

E-Learning in Workplaces

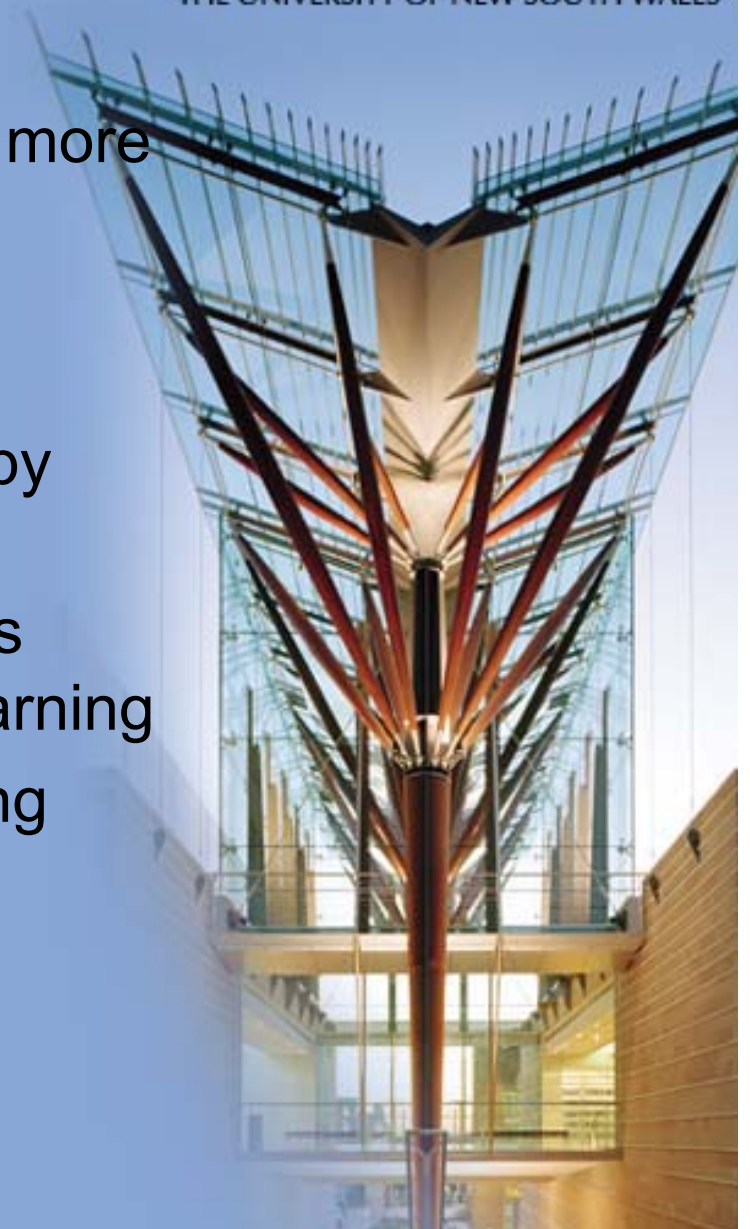
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Background

- In 2006, the e-Learning System provided by Blackboard is used by more than 3,400 institutions across 70 countries
- The global e-Learning market is expected to grow to US\$52 billion by 2010
- The concept of lifelong learning has furthered the development of e-Learning
- Many people believe that e-Learning promotes ubiquitous, self-paced learning, and personalisation



A Comparative Analysis of eLearning in Schools & in the Workplaces

- Facts:
 - A very rich body of literature exists on various aspects of eLearning in Higher Education (HE) that has not been extended to the Workplace yet
 - There are a great deal of similarities between eLearning in HE and eLearning in Workplace.
- The Aim of this study:
 - To extend existing literature on eLearning to the design of eLearning systems in the Workplace
- Research Methodology:
 - Systematic review of the existing literature on eLearning when applied to the workplace



Definitions

- **eLearning:**
 - It is the use of various technological tools that are Web-based, Web-distributed or Web-capable, for the purposes of education
 - It is technology-driven

