

Expo 2010:

Teaching and Learning Innovation

Authentic learning designs: Creating engaging real-world tasks



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Murdoch University
Western Australia

22 October, 2010
Chinese University of Hong Kong

Technology without pedagogy

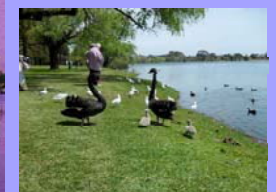
The facts are clear ... powerful technologies end up being used most often for word processing and low-end applications in [education]...

After all the machines, money and promises, the results are meager.



OVERSOLD & UNDERUSED

COMPUTERS IN THE CLASSROOM



Technology without pedagogy

Banks of computers in classrooms remain unused

Mobile devices are turned off

Laptops are used only for low level activities



OVERSOLD & UNDERUSED

COMPUTERS IN THE CLASSROOM



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http://obviousmag.org/en/archives/2009/04/alternative_uses_for_our_laptop.html

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http://obviousmag.org/en/archives/2009/04/alternative_uses_for_our_laptop.html

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<http://d.hatena.ne.jp/shiinaneko/touch/20100715/1279252548>

9



http://www.guy-sports.com/humor/computers/computer_mouse.htm

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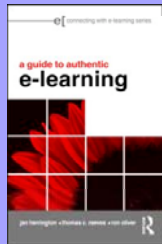
<http://d.hatena.ne.jp/shiinaneko/touch/20100715/1279252548>

10



http://obviousmag.org/en/archives/2009/04/alternative_uses_for_your_laptop.html

9 elements of authentic learning



(Herrington,
Reeves &
Oliver, 2010)

- Authentic context
- Authentic activity
- Expert performances
- Multiple perspectives
- Collaboration
- Reflection
- Articulation
- Coaching and scaffolding
- Authentic assessment

Learning WITH technology

We can use pedagogical models such as **authentic learning** to guide the successful use of educational technologies



Authentic context

Authentic context

Authentic task
Expert performance
Multiple views
Collaboration
Articulation
Reflection
Scaffolding
Authentic assessment

- A physical or virtual environment that reflects the way the knowledge will be used in real-life

Authentic learning

What is it?



Authentic tasks

- Authentic context
- Authentic tasks**
- Expert performance
- Multiple views
- Collaboration
- Articulation
- Reflection
- Scaffolding
- Authentic assessment

- Tasks and activities that have real-world relevance

Authentic context

Characteristics

- A design to preserve the complexity of the real-life setting
- Provides the purpose and motivation for learning
- Ideas can be explored at length in the context of real situations

Example: Sustainable tourism



Appalachian Grower's Fair: 46 hospitality and tourism students

- Plan, market, conduct and evaluate a festival
- Showcase local produce, plants, handmade items and music
- Fund a proposed museum at the site

(Deale et al. 2010)



Authentic tasks

Characteristics

- Clear goals and real-world relevance
- Require production of knowledge rather than reproduction
- Complex and ill-defined
- Completed over a longer period

Example: History



Becoming an historian

Authentic context

Characteristics

- A design to preserve the complexity of the real-life setting
- Provides the purpose and motivation for learning
- Ideas can be explored at length in the context of real situations

Example: Sustainable tourism



Appalachian Grower's Fair: 46 hospitality and tourism students

Use internet, cameras, computers, mobile phones, software to design, plan, market, collect data, interview ...



'Not Just A Name On A Wall'

Home Research Task Memorial Resources Teacher Info

Research (Finding Information)

Once you have chosen a name from a memorial such as the [Coonabarabran Clock Tower](#), you need to find out as much as you can about the person and their experiences in WW1. Write rough notes to begin with using the [Scaffold](#) to help arrange them in order. There is a huge amount of written material available on the web concerning WW1. One reliable suggestion for your research is to:



Start with the [Biographical section of the Australian War Memorial Website](#). Click on the 'Research a Person' link and enter any relevant information. You may obtain an array of records, but you are guaranteed to at least obtain an entry on the nominal roll (a photographed sheet from which you identify your soldier). This will give you amongst other information his unit and enlistment and discharge dates. The AWM site has a wealth of information on WW1 and you may wish to investigate other sections, such as the Australians at War Section



Once you have the soldiers unit (such as his battalion), and relevant dates you can track his experiences through following his unit through the War. A battalion of infantry is made up of around 1000 men and it is reasonable to assume that your soldier shared a common experience with these men. Next go to [Ross Mallet's Order of Battle](#) site as it has comprehensive information on every unit that served in WW1. Make a list of the Battle Honours for your unit, and that, together with the enlistment and discharge dates will show what your soldier was involved in. Mallet also has a link to unit histories which you may be able to obtain through your library or view at the Mitchell Library.



Next find out some detail about some of the battles the soldier may have participated in. One suggestion to refer to the [Australian Battlefields of WW1](#) site. Another suggestion would be to download and look at the appropriate section of the [Bean's First World War Official History](#) available on the AWM site.



This [page on the National Archives of Australia](#) site gives instructions for searching for information using [RecordSearch](#). If you are fortunate the soldier's Service Record will have been digitised for you to view (you can request a photocopy but will need to pay for it). The service record usually has an Attestation Paper, Service and Casualty Form and any Military Correspondence. These can be extremely valuable to obtain a mental picture of the soldier and to track his movements. As well as hospital admission dates, the Service and Casualty Form includes leave details, any AWOL and some information on movements.

