Technological University Dublin
ARROW@TU Dublin

Conference papers | Learning Teaching & Assessment

2005

The Truth About E-Learning: Lessons Learnt for Architecture.

Roisin Donnelly
Technological University Dublin, roisin.donnelly@tudublin.ie

Follow this and additional works at: https://arrow.tudublin.ie/ltccon

Part of the Educational Methods Commons, Higher Education Commons, and the Online and Distance Education Commons

Recommended Citation

Donnelly, R. (2005) The Truth About E-Learning: Lessons Learnt for Architecture. *ARCLIB Conference, UCD, 14th. July 2005*.

This Conference Paper is brought to you for free and open access by the Learning Teaching & Assessment at ARROW@TU Dublin. It has been accepted for inclusion in Conference papers by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie, vera.kilshaw@tudublin.ie.

The Truth about E-learning: Lessons Learnt for Architecture

Roisin Donnelly,

ARCLIB
Conference UCD,
14th July 2005

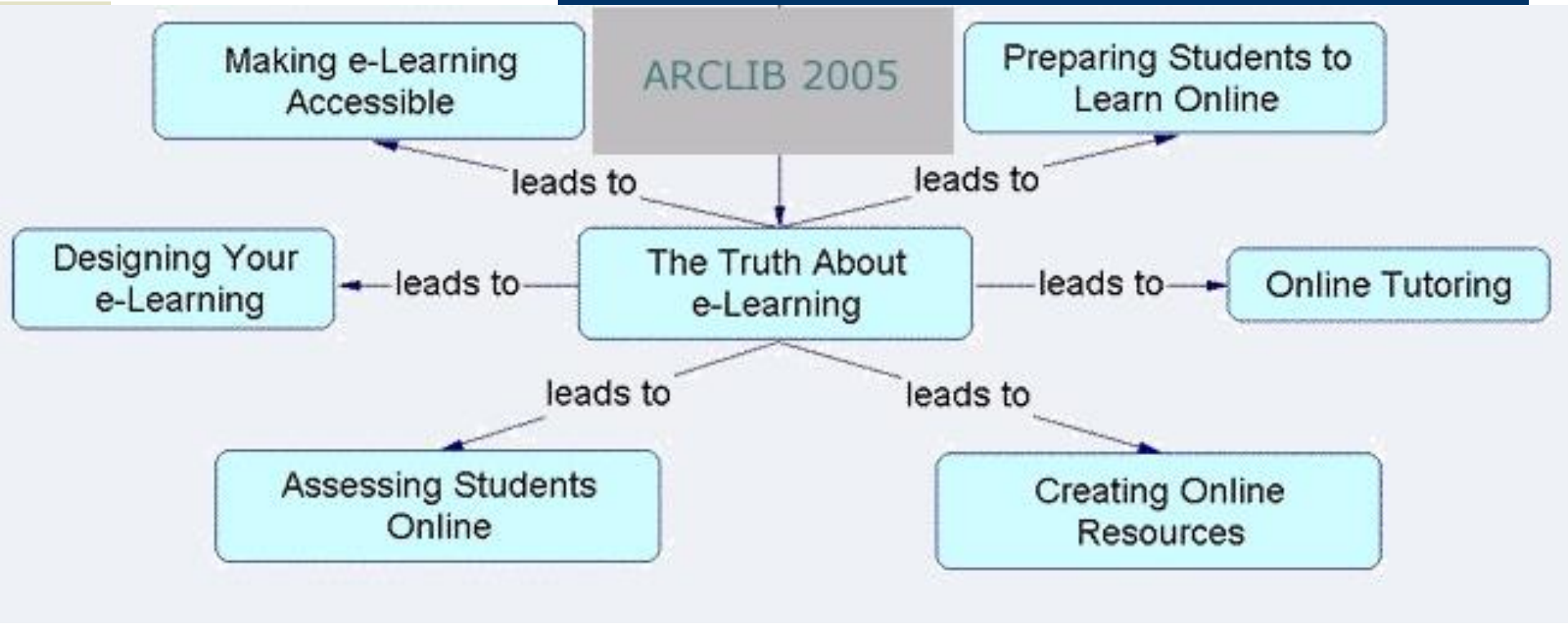
Towards Truth…

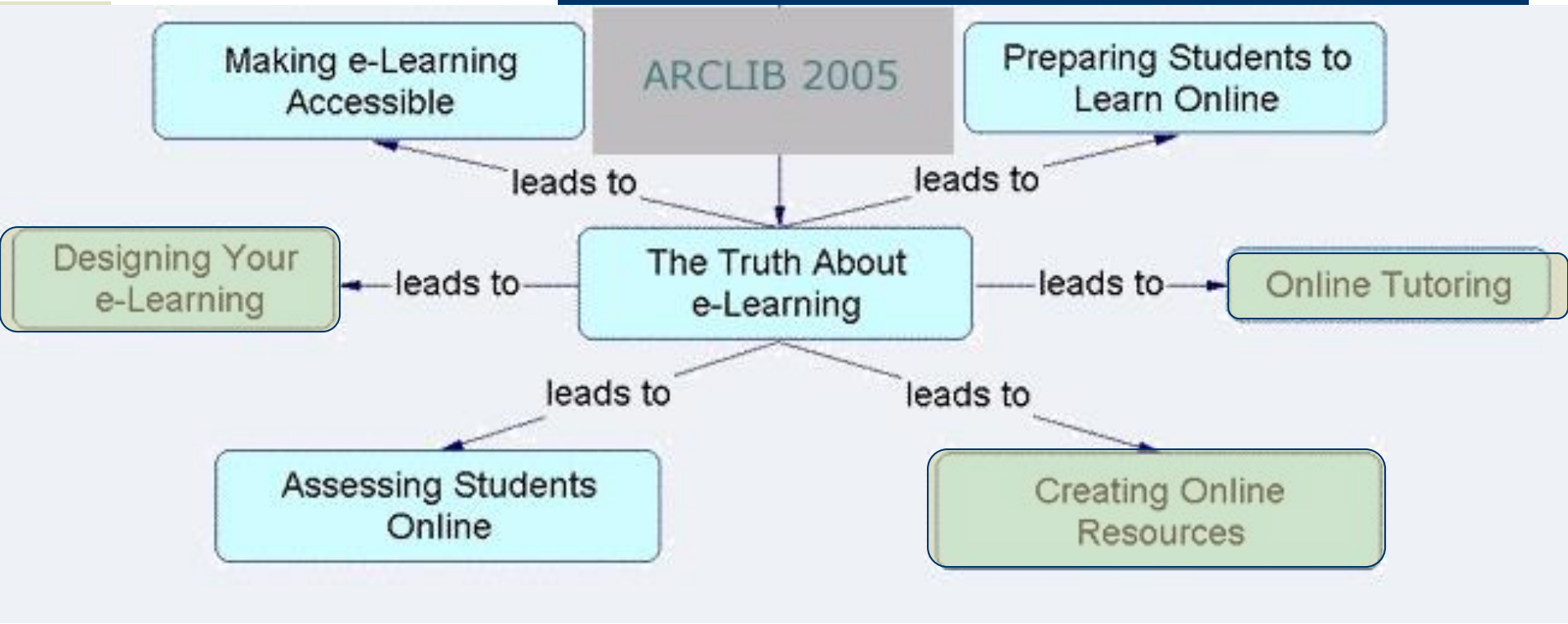
"The best way to come to truth being to examine things as really they are, and not to conclude they are, as we fancy of ourselves, or have been taught by others to imagine."

John Locke, An Essay Concerning Human Understanding

This presentation will introduce key ideas about designing e-learning experiences for students. It is organised around the following topics:

- Designing E-learning: Pedagogy and Practice
- Model of E-learning: Blended Learning
- Changing student and teacher roles: online tutoring
- Integrating Online Resources
- DIT Case Studies in the Built Environment:
  - WebCT Courses in Architecture
  - E-Portfolio Exploration


Making e-Learning Accessible
ARCLIB 2005
Preparing Students to Learn Online
leads to
leads to
Designing Your e-Learning
leads to
The Truth About e-Learning
leads to
Online Tutoring
leads to
leads to
Assessing Students Online
Creating Online Resources


Making e-Learning Accessible
ARCLIB 2005
Preparing Students to Learn Online
leads to
leads to
Designing Your e-Learning
leads to
The Truth About e-Learning
leads to
Online Tutoring
leads to
leads to
Assessing Students Online
Creating Online Resources

Not Using E-Learning effectively:

- Replicating existing courses on a computer
- Putting your training manuals in html
- Creating a multiple choice test that gives a score that says that you read something