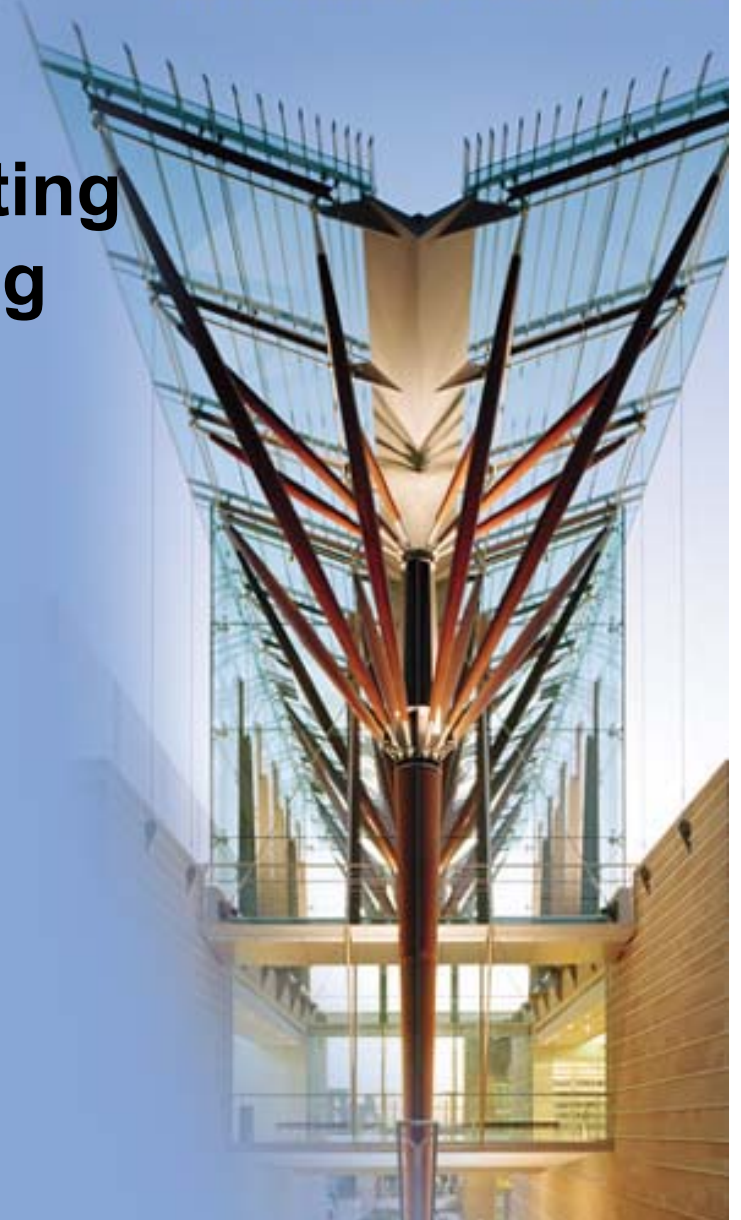
- **Online Learning:**
 - Same as eLearning except that:
 - » it only occurs through the Web, and
 - » does not consist of any physical learning materials issued to students or actual face to face contact.

- **Blended Learning:**
 - an approach to education



eLearning in Organization

- More organisations are adopting e-Learning to facilitate lifelong learning, and to retain employees
- Research on eLearning at Workplace is only beginning



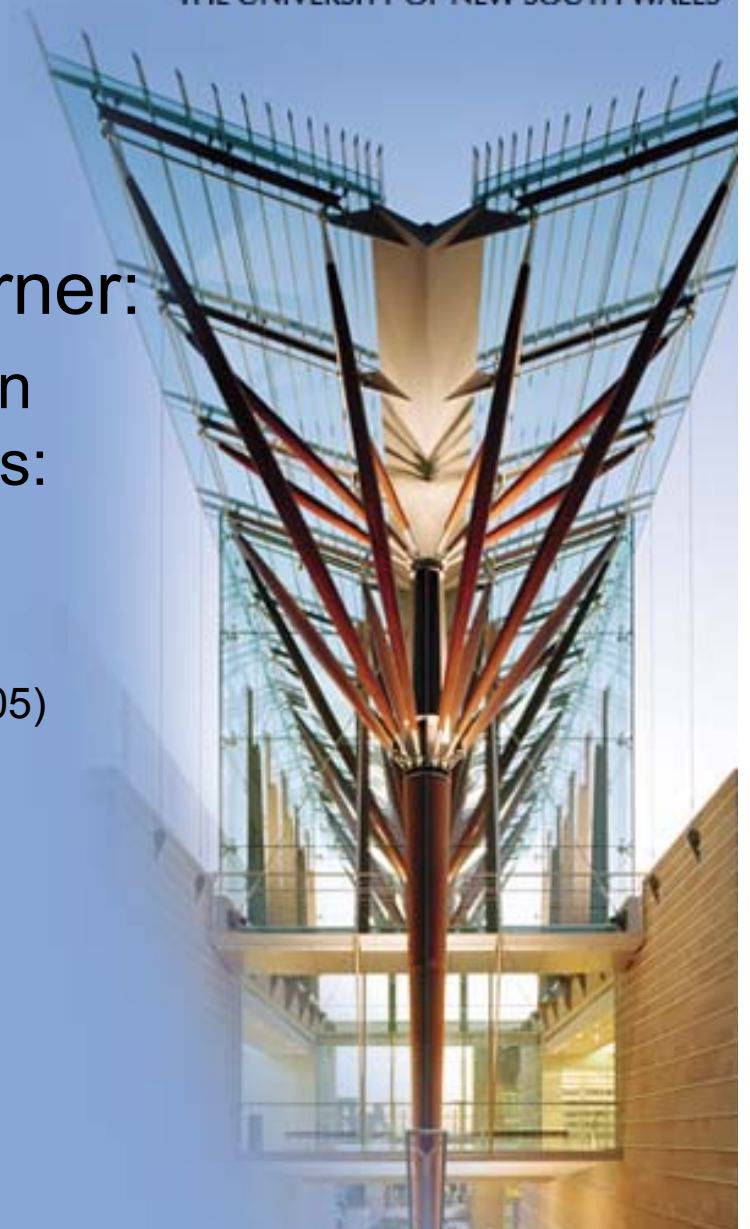
Review of Recent Studies in eLearning in Organization

- **Studies related to design of adult learning in workplace:**
 - ‘Androgogy’: a design directive that states adult learning theories should be used to design *e-Learning practices in workplace*
 - **Adult learners learn effectively when the learning process is reflective, problem oriented, flexible, involve social interaction, and benefit personal development.**



Review of Recent Studies in eLearning in Organization

- Studies on recognising the importance of valuing adult learner:
 - “adult learners value their learning in terms of the three major outcomes:
 - » Engagement,
 - » Learning, and
 - » Transfer of learning.” (Waight et. al., 2005)



