



National Institute for  
**CHRISTIAN EDUCATION**  
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## **Technology and Education**

**ED555**

# **Unit Outline**

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836 Mulgoa Rd, Mulgoa NSW 2751 | PO Box 1892 Penrith NSW 2751, Australia

Tel: 02 4773 5888 | Fax: 02 4773 5801 | Email: [admin@nice.edu.au](mailto:admin@nice.edu.au) | [www.nice.edu.au](http://www.nice.edu.au)

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Author: Chris Parker

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# TECHNOLOGY AND EDUCATION

ED555

## Statement of Purpose

This unit provides students with a critical understanding of the developing role of information and communication technologies (ICT) in education. Students critically explore the worldviews that underpin digital technologies and the impact they are having on culture and specifically on school-based education. Students will also reflect upon ICT issues relevant to Christian education. In addition to this analysis, students will explore these new technologies, evaluate their pedagogical effectiveness and develop their own ICT skills.

## Pre-requisites

ED400/ED500 and ED401/ED501

## Suggested Co-requisite

ED456/556

## Rationale

Education has remained largely unchanged throughout the history of modern schooling. Education may be on the brink of a large scale paradigm change as a result of the substantial shaping effect of digital technologies on society and culture. The ubiquitous and invasive nature of the World Wide Web in the developed (and developing) world is shaping how these societies understand information, how it is constructed and how it is communicated. Education, by its very nature, must be affected by this thrust.

New pedagogies and learning technologies associated with the World Wide Web are providing new opportunities to engage students in their learning, meet a wide range of learning intelligences and develop creative and collaborative learning communities of a nature not previously seen. Education commentary assumes an uncritical optimism about the benefits of these new technologies to unfold a long awaited paradigm shift in education and schooling. Faithfulness in Christian educational practice requires the critical analysis of the worldviews that underpin any such shaping force. The western technocentric worldview with its continual advancements in the areas of information and communication technologies must be critically evaluated. As Christian educators, we acknowledge that there may be good creational essence in all innovations and technological advances. However, we also recognise that there may be distortions of the good creational plan. These technologies raise questions of the existence of ultimate truth and who creates it; the impact on relationships, communities and families; the effects of digital culture on school culture; the nature of identity and personal self worth when engaged in virtual communities; of censorship and intellectual property rights; the change in the nature of literacy; the tendency to idolise technology as a saviour substitute.

It is essential that Christian educators are well equipped with a suite of contemporary ICT skills. For students to critically evaluate educational information and communication technologies from

both pedagogical and biblical worldview perspectives, they need to develop knowledge and understanding and the ability to implement current ICT technologies.

## Relation to Course Objectives

By developing core ICT skills and knowledge through authentic assessment in the context of classroom practice, this unit contributes directly to the course objectives 5 and 6. The development of a critical analysis of technology in education also contributes to the course objectives 1, 2 and 3.

## Learning Outcomes

At the end of this unit students will be able to:

1. Analyse the pedagogical effectiveness of various information and communication technologies;
2. Confidently source, evaluate and implement information and communication technologies in their educational practice;
3. Discern technocentric cultural trends and the associated worldview beliefs shaping society and the affects that the resulting digital culture is having on education and school communities;
4. Detail the nature of digital culture and its potential impact on educational practice and school structures;
5. Understand the role of information and communication technologies in shaping a worldview that sees truth as relative and a construction of the individual and/or a community of users;
6. Understand the worldview shaping nature of digital culture and its impact upon the self identity concept of young people;
7. Identify and discern distortions of creational norms evident within digital cultures and as a result of the implementation of information and communication technologies in education.

## Subject Content

1. **ICT and Digital Culture.** An exploration of the shaping effects of information and communication technologies on society and culture. The new digital culture has many distinctive features and its members are principally from younger generations. Through an analysis of digital culture, the student will begin to develop a framework for understanding the potential impact on education.
2. **Teaching, Learning and ICT.** A critical analysis of a vision for an education that is significantly shaped by new information and communication technologies. Students will explore the claims that are being made and will begin to develop a critical discernment of the pedagogical implications.