Learning Requires…

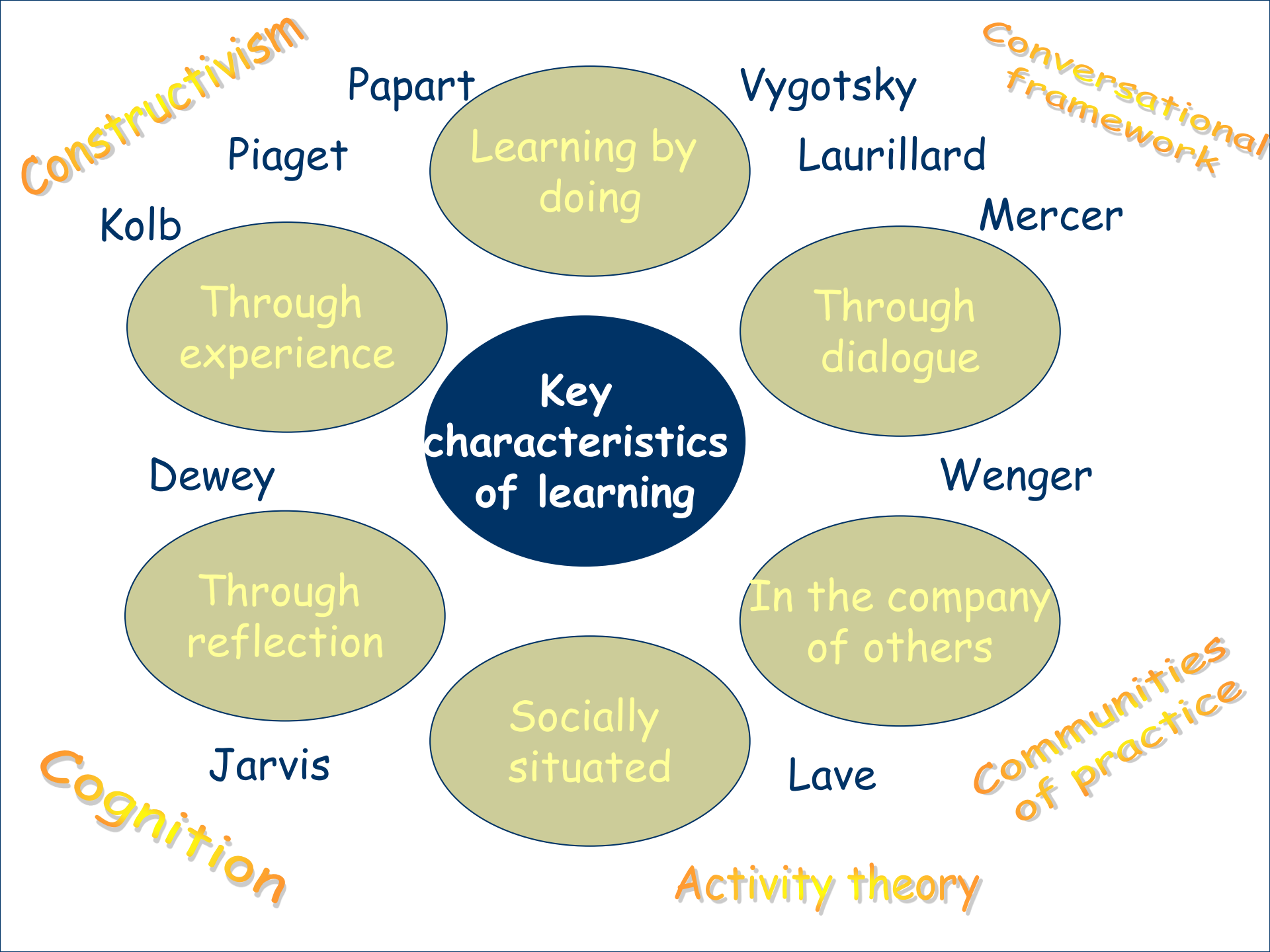
- Emotion – how come?
- Exploration – what happened?
- Frustration – got to fix this
- Explanation – maybe that's why
- Realisation – aha
- And above all, inspiring curiousity

Thinking about E-learning requires asking…

- Do I understand how my students learn?
- How do I facilitate my students reaching deeper levels of learning in my subject?
- How effective is e-learning in my subject area?
- What value will putting course material online bring to my students' learning?
- Why am I putting material online?

The Importance of Pedagogy in E-Learning

- the importance of interactivity in the learning process
- the changing role of the teacher from sage to guide
- the need for knowledge management skills and for team working abilities, and
- the move towards resource-based rather than packaged learning.


Constructivism
Papart
Piaget
Kolb
Learning by doing
Through experience
Dewey
Through reflection
Jarvis
Cognition
Vygotsky
Laurillard
Mercer
Conversational framework
Through dialogue
Key characteristics of learning
Wenger
In the company of others
Communities of practice
Socially situated
Lave
Activity theory

Instructional Strategy: A Framework

Blended Solutions are Best?