Review of Recent Studies in eLearning in Organization

- Motivation:
 - ‘Organizational Learning’
- In a corporate eLearning, an optimal combination of seven principles is needed
 - (1) address individual differences;
 - (2) motivate the student;
 - (3) avoid information overload;
 - (4) create a real-life context;
 - (5) encourage social interactions;
 - (6) provide hands-on-activities; and
 - (7) encourage student reflection



Review of Recent Studies in eLearning in Organization

- **Motivation:**
 - new concept of ‘learning organization’
- **Employees are 300 per cent more likely to leave an organisation within their first year if they haven’t had a learning experience**
- **Four major organisational issues in e-Learning:**
 - Leadership, Structural and Cultural issues,
 - Design issues,
 - Technological issues, and
 - Delivery issues

This study focuses on eLearning in the workplace at both ‘individual’ and ‘organizational’ levels



eLearning in Workplace at Individual Level: Individual Differences

■ Skill categories:

– Craftsmen

» Are motivated to learn practical/routine skills

– Young professionals

» Have 'principles orientation' towards learning

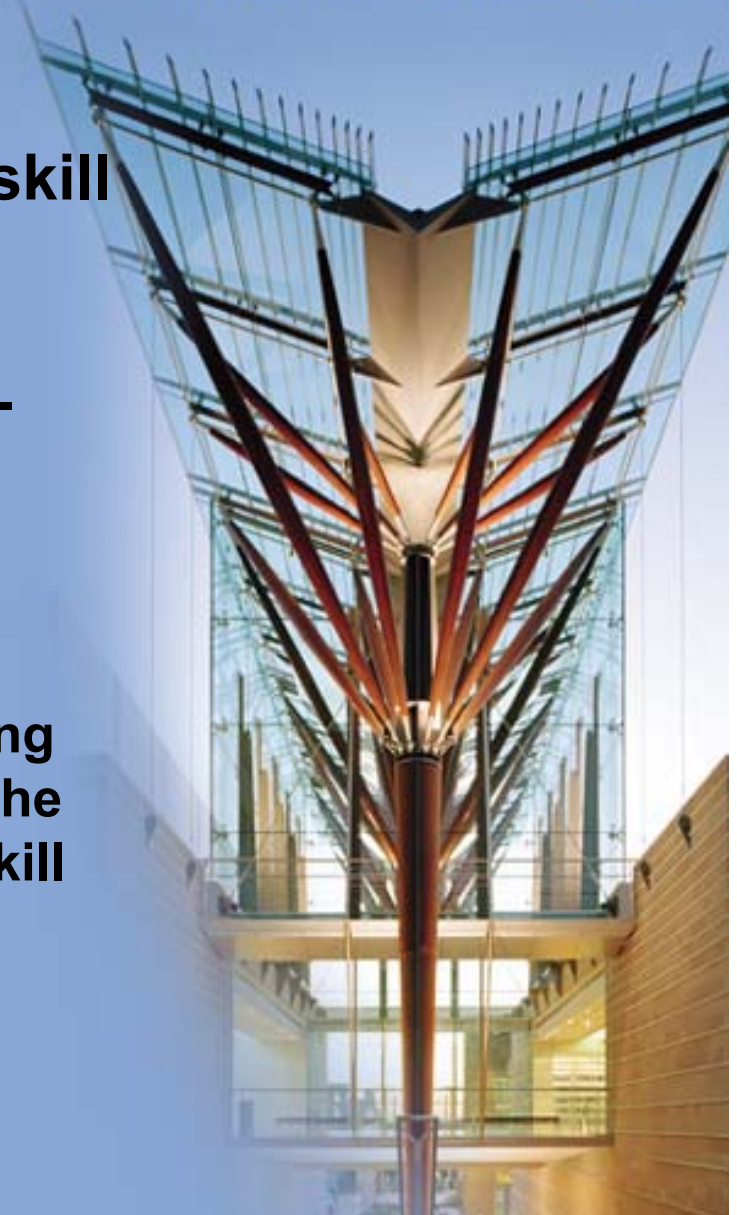
– Senior professionals

» Are action-oriented and require 'reflection learning'