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Example: History

21

- Course: [Year 10 History - World War 1](#)
- Peter Morrissey, Coonabarabran High School



Use mobile phone to interview and take photographs

Expert performance

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Authentic context

Authentic task

Expert performance

Multiple views

Collaboration

Articulation

Reflection

Scaffolding

Authentic assessment

- Access to expert thinking and the modelling of processes

'Not Just A Name On A Wall'

Home Research Task Memorial Resources Teacher Info

Coonabarabran Memorial Clock Tower



The Coonabarabran Memorial Clock Tower would be familiar to any traveller along the Newell Highway between Brisbane and Melbourne. It is built from local sandstone and was dedicated in 1928. The tower has a large brass plaque on each side inscribed with the names of 255 servicemen that served in The Great War (WW1). Those that died during the war (41) have a star next to their name. These names can be read by clicking on the icon of each plaque below. This will open an enlarged image of the plaque.



Dedication Plaque on [East Wall](#)



Names on [South Wall](#)



Names on [West Wall](#)



Names on [North Wall](#)

Keyno

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Multiple perspectives

Characteristics

- Not just a single perspective - such as a textbook
- Powerful search tools enable range of views
- Different points of view on a critical incident

Example: Investigate a workplace accident



Powerful search engines

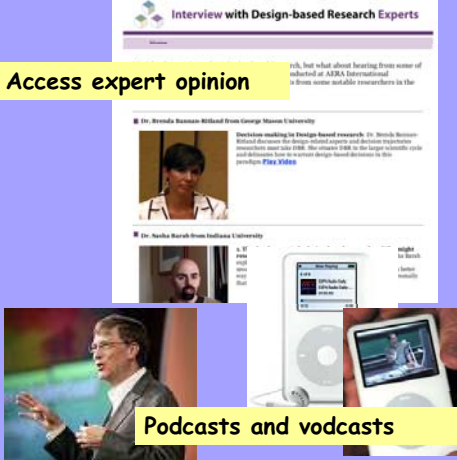
Repositories and resources

Expert performance

Characteristics

- Access to the way an expert would think and act
- Access to learners in various levels of expertise
- Opportunities for the sharing of narratives and stories

Examples: Expert views



Collaboration

- Authentic context
- Authentic task
- Expert performance
- Multiple views
- Collaboration**
- Articulation
- Reflection
- Scaffolding
- Authentic assessment

Joint problem solving and social support

Multiple perspectives

- Authentic context
- Authentic task
- Expert performance
- Multiple perspectives**
- Collaboration
- Articulation
- Reflection
- Scaffolding
- Authentic assessment

- Different perspectives from different points of view

Articulation

Authentic context

Authentic task

Expert performance

Multiple views

Collaboration

Articulation

Reflection

Scaffolding

Authentic assessment

Opportunities for students to speak and write about their growing understanding

Collaboration

Characteristics

- Teams or pairs rather than individuals
- Collaboration encouraged through technology
- Tasks addressed to groups, not individuals

Examples: Collaborative writing online

What is a wiki?
The word "wiki" is Hawaiian for quick. A Wiki thus came to mean an application that allows users to very quickly create web-based content. Users can read, contribute, delete, edit and reorganise information using simply their web browser.

Dropbox

Joint publications

WikiServerPro
Description
*** People experiencing startup
Tap the email diagnostics button
This mobile Wiki server is a full f change, either on the device, or

Articulation

Characteristics

- Public presentation of argument to enable defence of position and ideas
- Presentations to online class
- Microblogging articulation in 140 characters

Examples

VOIP

Movies/documentaries

Twitter comments

Example: Negotiation skills

- Course: Management - Employment relations
- Delicate dining
- Sandra Jones, RMIT, Melbourne



Students have roles as a manager, chef, kitchen hand, waiting staff, bar staff, and address contemporary issues facing the organization and the role-player

Reflection (*in and on action*)

Characteristics

- Opportunities to make choices
- Not quiet and solitary - can be a two-way process
- Opportunities to reflect in online and mobile journals and diaries

Examples

The examples section shows three digital platforms: BlogPress, Blogs, and Journals and diaries. BlogPress is a mobile app for iPhone and iPad. Blogs shows a screenshot of a blog post titled 'Quality Teaching Part 1'. Journals and diaries shows a screenshot of a journal entry with a date and text.

Articulation



Students create a film to teach other students a scientific concept, including:

- Diagrams
- Interviews
- Music,
- Animations etc.

- What causes the phases of the moon?
- What causes the seasons?
- What is evaporation?
- How do you read a weather map?

In order to explain it to others they must understand it and be able to articulate the concepts

Scaffolding and coaching

- Authentic context
- Authentic task
- Expert performance
- Multiple views
- Collaboration
- Articulation
- Reflection
- Scaffolding
- Authentic assessment

- Support provided to the learner by the teacher and others in the learning environment

Reflection

- Authentic context
- Authentic task
- Expert performance
- Multiple views
- Collaboration
- Articulation
- Reflection
- Scaffolding
- Authentic assessment

- Opportunity to think about, reflect and discuss choices

Authentic assessment

Characteristics

- Seamless integration of assessment and task
- Opportunities to craft polished performances
- Significant student time and effort in collaboration with others

Example: Portfolios and authentic products

Product from task

Electronic portfolios

Published reports

Movies/documentaries

Mobile products

Scaffolding

Characteristics

- No attempt to 'transmit' knowledge
- Teacher's role is supporting rather than didactic
- Collaboration where more able partners can assist

Example: Twitter in large lecture

Micro-blogging: Twitter

Focusing on the task

It's the task that matters most!