- There are still classrooms and teachers… Motto: don’t throw anything out!
- Were there things you could do in a classroom that you couldn’t do with e-learning? What e-learning model were you using?

Blended - Definitions

- Mix instructional modalities: media (live virtual classroom, self-paced instruction, collaborative learning, instructor-led, streaming video audio, text, simulations) to accomplish an education goal
- Instructor: on different campuses?
- To combine various pedagogical approaches (eg., constructivism, behaviourism, and cognitivism) to produce an optimal learning outcome with or without instructional technology.
- To combine any form of instructional technology (eg., videotape, CD-ROM, web-based training, film) with face-to-face instructor-led training.
- To mix or combine instructional technology with actual job tasks in order to create a harmonious effect of learning and working.
- Combine delivery methods: synch or asynch?

(Driscoll, 2002; Graham, Ure and Allen, 2003)

Blended

Blended can mean all of these !

The point is that blended learning means different things to different people, which illustrates is widely untapped potential.

A Blended Model

- Online pre-work
- Classroom event
- Online peer community
- E-mentoring
- Webliography

Extending the learning experience over time

Blended – Options

Some examples of how to get started with blended learning are as follows:

- Put the assessment online
- Follow up with a community of practice - threaded discussions
- Make reference materials available
- Deliver pre-work online
- Provide online office hours
- Use mentoring/coaching as a tool
- Provide job aids
- Access experts
- Create a "lifeline"
- Maximise e-mail and messaging

Ingredients of the Blend

- Synchronous physical formats
  - Instructor led classrooms and lectures
  - Hands-on labs and workshops
  - Field trips
- Synchronous online formats (live e-learning)
  - E-discussions
  - Web seminars and broadcasts
  - Coaching
- Self-paced asynchronous formats
  - Documents and web pages
  - CBT modules
  - Simulations
  - Assessments/tests/surveys
  - Learning communities and discussions forums

Advantages

- Increased learning (better papers- more depth, higher scores)
- More effective pedagogy and interaction (depending on tutor!)
- Course access at one's convenience and flexible completion (e.g. multiple ways to meet course outcomes)
- Reduction in physical class or space needs, commuting
- Increased opportunities for human interaction, communication and contact amongst students
- Introverts participate more

Disadvantages

- Procrastination: trouble managing time and requirements
- Problems with technology at the start (instructor tries to do too much)
- Can be overwhelming (too much work for tutor and students) or too novel
- Poor integration or planning
- Resistance to change
- Good ideas but lack time, money and support
- Confusion – learning not explicit enough

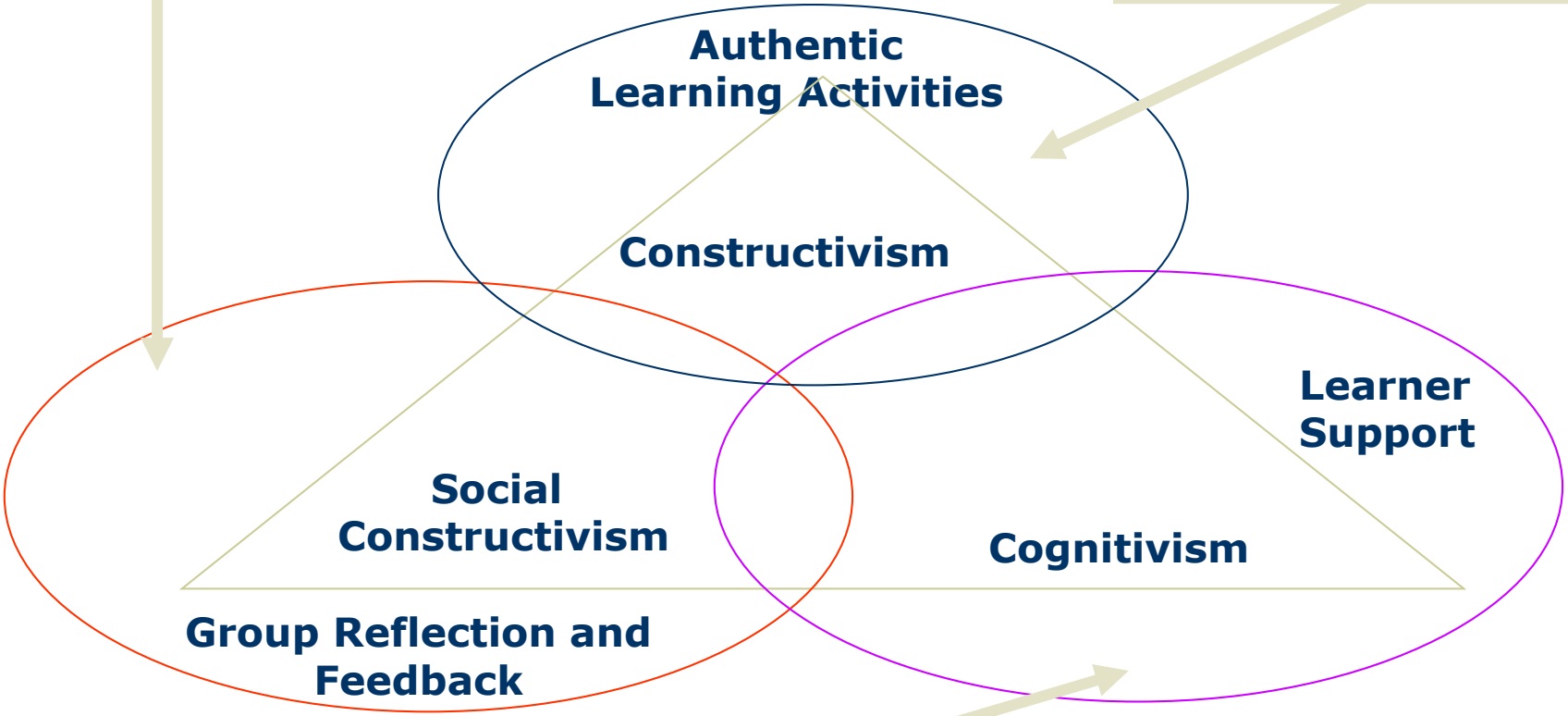
Blended Solutions are Best?

