecturer(s) :

Berwick

- Michael Morgan

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Introduction

Welcome to FIT3033 Principles of Educational Multimedia for semester 1, 2009. This 6 point unit is a component of the Bachelor of Information Technology and Systems degree Multimedia Applications major. The unit has been designed to provide you with an understanding of educational multimedia applications. It explores many aspects of learning, teaching and interactive multimedia.

Unit synopsis

This unit examines the diversity of theoretical and conceptual frameworks which influence current research and production of educational multimedia applications. Topics will include: educational theory and practice, cognition and cognitive development, the differentiation between child and adult learners, catering to differences in the capacity to learn, for example, gifted and disabled learners, creating immersive and interactive learning environments, current debates surrounding e-Learning, and enabling equitable access to learning technologies. Students will be given an overview of issues and techniques for applying information technology to support instruction in educational and training contexts and gain practical experiences in managing a design process involving competing aspects of learning theories, content characteristics, audience needs and software development practices.

Learning outcomes

At the completion of this unit students will have a theoretical and conceptual understanding of:

- the diversity of theoretical and conceptual frameworks which contribute to the current research and application of educational multimedia;
- the uniquely immersive, engaging and interactive nature of educational multimedia learning environments;
- the correlation of the individual needs of a learner with an appropriate digital environment for the delivery of educational material and learning experiences.

Students will have developed attitudes that enable them to:

- be acquainted with and value the diversity of learning styles and requirements within the community;
- appreciate the need for an adaptive approach in the modification of technology to the requirements of both the learner and the educational content.

Students will have the skills to:

- design and produce documents relating to the conceptual development of educational learning environments;
- develop applications of learning environments for specific learning needs;
- utilise appropriate techniques and be able to select tools to meet the requirements of specific learning environments.

Students will have developed the teamwork skills needed to:

- recognise the potential of multimedia in enabling educational access and equity
- further develop communication and group work skills
- understand the importance of the functional and structural role of multimedia in contemporary educational practice
- recognise the significance and ubiquity of educational products in the multimedia industry and the need for quality assurance in production processes

Workload

For on campus students, workload commitments are:

- two-hour lecture and
- two-hour tutorial
- a minimum of 8 hours of personal study in order to satisfy the reading and assignment expectations.

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed FIT2012, FIT2016 , or equivalent.

Relationships

FIT3033 is a core unit in the Multimedia major of the Bachelor of Information Technology and Systems. You may not study this unit and MMS2701 in your degree.

Continuous improvement

Monash is committed to 'Excellence in education' (Monash Directions 2025 - http://www.monash.edu.au/about/monash-directions/directions.html) and strives for the highest possible quality in teaching and learning.

To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. The University's Unit Evaluation policy (http://www.policy.monash.edu/policy-bank/academic/education/quality/unit-evaluation-policy.html) requires that every unit offered is evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with

evidence of aspects that students are satisfied and areas for improvement.

Faculties have the option of administering the Unit Evaluation survey online through the my.monash portal or in class. Lecturers will inform students of the method being used for this unit towards the end of the semester.

Student Evaluations

If you wish to view how previous students rated this unit, please go to
http://www.monash.edu.au/unit-evaluation-reports/

Improvements to this unit

Student Seminars have been used to ensure student engagement with the content and to point out the relevance of the content to student learning.

Micro lectures will supplement content delivered by students in seminar weeks.

Reviewed Seminar Topics.

A competitive learning product analysis exercise has been used to reduce the reliance on essay writing.

The due date of the project documentation has been moved forward to allow greater time for project development.

The practical assignments, documentation and multimedia project, are intended to allow students to work on a real educational multimedia package and to practice their multimedia authoring and media creation skills.

In past years learning applications have focused on children as an audience. A wider range of target audiences and contexts will be allowed this year, including adult instruction, workplace instruction and online packages.

Unit staff - contact details

Unit leader

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Teaching and learning method

Weeks 1 to 5 and 13 will involve lecturer delivered content.

Weeks 6 to 12 will involve student delivered seminars, supplemented with micro lectures.

The unit will use the Moodle open source online learning system.

Tutorial allocation

On-campus students should register for tutorials/laboratories using Allocate+.