Tom Reeves



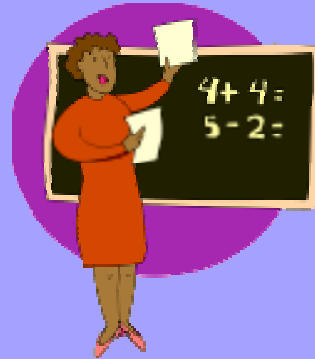
Authentic assessment

- Authentic context
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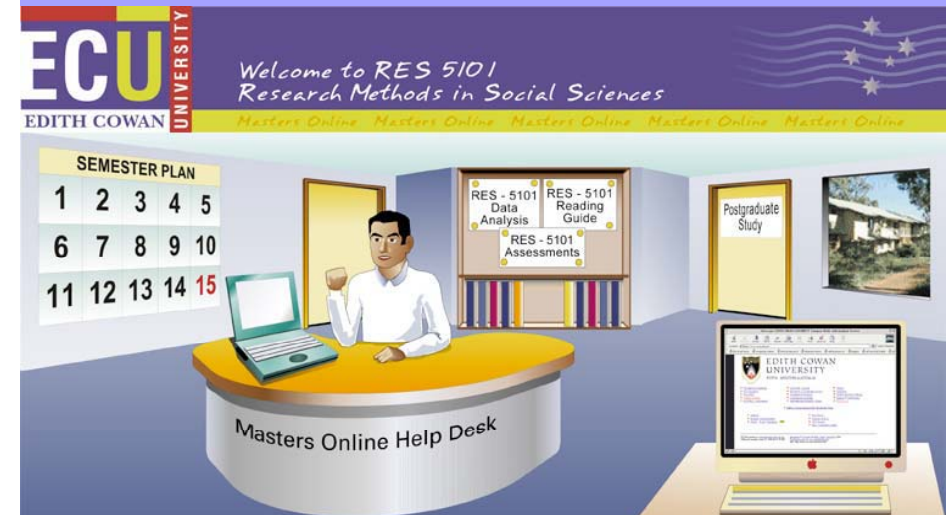
- Assessment is integrated with the task rather than separate testing

Is this an authentic task?

There are 25 people in a room. How many handshakes would there be, if everyone shook hands with every other person?



E-learning works when the learning tasks are authentic!

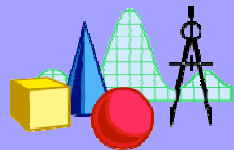


Decontextualized problems

Let F be the vector field on given by $F(x,y,z) = (2xz, -x, y^2)$
Evaluate

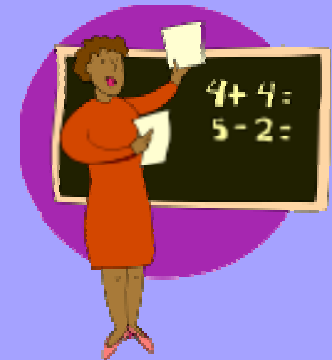
where V is the region bounded by the surfaces

$$x = 0, y = 0, y = 6, z = x^2 \text{ and } z = 4$$



What is an authentic task?

- $2x + 1 = 7$
Solve for x
- $1/2 + 3/4 =$
- Graph $y = \sin 2x$



Problems that try to relate to students' interests



Teachers' joke adds up to woe (West Australian)

DALLAS

SIX high school mathematics teachers in a United States school have been suspended for giving their students a quiz that used real-life situations involving drugs, prostitutes and violence to test their skills.

The controversial worksheet included these questions:

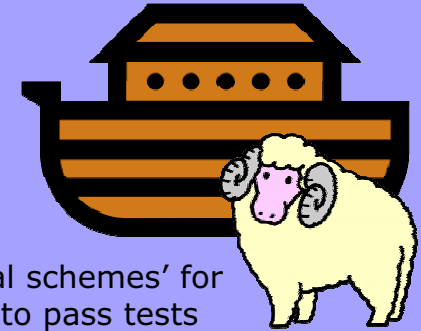
- Johnny has an AK-47 with an 80-round clip. If he misses six out of 10 shots and fires 13 times at each drive-by shooting, how many drive-by shootings can he attempt before he has to reload?

Word problems

If there are 26 sheep and 10 goats on a ship, how old is the captain?

Schoenfeld (1991)

"nonreason" - a willingness to engage in activities that don't make sense



Collins (1988): 'suboptimal schemes' for remembering information to pass tests



Real-life examples

Teachers' joke adds up to woe (West Australian)

The six teachers have apologised over the test.

"It was intended as an icebreaker, of letting kids know know that we have a sense of humour and a sense of what goes on in the world".

It was not known how the students scored in the test.

Word problems

Problem:

If a person jumps off a moving bus, how would that affect the speed of the bus?