- E-learning allows for the creation of simulated environments that look like the real world
- Primary Processes
  - Real Projects/Problems
  - Socratic Mentoring
  - Goal-based Scenarios
  - Apprenticeships

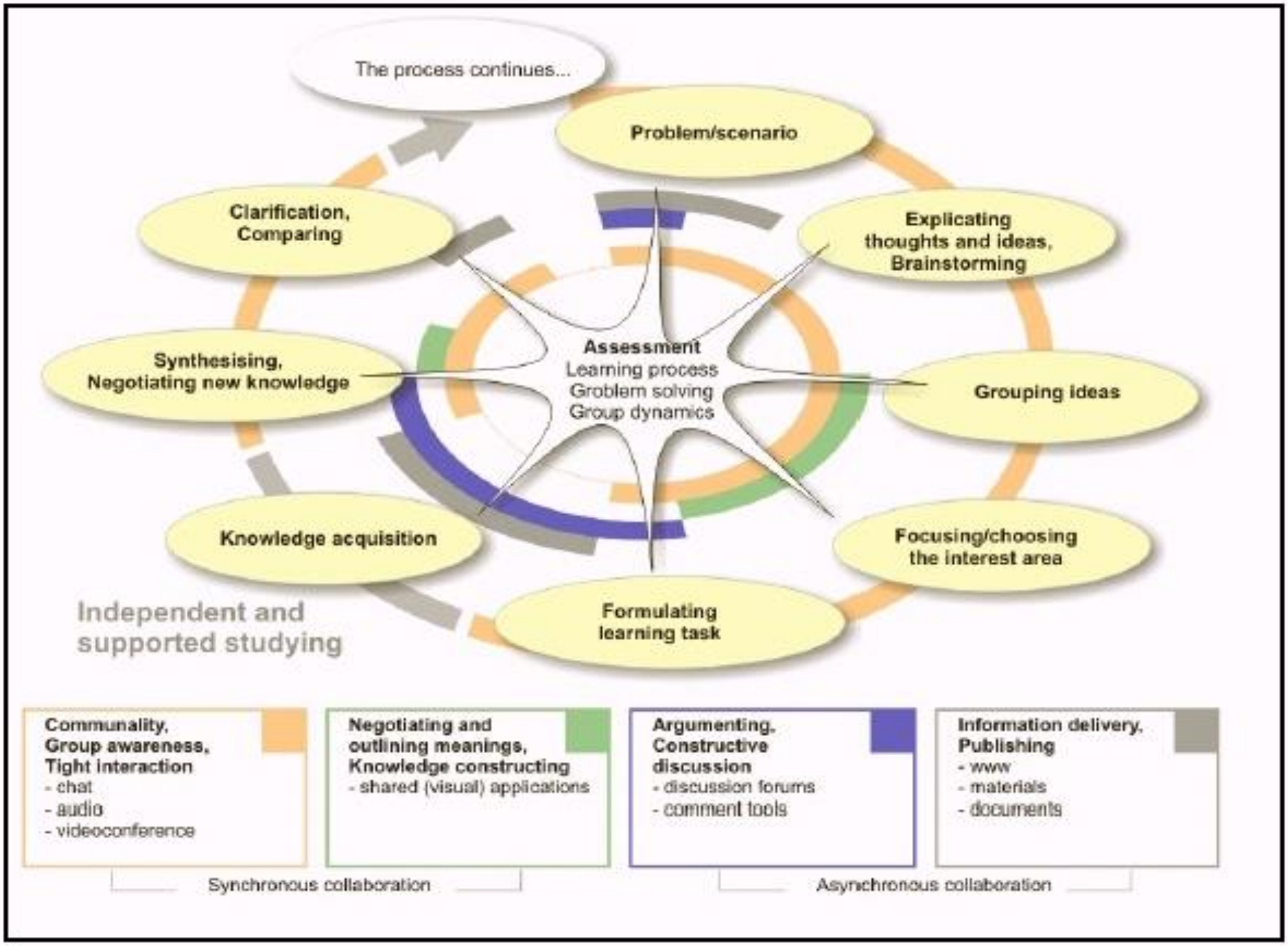
Using Technology to Support Project and Problem-based Learning