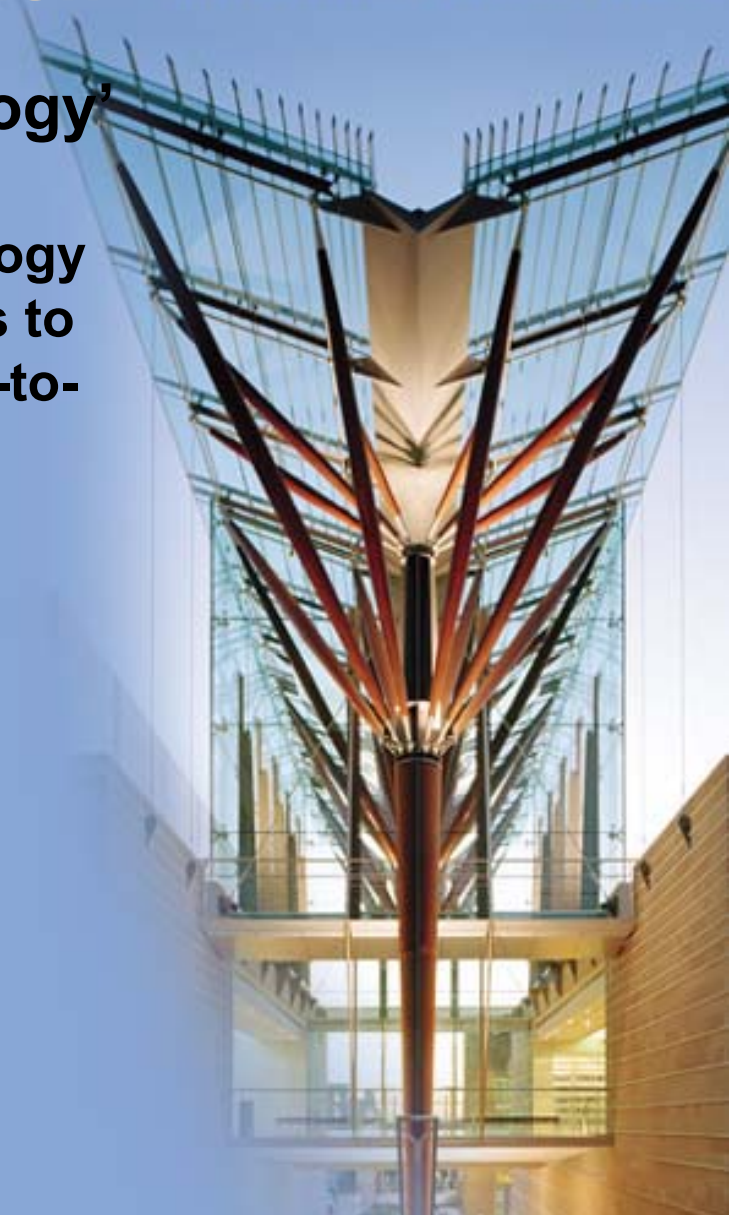
eLearning in Workplace at Individual Level: Individual Differences

- **Relationships between employee skill and value from eLearning:**
 - high-skilled employees are preferred against low-skilled employees in an e-Learning environment as eLearning generates more value if the learner is highly skilled
 - Employee type ‘craftsmen’, has been disproportionately concentrated among unskilled workers. At the same time, the wage inequality has widened within skill categories, leading to a growing segregation of workers by skill



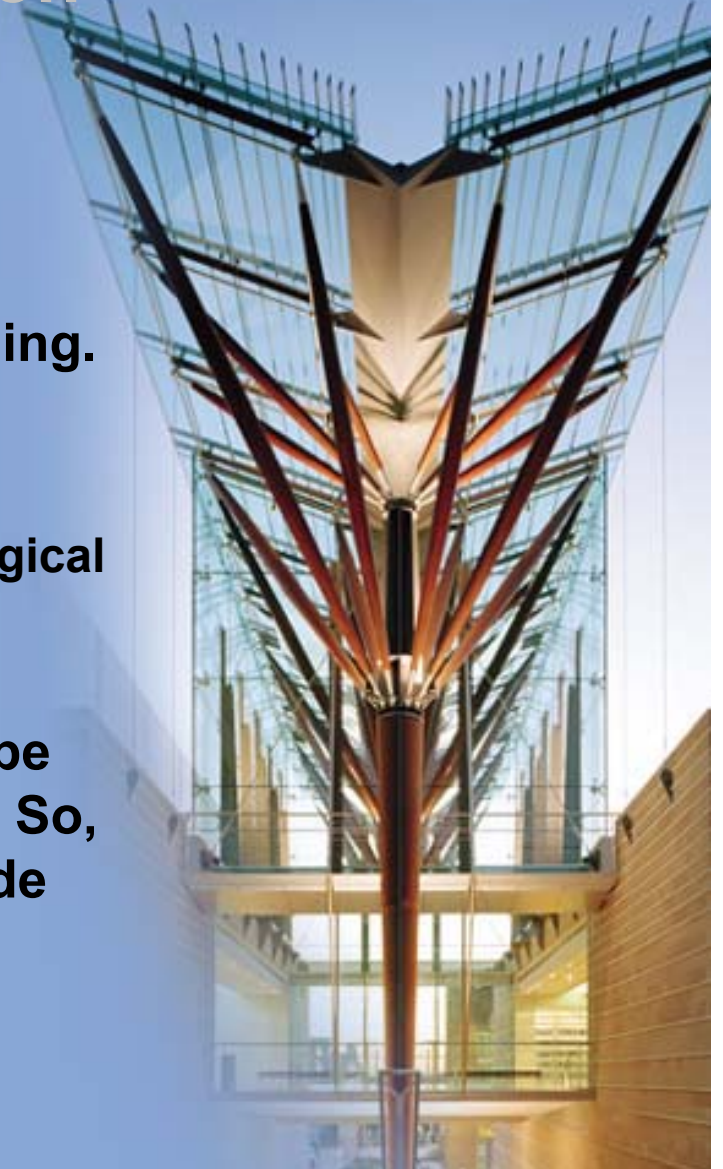
eLearning in Workplace at Individual Level: Motivation

- **Barriers related to ‘use of technology’**
 - While all employees may be equally motivated to learn, the use of technology for e-Learning creates certain barriers to employees when comparing to a face-to-face traditional learning environment.
- **External factors** (two studies with identical results):
 - Achievement,
 - recognition,
 - the nature of the work itself,
 - responsibility, and
 - advancement