"It depends on what the driver does"

"It depends on whether the other passengers notice"

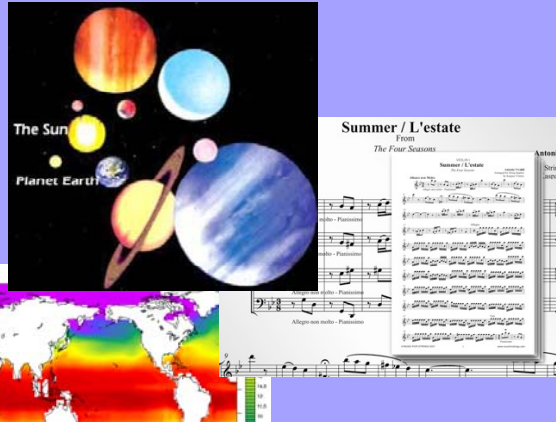
"It depends on how heavy the person is"

"It depends on whether anyone cares about the person"

Thematic approaches

The four seasons

- Science
- Music
- Poetry/writing
- Mathematics
- Geography



Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperature												
Mean maximum temperature (°C)	25.6	25.6	24.5	22.6	20.0	17.6	17.0	18.3	20.3	22.1	22.9	25.0
Mean minimum temperature (°C)	17.9	18.2	16.7	14.2	11.8	9.4	8.3	8.8	10.6	12.6	14.4	16.5

Some PBL problems

- Problem-based learning example
- [When Twins Marry Twins](#)

PBL Clearinghouse

Sample PBL Problems

- [One Twin Problem Based Learning](#)
- [The Elkhart Motor Accident](#)
- [The Colorado River: Where Water is a Highway? \(UTL Summer 99\)](#)
- [Where Emotions Is It Anyway? \(UTL Summer 99\)](#)

Biology

- [When Twins Marry Twins](#)
- [The Control Solution](#)

Chemistry/Biochemistry

- [Starting for a Kettle Trip](#)
- [Beverly's Discovery \(Teaching Note\)](#)
- [The Dinosaur \(Teaching Note\)](#)
- [Fish Sids with an Unusual Organic Analysis](#)
- [Case Study Problem in Molecular Evolution](#)

Criminal Justice

- [Crime and Punishment: Case Negotiation in the Criminal Justice System \(UTL Summer 99\)](#)

Physics

- [A Day in the Life of John Henry: A Traffic Cop](#)
- [Overload: a problem on household wiring](#)
- [Laptop Overload: a problem on statistics and lightbulbs](#)
- [Pulley Challenge: a design problem for engineering majors](#)

Comments, suggestions, or requests to add pbl@udel.edu.
Last updated July 4, 2005
Copyright © 1999, 1998

Most video games

- Most games do not require a product

Social Impact Games
Entertaining Games with Non-Entertainment Goals (e.g., Science Games)

Home | Login/Register | Search (use left menu for games)

View Games by Category

- Education + Learning Games
- Public Policy Games
- Health + Wellness Games
- Business Games
- Military Games
- Commercial (COTD) Games
- Proposed + Upcoming
- Show References
- Print

Education and Learning Games

A Note on Categories and Learning Games

Type: Education and Learning Games

Note: Education and Learning Games that have been commercially published – and can be found in stores – are listed under "COTD" (Commercial Off The Shelf). Also see other categories, since most non-entertainment purposed games have an educational component.

Comments: 0

in America, We're the Best: Pass the Course!

Ken and Laverne

A computer game, currently under development in conjunction with the author.

Genre: Education

Platform: Windows

Developed by: Ken and Laverne

For more information on this game, visit the website for the game.

Genre: Education

Platform: Windows

Developed by: Ken and Laverne

For more information on this game, visit the website for the game.

Genre: Education

Platform: Windows

Developed by: Ken and Laverne

For more information on this game, visit the website for the game.

A multi-player game in development at MIT about the American Revolution.

When Twins Marry Twins

Written by Deborah E. Allen

Sally Thompson meets Harry Branaugh in her junior year at a small liberal arts college in Massachusetts. It's a case of love at first sight. In the spring of their senior year, they both have been lucky enough to find jobs in the Boston area, so they plan to get married in the June following graduation.

At their wedding rehearsal dinner, Sally's twin sister Emma meets Harry's twin brother Ken for the first time. It's a case of love at first sight. As Sally and Harry have their first serious argument about who should have told whom about having a twin (and exactly when), Emma and Ken make plans for the evening that don't include the rest of the family. Three months later, they also decide to get married.

The couples keep in touch, and 3 years later Sally and Emma are delighted to discover that they are both expecting (twins?). Emma's due date is in October, and Sally's in December. On December 12th, seventeen hours into labor, Sally is no longer sure she's delighted about the prospect of motherhood, and begins to worry about the child she's about to deliver.

"Why didn't you think of it sooner?" she says to Harry, gripping his arm rather severely. "Identical twins should never marry identical twins. Our child's going to look just like Emma and Ken's little boy." Her first impression of Kenneth, Jr. she recalls, was that he had the sort of face that only a mother and father could love.

Two hours later, Sally is scared to take a look as the obstetrical nurse puts her first child into her arms.

Questions to ponder:

Will their child look just like his or her "double cousin," Ken, Jr.? Why or why not?

Assuming that Sally is right and the children will look identical, will they also have similar personalities, behavior, and attitudes?