- ✓ Peer Interaction on tasks
- ✓ Socialising online (shared interests e.g. book club)
- ✓ Scaffolded tutor facilitation
- ✓ Formative peer feedback on reflective blogs

- ✓ Building Knowledge of Learning Issues
- ✓ Participation in discussion forums with guest experts
- ✓ Email and video conference contact



- ✓ Learner guides/e-handbooks
- ✓ Online Mentor support
- ✓ E-library
- ✓ Synchronous chat-guidance



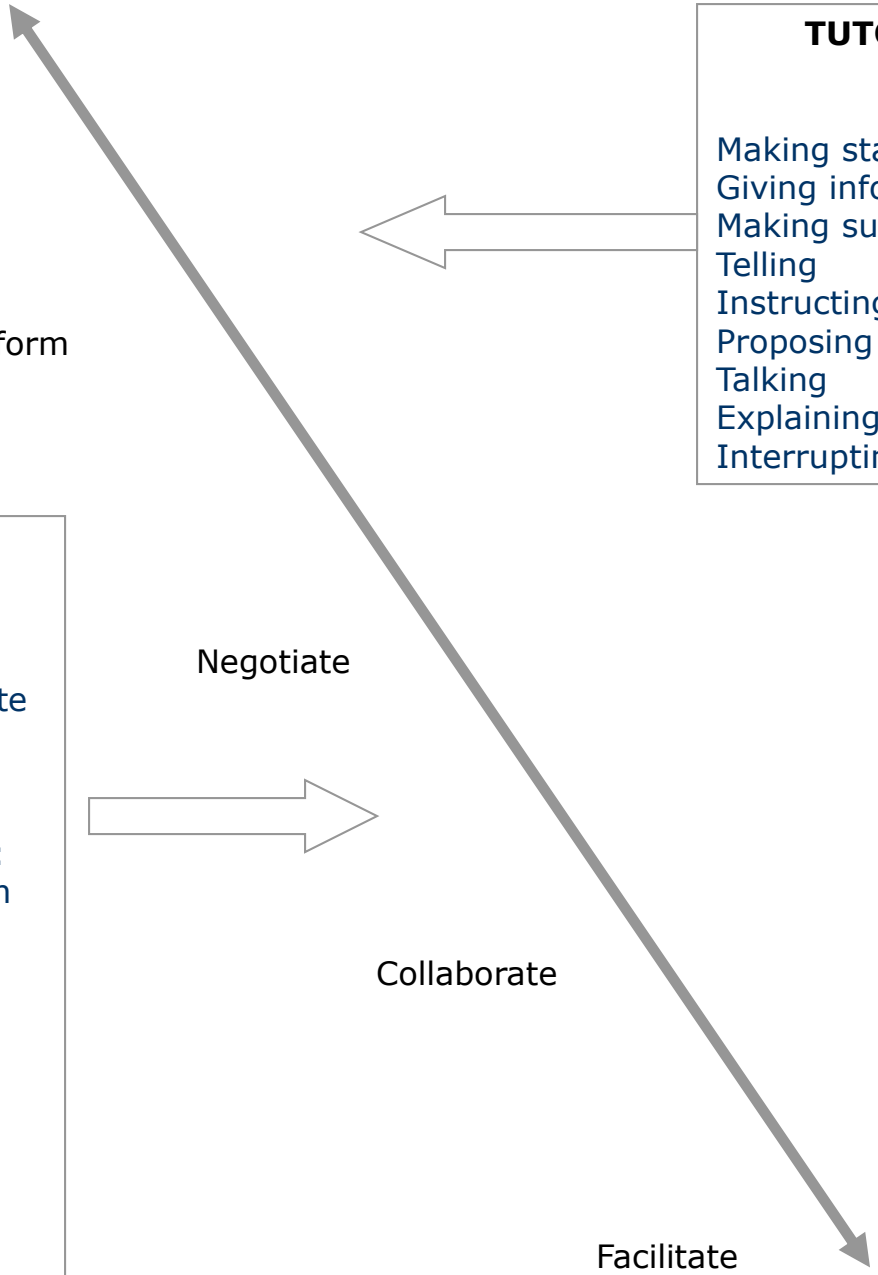
Adapated from University of Tampere, Roisin Donnelly, 2005