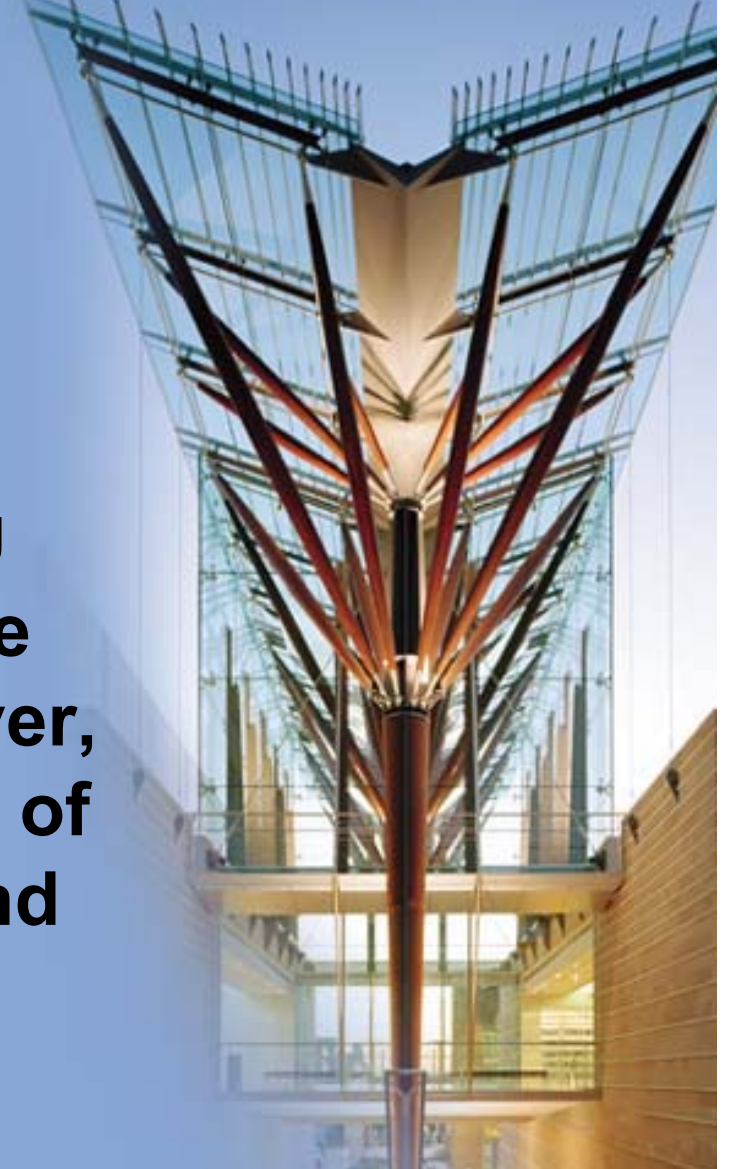
eLearning in Workplace at Individual Level: Motivation

- **Other motivational factors:**
 - poor quality of the e-Learning system, difficult navigation, lack of technical support etc., are all barriers to e-Learning.
 - ‘content relevance’, ‘accessibility’ and ‘user-friendliness’
 - » two of them are related to the technological matter.
 - Finally, it was found that employees generally expected that e-Learning to be innovative, interesting and interactive. So, if any e-Learning system fails to provide such aspects is likely to dissatisfy the learners – the employees.



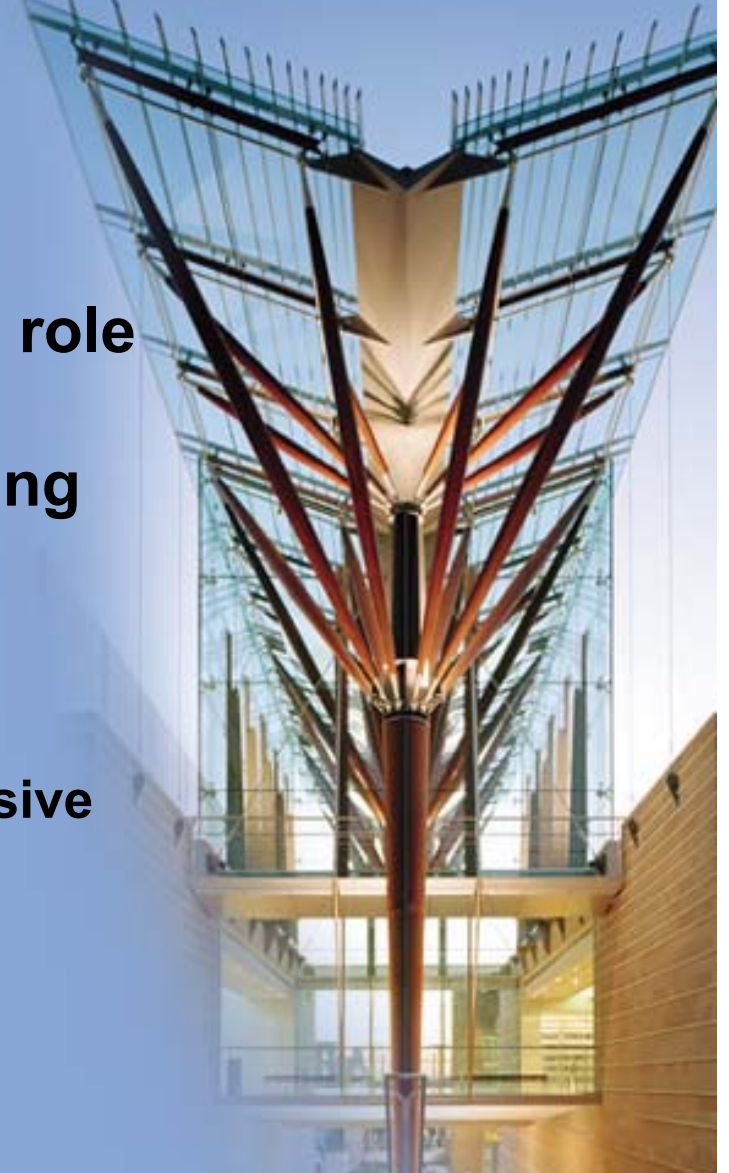
eLearning in Workplace at Individual Level: Social Interaction