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Unit Schedule

Week	Topic	Key dates
1	Educational Multimedia, Introduction, Assessment and Seminar Topics	Seminar Topic Selection
2	Knowledge, Learning and Pedagogy	
3	Cognitive Architecture, Schema Theory and Cognitive Development	
4	Learning Theories - Behaviourism and Instructivism	
5	Micro Lecture - Example Seminars 5a Other Theories of Learning - Constructivism 5b Types of Learning Environments	Assignment 1: Group Seminar and Sides (25%) Due Friday 3 pm week 5
6	Micro Lecture - Seminar 6a Workplace Learning Developments 6b Learning Using Simulations	Assignment 2: Group Design Document 20%) Due Friday 3 pm week 6
	Mid semester break	
7	Micro Lecture - Seminar 7a Multiple Intelligences 7b Learning Styles/ The Right and Left Brain	
8	Micro Lecture - Seminar 8a Differences Between Adult and Child Learners 8b Gifted and/or Special Needs Learners	
9	Micro Lecture - Seminar 9a Games for Learning 9b Online Learning Environments, Features and Limitations	Assignment 2: Individual Competitive Product

		Analysis (15%) Due Friday 3 pm week 9
10	Micro Lecture - Seminar 10a Interesting Ways of Motivating Students to Learn 10b Discuss the Open Learning University Model	
11	Micro Lecture - Seminar 11a New Developments in Assessment and Grading Systems 11b Novel Ways of Providing Feedback to Learners	
12	Micro Lecture - Seminar 12a Instructional Technology and Media Development 12b New Approaches to Instruction	Assignment 4: Group Interactive Educational Multimedia Application (40%) Due Friday 3 pm week 12.
13	Review	

Unit Resources

Prescribed text(s) and readings

No Set Text

Recommended text(s) and readings

Recommended Reading (*indicates Highly Recommended for this unit)

* Alessi, S. and Trollip, S. (2001). *Multimedia for Learning: Methods and Development*. 3nd ed. Allyn and Bacon. Sydney.

*Berg, G. A. (2003) The Knowledge Medium: Designing Effective Computer Based Learning Environments. Information Science Publishing. Hershey. *Boyle, T. (1997). Design for Multimedia Learning. Prentice Hall. London. Castells, M. Flecha, R . Freire, P. Giroux, H. Macedo, D. and Willis, P. (1999) Critical Education in the New Information Age. Rowman and Littlefield. Lanham, MD. Fenrich, P. (1997) Practical Guidelines for Creating Instructional Multimedia Applications. International Thomson Publishing. Gardner, H. (1999) Disciplined Mind: What All Students Should Understand. Simon and Schuster. NY. Hricko, M. (2003) Design and Implementation of Web-Enabled Teaching Tools. Information Science Publishing. *Mayer, R.E. (2001). Multimedia Learning. Cambridge University Press. Scherer, M. (2004) Connecting to Learn: Educational and Assistive Technology for People with Disabilities. American Psychological Association. *Snelbecker, G. E. (1985) Learning Theory, Instructional Theory, and Psychoeducational Design. University Press of America. Snyder, I. (2002) Silicon Literacies: Communication, Innovation and Education in the Electronic Age. Routledge. Sprenger, M. (1999) Learning and Memory: The Brain in Action. Association for Supervision

Required software and/or hardware

The software required for this unit is available in the multimedia labs at the Berwick campus and includes:

Macromedia Director

Macromedia Flash

 Macromedia Dreamweaver

Adobe Photoshop

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Adobe Illustrator

CMap Concept Mapping software (http://cmap.ihmc.us/download/).

Software may be:

- purchased at academic price at good software retailers

Equipment and consumables required or provided

On-campus students may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to 10 hours per week for use of a computer, including time for newsgroups/discussion groups.

Study resources

Study resources we will provide for your study are:

- the FIT3033 web site on MUSO
- weekly lecture slides
- weekly tutorial requirements
- assignment specifications, sample solutions and
- supplementary material

These resources will be made available through the MUSO website.

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to http://www.lib.monash.edu.au.