Teacher's Role

Anxiety: E-learning does not involve instructors

- Mentors are everywhere
- People are more used now to email and chat that ever
- Conversation has always been the main medium of instruction outside of experience

Continuum of Blended Tutor Communication Strategies



TUTOR CENTRED: Online

Making statements
Giving information
Making suggestions
Telling
Instructing
Proposing
Talking
Explaining
Interrupting

PBL LEARNER CENTRED: Blended: Online and F2F

Starting point for Engagement: reveal key questions to illuminate topic, clarifying, provoke ideas, continuous feedback,

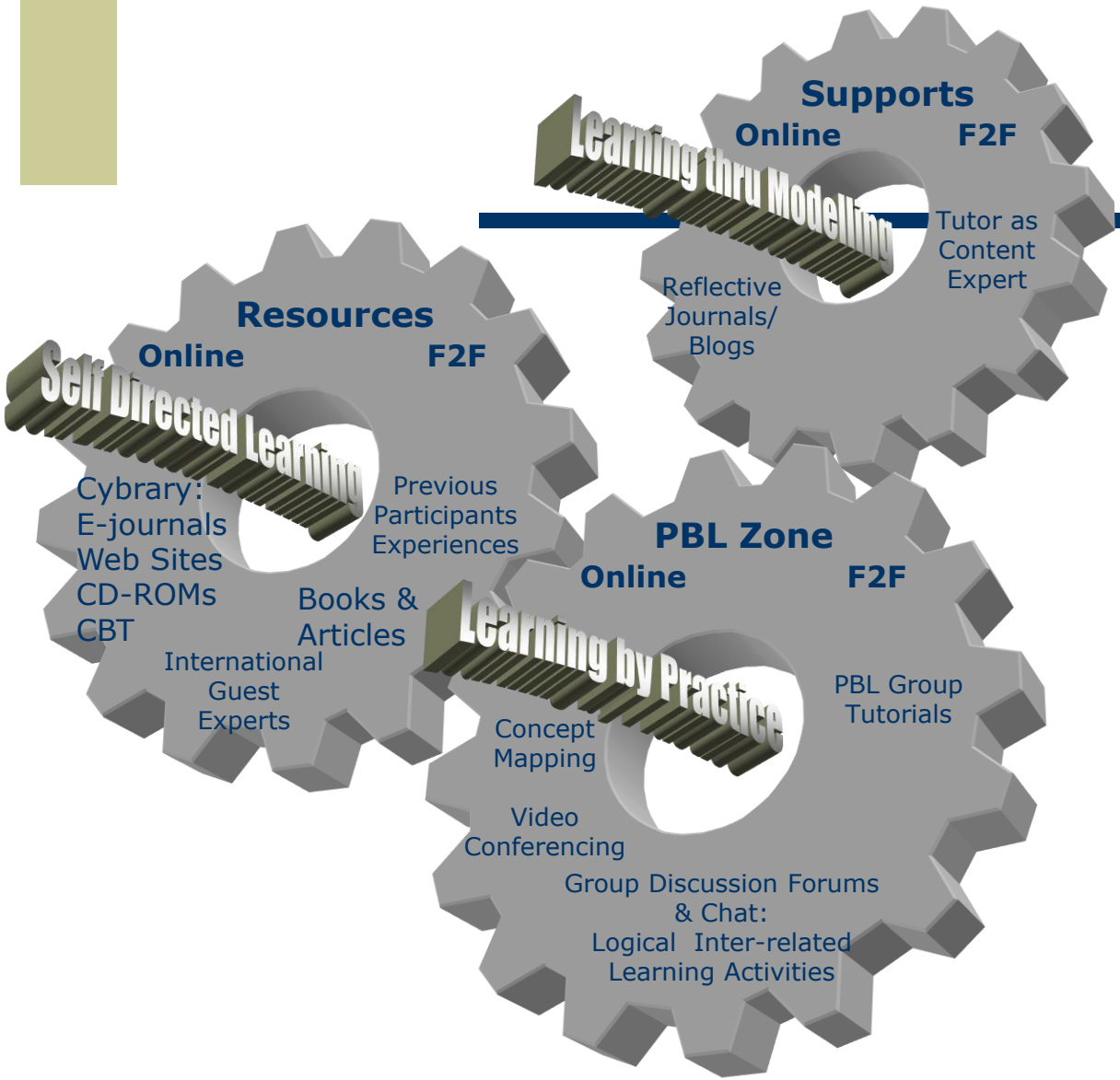
Creating space for engagement: asking open questions, provision of alternate perspectives, social and affective