- **New social skills required**
 - virtual socialisation,
 - virtual collaboration
- **A key benefit of e-Learning:**
 - promotes collaborative learning
- **Employees generally welcome collaborative learning. However, they also desire some degree of individual reflection before and after collaborative activities**



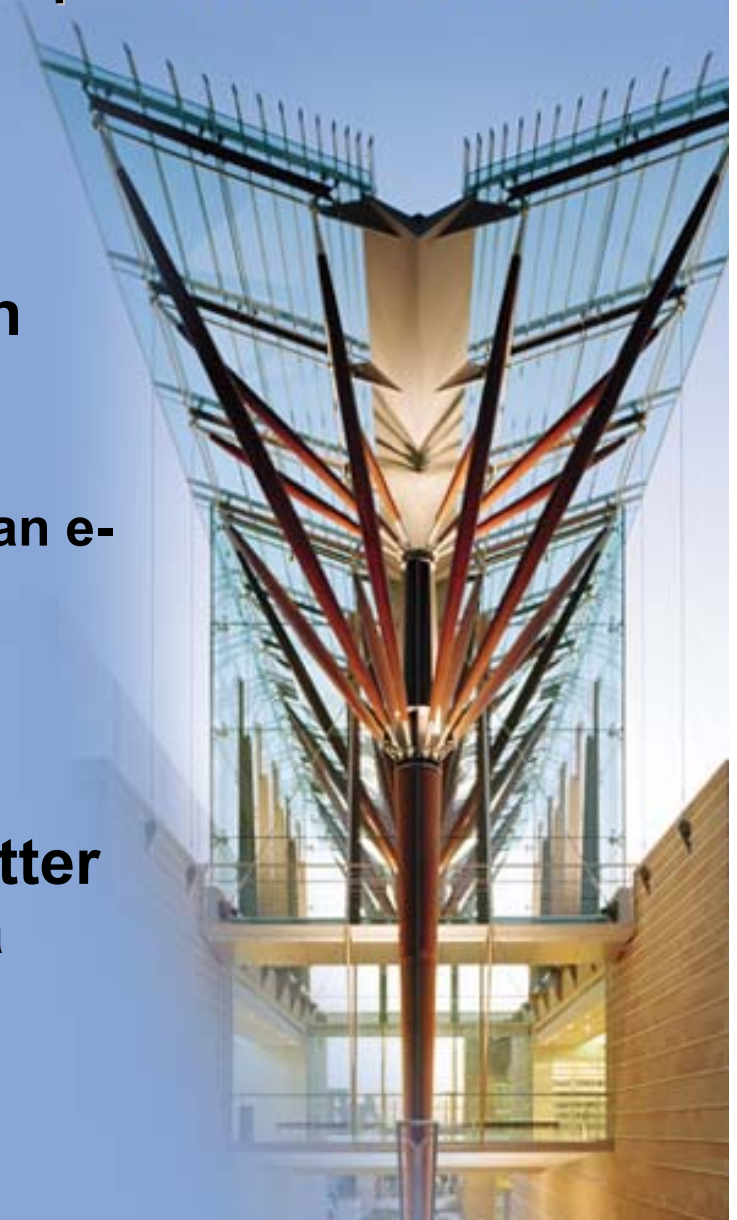
eLearning in Workplace at Individual Level: Social Interaction

- **Changing role of teacher/instructor**
 - In both organisation and HE the role of teachers/instructors and participants/learners are changing
 - In e-Learning:
 - » instructor's role has shifted from teaching to advising,
 - » learner's role has shifted from passive listeners to active learners



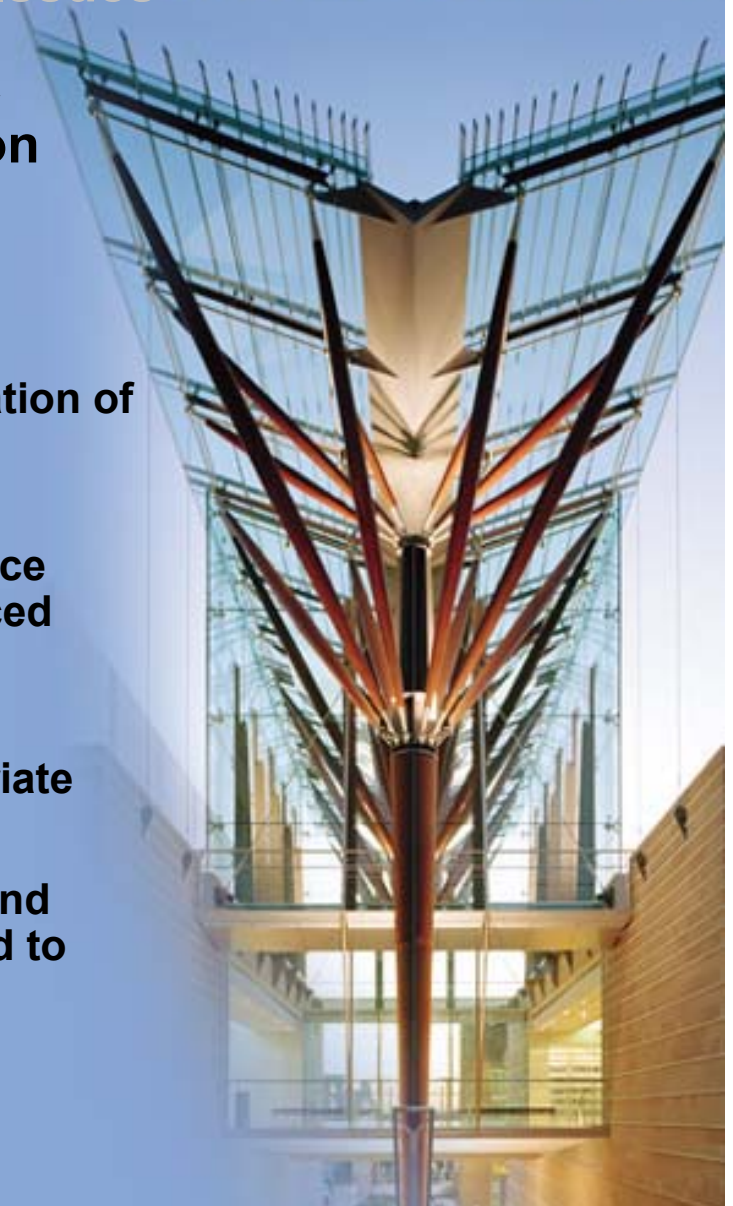
eLearning in Workplace at Organizational Level: Leadership ...