The Educational Library and Media Resources (LMR) is also a very resourceful place to visit at http://www.education.monash.edu.au/library/

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (http://moodle.monash.edu.au) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: http://my.monash.edu.au

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

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For more information, please visit: http://www.monash.edu.au/muso/support/students/downloadables-student.html

You can contact the MUSO Support by phone : (+61 3) 9903 1268

For further contact information including operational hours, please visit:
http://www.monash.edu.au/muso/support/students/contact.html

Further information can be obtained from the MUSO support site:
http://www.monash.edu.au/muso/support/index.html

Assessment

Unit assessment policy

Practical assessment: 100%

To pass this unit you must:

- Attempt all assessment tasks
- Achieve no less than 50% of possible marks

Assignment tasks

• Assignment Task

Title : Assignment 1: Group Seminar and Seminar Slides

Description :

A Group Seminar presentation of 20 minutes and 10 minutes questions. Groups to be of three students and presentations to be delivered to class in lectures in weeks 6 to 12. With presentation slides to be submitted for uploaded to the FIT3033 MUSO site by Friday 3 pm week 5.

Seminar topics selected from the list provided.

Weighting : 25%

Criteria for assessment :

Presentation Delivery and Slides Formatting (10)

Content and Research (10)

Relating the topic to educational multimedia and discussion of examples of educational multimedia packages (5)

Due date : Friday 3 pm week 5

• Assignment Task

Title : Assignment 2: Group Design Document

Description :

Presentation by the group of a detailed project plan for an interactive multimedia learning environment and to be targeted at a given instructional methodology.

Weighting : 20%

Criteria for assessment :

Professional Presentation of Documentation (5)

Completion of Documentation Components (10)

An Interesting and Original Concept (5)

Due date : Friday 3 pm week 6

- **Assignment Task**

Title : Assignment 3: Individual Competitive Product Analysis

Description :

Select an educational multimedia package and provide a 750 word (include screenshots) analysis of it's strengths and weaknesses in terms of instructional design, content presentation, interactivity and assessment.
Weighting : 15%

Criteria for assessment :

Presentation of a clearly expressed and logical analysis (5)

Reference to instructional theory to back up your analysis (5)

Correct referencing, written expression and use of supporting graphics (5)

Due date : Friday 3 pm week 9

- **Assignment Task**

Title : Assignment 4: Group Interactive Educational Multimedia Application

Description :

Production of a multimedia learning environment for a specific audience and context, that demonstrates; 1) clear instructional objects, 2) the appropriate formatting and use of media for the presentation of content, 3) an effective instructional strategy that includes interactive elements, and 4) an appropriate assessment strategy.

Your learning environment may target:

1) Child learners

2) Adult learners

3) Workplace learning

4) Online learning

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Weighting : 40%

Criteria for assessment :

Clear Instructional Objectives 5

Effective Instructional Strategy 5

Major Interactivity 5

Appropriate Assessment Strategy and Feedback 5

Appropriate Formatting, Use of Media and Media Quality 10

Technical Excellence and Reliability 5

Creativity in Design 5

Due date : Friday 3 pm week 12

Assignment submission

Submit the assignment to the labelled Assignment Boxes in the foyer of the Berwick School of Information Technology at the Berwick Campus by 3 pm on the due date, with the appropriate cover sheet correctly filled out and attached.

Assignment coversheets

Electronic assignment coversheets can be found via "Student assignment coversheets" (http://infotech.monash.edu.au/resources/student/assignments/) page on the faculty website. They are also available from the front office at Berwick School of IT.

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Late assignment

Assignments received after the due date will be subject to a penalty of a **5 % reduction in marks** for each day (including weekends) the assignment is late. Assignments will not normally be accepted if handed in more than 2 weeks after the due date.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at http://www.policy.monash.edu/policy-bank/academic/education/assessment/

We will aim to have assignment results made available to you within two weeks after assignment receipt.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with Student Rights and Responsibilities (http://www.infotech.monash.edu.au/about/committees-groups/facboard/policies/studrights.html) and the Faculty regulations that apply to students detected cheating as these will be applied in all detected cases.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- Disabilities Liaison Unit

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at http://www.monash.edu.au/exams/special-consideration.html. Contact the Faculty's Student Services staff at your campus for further information and advice.