Scaffolding: building on others comments, recapping

Motivating: acknowledging, accepting, listening, supporting

Closing: reflecting, evaluating

Integrating Resources



WebCT Courses in Architecture

Number of lecturers/DIT staff who have attended WebCT training and have subsequently gone on to use WebCT with students

FACULTY	No. who have attended training workshops	No. who have developed WebCT modules	% who have developed WebCT modules	Number of modules	
				Modules live	Modules in development
Built Environment	44	22	50	33	53

WebCT Courses in Architecture

Number of lecturers/DIT staff who have attended consultations sessions with LTT and have subsequently gone on to use WebCT with students

FACULTY	No. who have attended consultations sessions with LTT	No. who have developed WebCT modules	% who have developed WebCT modules	Number of modules	
				Modules live	Modules in development
Built Environment	19	13	68.4	20	12

WebCT Courses in Architecture

School of Architecture – Live WebCT Modules

- Architectural History Image Database
- FT101/1/2/3 Civilisation Studies
- FT101/1 Maths & Statistics
- FT102 /2 Surveying & Levelling

School of Architecture – In Development WebCT Modules

- FT101/2 Indoor Environmental Science
- DT102/1 Mechanics & Structures (not active)
- FT102/1 Studio Building Construction (not active)
- FT102/1 Studio: CAD (not active)
- FT102/1 Studio: Graphics
- FT102/1 Studio: Projects
- FT102/1/2/3 History of Technology

WebCT Courses in Architecture

Examples of note in Faculty of Built Environment

The Dept of Geomatics is using online learning extensively and lecturers there have developed a successful CPD course which has already been delivered to Ordnance Survey Ireland and also internationally.

Examples of note in School of Architecture

One lecturer has developed a significant image database composed of photos (mainly taken by himself) of structures of importance in architectural history. This resource is used specifically within FT101 Civilisation Studies but is also available generally to other interested DIT lecturers for use with their students in the School of Architecture.

E-Portfolio Exploration

- An e-portfolio is an electronic format for learners to record their work, their **achievements** and their **goals**, to **reflect** on their learning, and to **share** and be supported in this. It enables learners to represent the information in different formats and to take it with them as they move into different aspects of their professions. The two main developers and users of e-portfolios are:

✓ Students - to present and reflect on work within courses or across programmes

✓ Teachers - to document and reflect on their classroom practice and enable comment by colleagues or others.

E-Portfolio Exploration

The intended outcomes of the project are to explore the potential of a web-based e-portfolio system in 2 schools in the Faculty of the Built Environment (Architecture & Construction). This will entail:

- conducting an impact analysis of e-portfolios internationally in supporting teaching, skills and capabilities development;
- identifying attitudes of Built Environment academics to the use of e-portfolios as an assessment mechanism; discovering students' learning needs;
- exploring the potential uptake of the use of e-portfolios within specific courses in the Built Environment;
- investigating the potential integration of e-portfolios as a learning tool in specific courses in the Built Environment (teaching, learning and assessment, reflection, feedback, support and evaluation processes around individual needs).
- [setting up a project web site on WebCT to bring together the different elements of the project.]

Contact Details

roisin.donnelly@dit.ie

References

- An Essay Concerning Human Understanding by John Locke [edited by R. Woolhouse] UK: Penguin Books Ltd, 2004.

- Graham, C. R., Allen, S., & Ure, D. (2003, in press). Benefits and challenges of blended learning environments. In Mehdi Khosrow-Pour (Ed.), Encyclopedia of Information Science and Technology I-V. Hershey, PA: Idea Group Inc.

- Driscoll, M. (2002) Web-based Training: Creating E-Learning Experiences (2nd edition) UK: Jossey Bass Wiley.