- The importance of leadership had been emphasized in a number of studies.
- Successful e-Learning depends on leaders that both understand and support e-Learning..
 - creating opportunities for renewal of an e-Learning solution,
 - providing financial support, and
 - encouraging learning internally and externally.
- Strong leadership will lead to a better learning culture moving towards a *learning organisation*
- governance and administration



eLearning in Workplace at Organizational Level: Design Issues

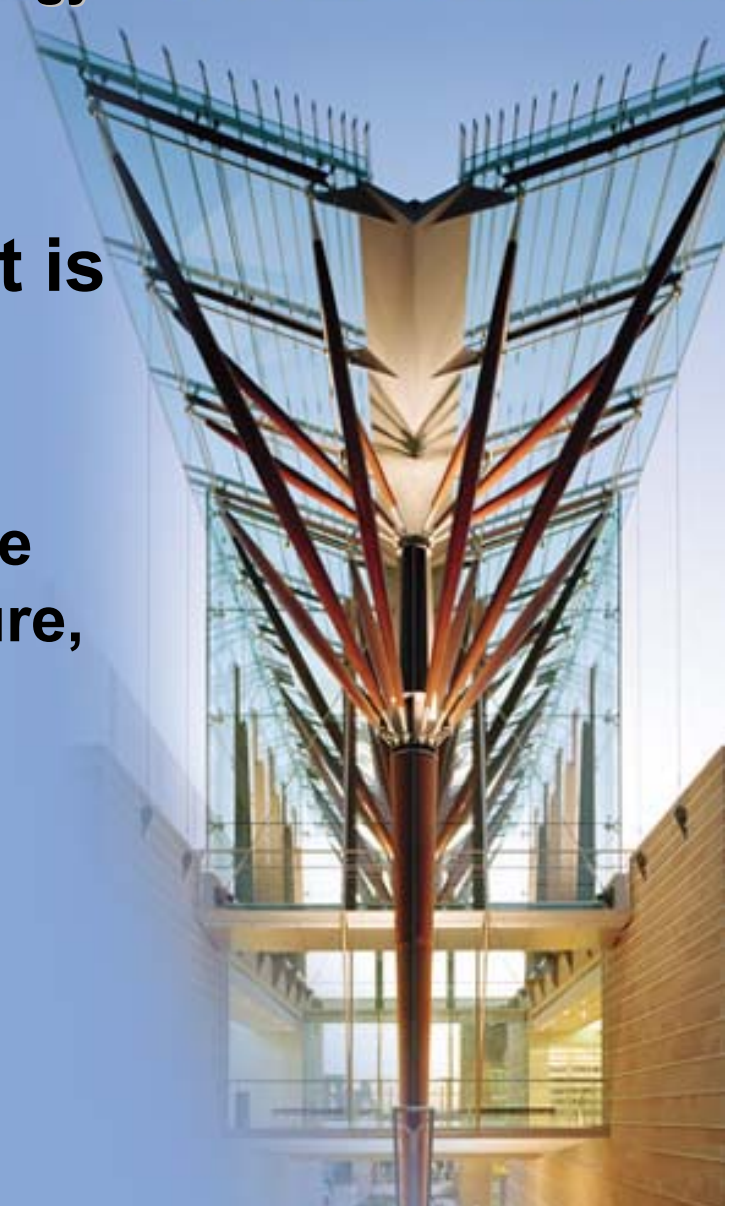
- Employees are expected to learn specific things that are relevant to the organisation
- Four design principles are suggested to improve the effectiveness of e-Learning:
 - multimedia principle
 - » use of both textural and graphical presentation of the learning content.
 - contiguity principle
 - » when text is used to explain a graphic or vice versa, the text and graphics should be placed near each other on the screen
 - modality principle
 - » use of audio technology whenever appropriate
 - personalisation principle
 - » it is essential for text to be written in first and second person for e-Learning program, and to provide learners with virtual coaches for guidance



eLearning in Workplace at Organizational Level: Technology Issues

- e-Learning depends on a technology infrastructure that is scalable, interoperable and standards cognizant

“employees were frustrated by the timed out session, Internet failure, needs to restart / re-establish connection, and slow home connection speed”



eLearning in Workplace at Organizational Level: Delivery ...