3. **Implementing ICT.** A reflection upon strategies for educationally sound implementation of information and communication technologies. Students will review their own practice and explore strategies for implementation in their classroom and school.
4. **Transforming Education.** An analysis of the transformative power of information and communication technologies and its associated digital culture. Students will examine the worldview beliefs that underpin the current thrust and attempt to evaluate these technologies from a biblical worldview.

## Delivery Approaches

	Student Workload
1. Directed reading	60 hours
2. Responses to reading	50 hours
3. Assignment interaction	50 hours
4. Online forum interaction	20 hours
	<b>Total: 180 hours</b>

## Assessment

The assignments are integral to the completion of this unit. They are not merely assessment of work done elsewhere in the unit but are themselves a major part of the learning experience.

The final grade for the unit will be determined by the student's performance in the two assignment tasks.

## General Assessment Criteria

In addition to criteria specific to each assessable task, the following criteria will be used in the assessment of assignments:

1. Critical thinking
  - biblically informed perspective
  - reasoning
  - original thought
2. Communication
  - meeting outcomes of assessment task
  - engagement with unit concepts
  - logical development of ideas
3. Literature and References
  - engagement with unit related literature
  - reference to additional literature
  - consistent referencing and citation style
4. Creative Thinking

- based on own experience and personal research
- biblically informed perspective

## Assessment Tasks

### Assignment 1 (Option A)

Contribution and collaboration on the online forum for this unit in the Institute's online eLearning portal (Moodle).

<b>Format:</b>	<b>Forum posts and comments</b>
<b>Length:</b>	<b>Approximately 3000 words or equivalent</b>
<b>Weighting:</b>	<b>50%</b>

1. Web **forum postings** are to be made at the conclusion of each segment. This component asks you to reflect critically on your own thinking and development as you work through the Study Guide and readings. At the end of each segment you are required to post an entry on the web forum. The entry needs to be brief (100 words max). Your entries should focus upon a critical reflection of your own ideas and evaluations related to the topic of technology and education as you work through each segment. You should also raise questions and issues that you feel are worthy of further investigation. 20%
2. Write a 1 page **preamble for a Christian school's ICT policy**. Publish a post in the forum with this document as an attachment. Please post in PDF format (there are free PDF convertors available online if required). Your preamble will be broad in scope and will articulate a big picture biblical worldview of computers and education. 20%
3. Develop a **learning experience** for one of your classes that embraces blogging as a Web 2.0 social networking technology. You may develop a class blog, teacher blog, homework blog or provide each of your students with a blog. Unfold this with your class and then publish a post on this course's forum that provides a web address to your blog (or example of a student blog). Your post should also detail what you did and what observations you made about digital learners. Please also include a summary of student evaluations of the activity. This may be best achieved through the commenting facility attached to each post in the school blog and will be accessible by you posting links to the comments. This activity does not need to be for an extended amount of time to complete this assessment (though you might like to continue with it). 30%
4. Research and publish a 1 page guide for teachers about an **ethical approach to copyright**. Publish a post in the forum with this document as an attachment. Please post in PDF format (there are free PDF convertors available online if required). This will not be a comprehensive guide but it should be able to give a teacher an overview of the ethics, legalities and licences available. It will also give them hyperlinked references to online resources with more detail. This document should also highlight the Creative Commons copyright system and links to resources that describe it. 20%

5. In addition to your own posts, you are required to **comment on and interact with** posts made by other class members. 10%

### Assessment criteria

In addition to the general criteria that apply to all units, the following criteria will apply in the assessment of this assignment:

1. Evidence of a comprehensive personal engagement with the material contained in the Study Guide, texts and readings
2. Demonstrated awareness of the complexities surrounding the worldview beliefs underpinning digital culture and its shaping affects upon education
3. Reflections upon the scope of the issues needing consideration when implementing ICT in education
4. Identification of the ethical and legal issues associated with copyright for educators
5. Indicators of metacognitive processing and synthesising of personal reflections and those of colleagues

### Assignment 1 (Option B)

Construction of a learners' blog for the duration of the course

<b>Format:</b>	<b>Blog posts and comments</b>
<b>Length:</b>	<b>Approximately 3000 words or equivalent</b>
<b>Weighting:</b>	<b>50%</b>