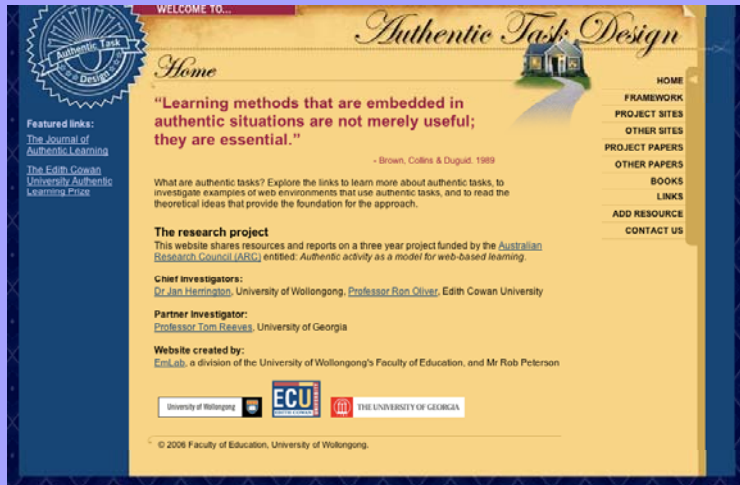
What is the maximum percent of the two childrens' genetic composition that could consist of identical genes (allelic versions)? The minimum percentage?

[This short problem was selected to represent the type of PBL problem that can be used successfully in a large class for non-majors as well as majors, can be researched by consulting the textbook alone, and has a content focus that easily fits within the framework of a conventional course.]



<http://www.udel.edu/pbl/curric/biology-prob.html>
Last updated Feb. 5, 1999.
Copyright Saunders College Publishing, 1999.

Focusing on the task



Complex problems simplified



Occupational Health and Safety

[Virtual laboratory](#)
(Quicktime VR)

Janis Mussett, Curtin Uni

Instead of a realistic product like OHS workplace evaluation



Task and assessment simplified as list of specific questions:

- What biological materials are present in the lab?
- What biological hazards are evident?
- How many instances of contamination exist in the lab?
- What preventive measures should be in place?

What are authentic tasks?

- have real-world relevance
- are ill-defined
- comprise a complex task to be investigated by students over a sustained period of time
- provide the opportunity for students to examine the task from different perspectives, using a variety of resources
- provide the opportunity to collaborate



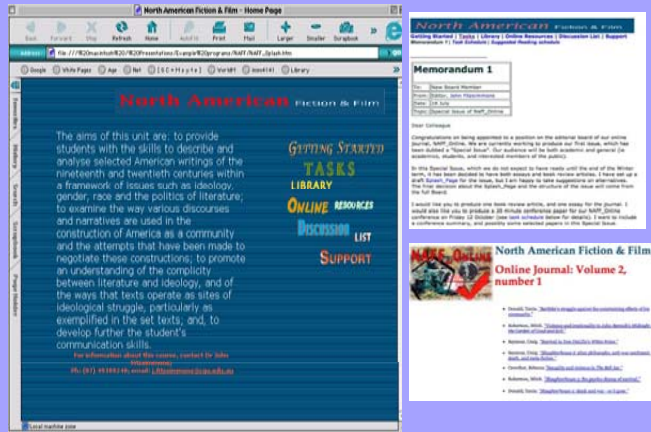
What are authentic tasks?

- If none of these examples qualify as authentic tasks, what do?
- What are the characteristics of authentic tasks?



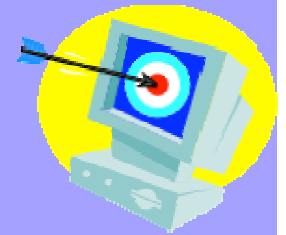
Example: Literature

- Course: [North American Fiction and Film](#)
- John Fitzsimmons
Faculty of Arts Health and Sciences,
Central Queensland University



Authentic tasks:

- provide the opportunity to reflect
- can be integrated and applied across different subject areas
- are seamlessly integrated with the assessment
- create polished products valuable in their own right
- allow competing solutions and diversity of outcome



Example: IT in education



- 1st year teacher education compulsory IT subject
- One major task over 7 weeks



Example: Research methods

- Course: [Research preparation: Research methods](#)
- Max Angus & Jan Gray,
School of Education,
Edith Cowan University



The effect of this approach?

- Transitory learning
- Lack of transfer
- Or worse!



How IT is often taught in teacher education ...



- We teach **from** technologies or **about** technologies
- Not learning **with** technologies

Technology as cognitive tools

“Teach carpentry
not hammer”

(Oppenheimer, 1997)



A typical introductory teacher education course



- How to make a Powerpoint presentation
- How to create a web page
- How to create a spreadsheet

The task

- 7 weeks in a 13 week semester
- Technology available to students:
 - iPods and microphones (1 x iPod per group of 2-3 students)
 - Video and still cameras - students used their own
 - Computers and software required for story-book construction: (e.g., Powerpoint, GarageBand, iTunes, iMovie, iPhoto, Word, ComicLife)



Approach

The approach of the project was to:

- use a central **authentic and complex task**
- encompass learning a range of different **technological tools**, and
- create **a genuine product** to share with other pre-service teachers and their own students
- **model processes** that primary school children could adopt



Writing the story

- Children's author as guest speaker
- Research and choose topic
- Write and storyboard story



Digital stories

Device

iPods

Curriculum/focus

IT for Early Childhood teachers

Task

Create a podcast of an original story - a talking book created in Powerpoint



This was certainly a project which had it all, tears and laughter, frustration and excitement and even a little swearing thrown in for free.