- **‘delivery’ refers to the setting up of supportive e-Learning, best practices and standards of e-Learning;**
 - little attention has been paid to this area



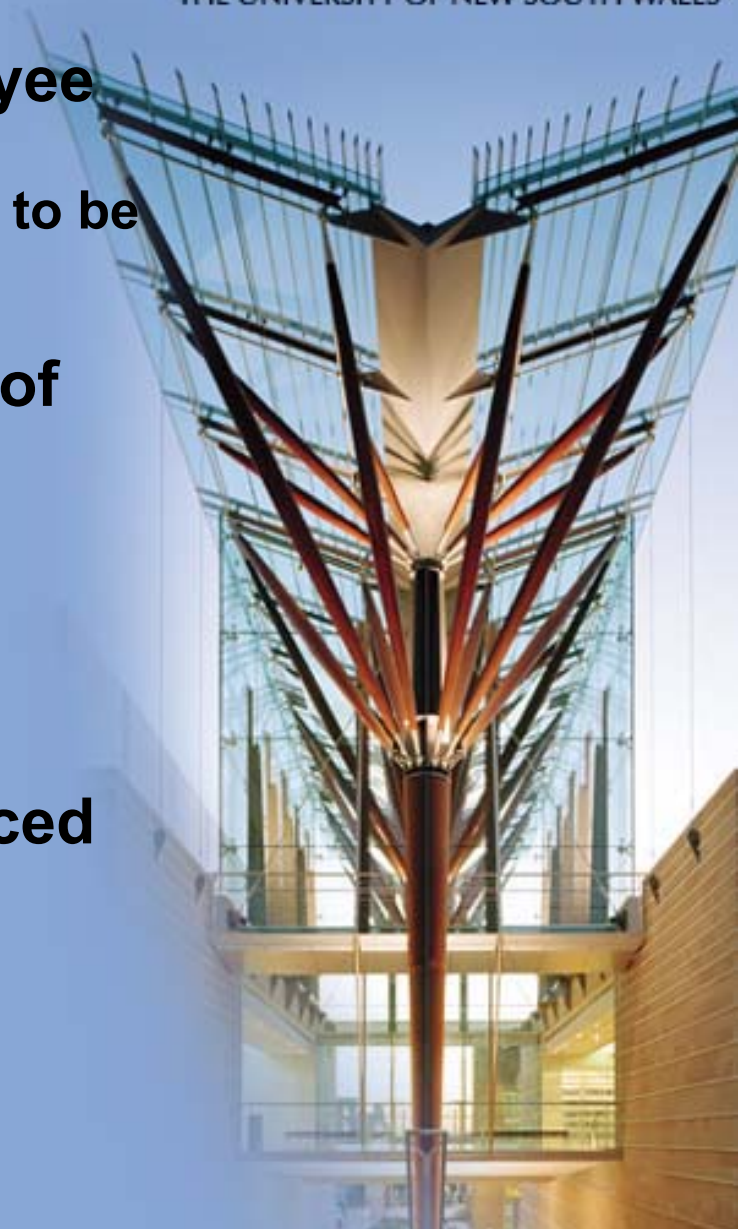
TABLE 1 – A Comparative Analysis of eLearning in Higher Education and eLearning in Workplace

	HIGHER EDUCATION	WORKPLACE
General	Formal; Decontextualized	Informal; Contextualized
Individual Level		
Learning Approach	Surface Learning	Action Learning
Motivational Factors	Extrinsic	Intrinsic
Social Interactions	Collaborative	Less Collaborative
Organizational Level:		
eLearning Strategy	Attention given to effects of 'cultural issues' on eLearning	Attention given to effects of 'educational issues' on eLearning
eLearning Success	Measured by ROI	Measured by students' learning experience
Design Process	High level of employees' participation	Low level of students' participation
<i>Design Approach</i>	<i>A collaboration of educationalists, subject matter experts, and technologists</i>	<i>A collaboration of educationalists, subject matter experts, and technologists</i>
<i>Technology Adoption</i>	<i>Sub-optimized</i>	<i>Sub-optimized</i>
<i>Best Practices & Guidelines for eLearning Delivery</i>	<i>Immature; not established yet</i>	<i>Immature; not established yet</i>



Conclusion

- **Similarities exhibited between postgraduate students and employees as learners**
 - Implications: This is a promising area to be further explored in order to enhance eLearning in workplace
- **Similarities in terms of promotion of collaborative learning**
 - This can guide design of eLearning in Workplace
- **The common goal of designing a learner-oriented e-Learning environment and the very similar technology and delivery issues faced by both contextual settings**
 - Another potential area for enhancing eLearning in Workplace



Conclusion

- **The review identified different learning approaches between UG students and employees.**
 - This can assist employers to focus on educational theories of ‘action learning’ for enhancing effectiveness of eLearning
- **The success of e-Learning in workplace is often tied to ROI whereas the success of e-Learning in higher education focuses on student’s learning outcome**
 - Financial impact of e-Learning on e-Learning in HE has been largely ignored
- **Employees have more opportunities to participate in the e-Learning design process**
 - Usefulness of the ‘participatory design’ theories/principle to the design process of eLearning in Workplace



Future Work

- **One immediate future study is to further investigate the consequences of the findings on organizational structure using empirical cases. For example, what factors characterise eLearning in undergraduate and postgraduate courses? In large and small enterprises, etc.**



THANK YOU



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