1. Develop a blog and maintain it as a journal of your learning during this unit. You will be asked to reflect critically on your own thinking and development as you work through the activities suggested by your lecturer. Your entries should focus upon a critical reflection of your own ideas and evaluations related to the topic of technology and education as you work through each segment. You should also raise questions and issues that you feel are worthy of further investigation. 20%
2. Write a 1 page **preamble for a Christian school's ICT policy**. Publish a post on your blog with this document as an attachment. Please post in PDF format (there are free PDF convertors available online if required). Your preamble will be broad in scope and will articulate a big picture biblical worldview of computers and education. 20%
3. Develop a **learning experience** for one of your classes that embraces blogging as a Web 2.0 social networking technology. You may develop a class blog, teacher blog, homework blog or provide each of your students with a blog. Unfold this with your class and then publish a post on learner's blog for this unit that provides a web address to your blog (or example of a student blog). Your post should also detail what you did and what observations you made about digital learners. Please also include a summary of student evaluations of the activity. This may be best achieved through the commenting facility attached to each post in the school blog, which will be accessible by you inserting links to the comments. This

activity does not need to be for an extended amount of time to complete this assessment (though you might like to continue with it). 30%

4. Research and publish a 1 page guide for teachers about an **ethical approach to copyright**. Publish a post on your blog with this document as an attachment. Please post in PDF format (there are free PDF convertors available online if required). This will not be a comprehensive guide but it should be able to give a teacher an overview of the ethics, legalities and licences available. It will also give them hyperlinked references to online resources with more detail. This document should also highlight the Creative Commons copyright system and links to resources that describe it. 20%
5. In addition to your own posts, you are required to **comment on and interact with** posts published by other unit class members on their blogs. 10%

### Assessment criteria

In addition to the general criteria that apply to all units, the following criteria will apply in the assessment of this assignment:

1. Evidence of a comprehensive personal engagement with the material contained in the Study Guide, texts and readings
2. Demonstrated awareness of the complexities surrounding the worldview beliefs underpinning digital culture and its shaping affects upon education
3. Reflections upon the scope of the issues needing consideration when implementing ICT in education
4. Identification of the ethical and legal issues associated with copyright for educators
5. Indicators of metacognitive processing and synthesising of personal reflections and those of their colleagues

### Assignment 2

Critical analysis of one or two characteristics of digital culture: identifying it's shaping affect on education and evaluating the characteristic/s from a biblical worldview perspective.

**Format:** Essay OR Video of presentation to the staff at your school\*  
**Length:** 3000 words or equivalent  
**Weighting:** 50%

New forms of information and communication technologies are having a profound shaping effect on societal structures and on culture at large. The ubiquitous and alluring nature of the Internet, and its promises, is resulting in the formation of a new digital culture. As more and more of our lives are being drawn into the Internet, digital culture is having a significant shaping effect on wider culture. All industries and institutions are being affected, including education.

What are some of the characteristics of digital culture? In this assignment you will choose 2 of these characteristics and present a critical analysis of the shaping effect they are having on education. For example; sexification of young people, idolatry of technology and information; effects on literacy, shaping of self identity; issues of cyber bullying, etc. You will also discern what worldview beliefs are driving this cultural change and reflect upon how we are to understand them through a biblical worldview. You will discuss what aspect of these characteristics you estimate to be part of the good creational essence and what may well be distortions resulting from the fall? You will conclude with some brief reflections on how to navigate through the tensions in the context of Christian education.

*\*The video presentation will be assessed using the same criteria and will require a brief abstract and reference list to be submitted with the video file. The recording and production of the video will be an ICT based learning experience for the student. Please load the video onto a web-based video sharing network and provide the link for assessment.*

### **Assessment criteria**

In addition to the general criteria that apply to all units, the following criteria will be employed in the assessment of this assignment:

1. Presentation of a well articulated overview of the nature and characteristics of digital culture
2. Evidence of a critical analysis of 2 characteristics and the shaping effect that they are having on the scope of education, including pedagogy and school structures
3. Critical evaluation of the worldview beliefs that underpin the 2 characteristics of digital culture
4. Understanding and articulation of a biblical worldview
5. Ability to discern and describe creational norms and distortions within digital cultures
6. Reflections on shaping impact of digital cultures on education

### **Set Text**

Buckingham, D. (2007). *Beyond Technology: Children's learning in the age of digital culture* (pp 50–74). Cambridge: Polity Press.

### **Required Reading**

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