What a challenge, but what a great feeling of achievement we all feel now it's complete - well almost. We still need to transfer it on to the iPod and save it to Quicktime, but piece of cake right??

We faced a LOT of problems, but by asking people and through trial and error we came up with a solution.

Yes indeed, these tasks no longer scare me, because we have proved to ourselves that with a little trial and error, perseverance and a few tears, we can succeed.

This has been a really challenging assignment but I did learn things I had never even heard of before, I guess that was the idea!



Using the technologies

- Brainstorm story ideas in concept mapping software (e.g., Inspiration)
- Capture and create pictures and videos
- Create 'pages' of story, including animations and transitions (e.g., in Powerpoint)
- Record audio narration (using iPods with microphones), and insert music and sound effects (e.g., using iMovie)
- Create a podcast to enable sharing of stories:
 - Save as a .mov file
 - Publish as podcast



COGNITIVE TOOLS

Brainstorming ideas in **Inspiration**

Researching on **internet**

Creating story pages in **Powerpoint** **Creating movie** in **iMovie**

Inserting images Inserting **sounds**

Scanning drawings **Recording voiceovers**

Exporting files **Importing files** Adding

sound effects Timing **slide advances**

Creating **movie files** **Uploading files** to server Publishing **podcasts**

Downloading other stories

Uploading files to **iPods**

Reflective journal as **blog** or **Word** document

Creating **pdfs**

Sharing

- Groups publish story to the course website.
- Students download each other's stories to put into their course portfolios and resources.
- Students present Powerpoint presentations in class, and submit stories on iPods for assessment
- Students create a reflective journal on the process and product (e.g., as podcast, blog, comic or webpage)



Dissemination: Online book

- Chapter on overall project
- 11 project chapters: visual arts, maths ed., adult ed., science ed., reflective practice, early childhood, environmental ed., phys ed., etc.
- Professional development
- Design principles

<http://ro.uow.edu.au/newtech/>

Digital stories

Device

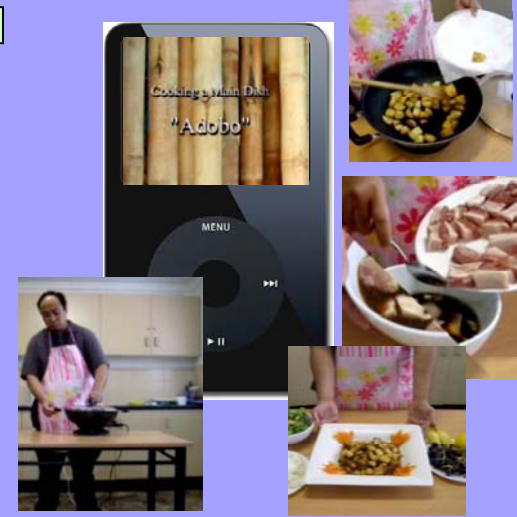
Mobile phone with camera

Curriculum/focus

Adult education

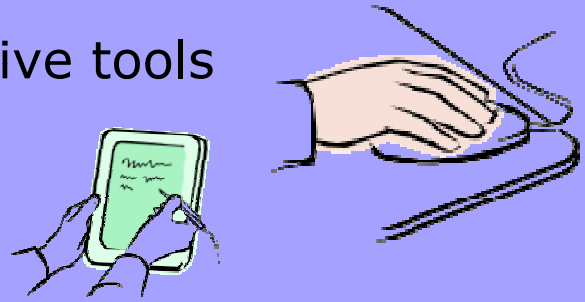
Task

Create a podcast of a workplace procedure:
How to cook Adobo



Role of technologies in these examples

Cognitive tools



Technology in the hands of the student (rather than the teacher)!

Dissemination: Project website



- Project website
- Includes:
 - New pedagogies
 - Information on the team and reference group
 - Information on the project
 - Products of the project (such as the analysis of affordances of devices)

<http://mlearning.uow.edu.au>

A promising research approach



- Socially responsible educational technology research through **design-based research**

David Jonassen:

'Students cannot use [cognitive] tools without **thinking deeply about the content** that they are learning, and second, if they choose to use these tools to help them learn, the tools will **facilitate the learning process**'



Definition of design-based research

(Wang & Hannafin, 2005)

A systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories (p. 6)

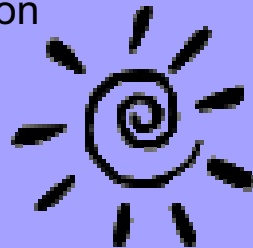
Checklist for design

- ✓ Authentic context
- ✓ Authentic activity
- ✓ Expert performances
- ✓ Multiple perspectives
- ✓ Collaboration
- ✓ Reflection
- ✓ Articulation
- ✓ Coaching and scaffolding
- ✓ Authentic assessment

Using technology as cognitive tools

Design-based research characteristics

- the use of an **iterative design and evaluation cycle**: interventions are adjusted as the **research** proceeds
- a focus on how the intervention worked



(Walker, nd)

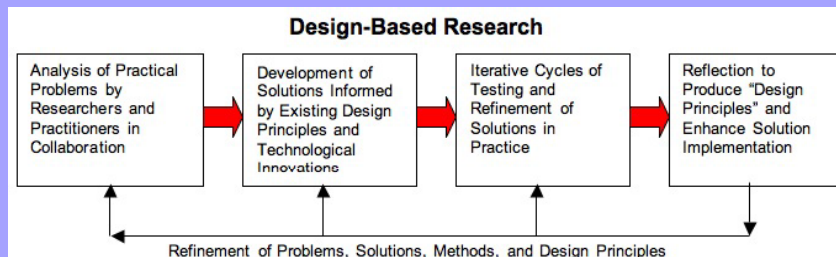
Terminology

Design-based research

=

- Development research
- Design experiments
- Design research
- Formative research

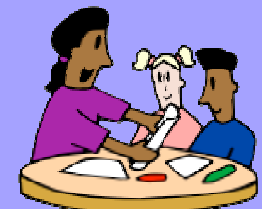
Phases of design-based research



(Reeves, 2006)

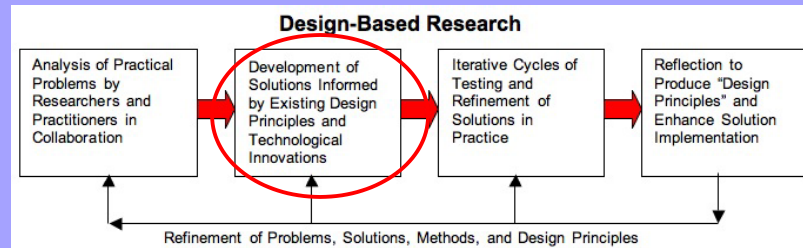
Design-based research characteristics

- an emphasis on conducting **research in authentic, natural educational contexts**, rather than laboratories
- the desire for **research** to have a **practical impact**, by having clear relevance for the improvement of education

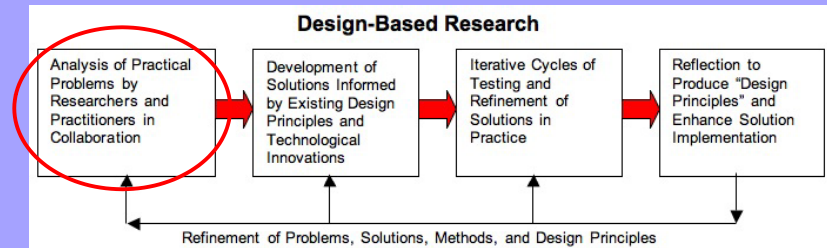


(Walker, nd)

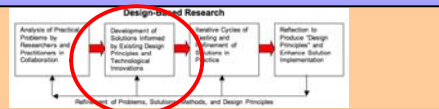
Phase 2: A solution



Phase 1: Exploration of problem

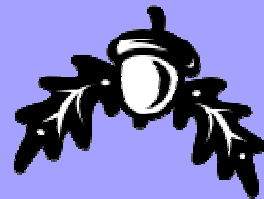


Phase 2:

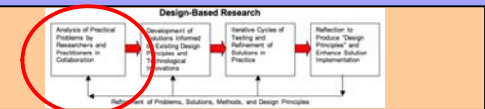


• In brief:

- Find principles or advice on how others have addressed similar problems
- Compile draft design principles
- Design and develop a solution

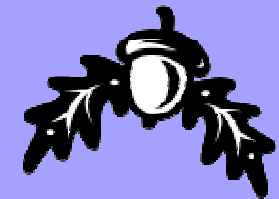


Phase 1:

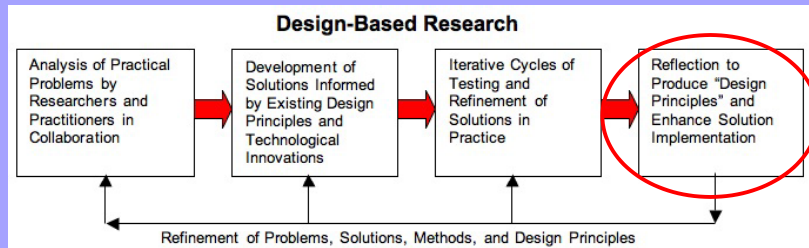


• In brief:

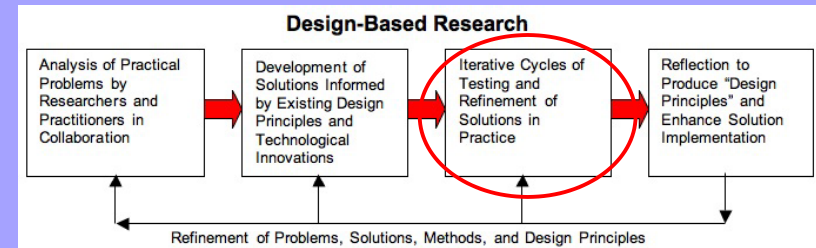
- Explore the problem
- Speak to other teachers about the problem
- Read what others say about it



Phase 4: Design principles



Phase 3: Cycles of testing



Form of principles

- "If you want to design intervention X then you are best advised to give that intervention the characteristics A, B and C"
(Van den Akker, 1999)

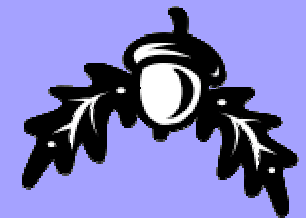


Phase 3:



• In brief:

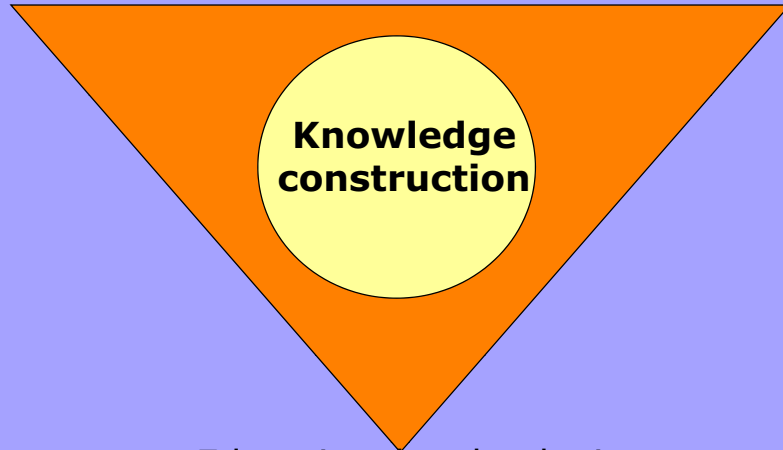
- Try your solution with students
- Collect data
- Change your approach after the first time to improve it
- Try again



Pedagogy for learning with technology

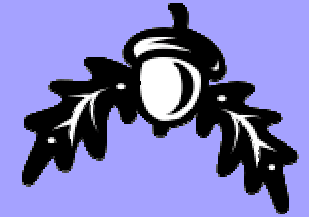
Authentic learning

Cognitive tools



Educational technologies

Phase 4:



In brief:

- Reflect on your findings
- Create principles (or advice) for others to follow
- Publish and disseminate the results of your research

Technology without pedagogy

The facts are clear ... powerful technologies end up being used most often for word processing and low-end applications in classrooms ... After all the machines, money, and promises the results are meager.



OVERSOLD & UNDERUSED
COMPUTERS IN THE CLASSROOM



Template to design study

12.1 The practitioners

Teachers and researchers together explore the nature of an educational issue or problem facing students. It is important for teachers to be involved in this phase so that the full extent of the problem is known, rather than being introduced solely by researchers.

Focus questions	Your ideas
Who are the other stakeholders that you need to consult about the problem? Do you have any other people or technologies that could help solve the problem? In the area, teachers from other schools or colleges, or professional associations, etc.	
What data will you collect from these teachers?	
For analysis, you might interview each one and have them write up their responses. Do you want to conduct a focus group or interview of all these teachers together?	
What questions will you ask?	
For analysis, you might ask the teachers their ideas on the problem, and their suggestions on how to overcome it, or you could ask them to describe the nature of the problem and what the teachers believe that should help you have found the problem in the first place?	
How will you collect and analyze these comments?	
For analysis, you might compare the teachers' comments to review a list of learning barriers, together with a list of suggestions and advice to see to improve the situation.	

<http://web.me.com/janherrington/Expo>

Website to accompany this presentation includes:

- Links and resources
- Downloadable papers

THANK YOU!

Expo: Chinese University of Hong Kong

Welcome to accompany keynote address to the Expo Teaching and Learning Innovation 2010 conference:
Authentic learning designs
 Creating engaging real world tasks
 LINKS AND RESOURCES

Dr. Jan Herrington
 Professor of Education
 Chinese University of Hong Kong

Email: janh@hkust.hk

Link to slide

Authentic task website

Virtual resource
 Martha Cushman & Peter Havel

Research methods
 Max Angeli & Jeff Gipe

April
 Authentic Learning & E-Learning

Assignment

Not just a name on the wall
 Peter Havel

Research collaborators
 The Ohio State University
 Tony Reeves Institute

Keynote abstract:

The value of learning by doing has been proven for centuries, but adoption of authentic learning in higher education, both in large-scale and in small learning contexts. The major worldwide focus on learning design has great potential as an opportunity to test teaching and learning practices and to create more meaningful learning experiences for students. Authentic learning designs are those that require students to apply their knowledge and skills in real-world contexts, and to solve problems. This approach provides opportunities for students to learn by doing, and also to develop the professional skills and competencies that are needed for the workplace. The presentation will include ideas and strategies for designing authentic learning experiences for your students. Authentic learning designs are those that require students to apply their knowledge and skills in real-world contexts, and to solve problems. This approach provides opportunities for students to learn by doing, and also to develop the professional skills and competencies that are needed for the workplace. The presentation will include ideas and strategies for designing authentic learning experiences for your students.

Articles and papers on authentic learning:

AVAILABLE FOR FULLTEXT DOWNLOAD:

Herrington, J. (2008). Authentic learning in higher education: A review of the literature. *Journal of Management Education*, 42(1), 1-15.

Herrington, J., & Reeves, T. C. (2007). Authentic learning in higher education: A review of the literature. *Journal of Management Education*, 41(1), 1-15.

Herrington, J., Reeves, T. C., & Oliver, K. (2005). Authentic learning in higher education: A review of the literature. *Journal of Management Education*, 39(1), 1-15.

Herrington, J., Reeves, T. C., & Oliver, K. (2005). Authentic learning in higher education: A review of the literature. *Journal of Management Education*, 39(1), 1-15.

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Technology without pedagogy

The facts are clear ... powerful technology end up being used most often for word processing and low-level applications in classrooms. After all, the machine costs money, and promises the results are measurable.



<http://d.hatena.ne.jp/shiinaneko/touch/20100715/1279252548>