Meaningful E-Learning (MEL)

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Background & Need

- Most universities now utilize educational technologies and e-learning strategies to ensure consistency in course delivery and, in some instances, reduce face-to-face (f2f) contact hours for students (Carter, 2008; Carter, Rukholm, & Kelloway, 2009)
- Challenges associated with e-learning include geographic and technological barriers, lack of instructional design support, inconsistent, inadequate or unreliable infrastructure support, as well as varying degrees of faculty and student experience with e-learning environments (Barrett, & Salyers, 2010; Donato, Hudyma, & Carter, 2010; Salyers, 2007; Salyers, Carter, Barrett, & Williams, 2010 a, b).
- The main issue that has driven commencement of the MEL Project relates to strong and repeated anecdotal and research evidence that students and academic staff lack sufficient knowledge, skills, and/or time to enable them to integrate e-learning strategies in meaningful and sustainable ways into their teaching and learning activities

Three Brief Case Studies

- Nipissing University & E-Learning Challenges
- Mount Royal University & E-Learning Challenges
- University of Northern BC

An International, Multi-University Collaboration

MOUNT ROYAL UNIVERSITY
1910

NIPISSING UNIVERSITY

SIAST

Charles Sturt University

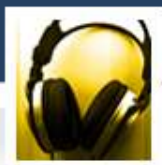
E-Learning Defined . . .

The term e-learning used for this research project refers to the:

"integration of pedagogy, information technology, and the Internet into teaching and learning processes. Thus, e-learning environments may include face-to-face (f2f) classrooms for which information technologies (e.g. learning management systems, video and web-conferencing, mobile devices, etc.) are used, blended and web-enhanced learning environments, and fully online learning environments."

MEL Project Research Team (2012)

Aims & Significance


- This research is aimed at helping students and faculty identify their needs and systematically implement support strategies for integrating e-learning technologies into their learning and teaching activities in effective, meaningful, and sustainable ways.
- The significance of the MEL Project extends across distance and classroom-based teaching and learning environments, due to contemporary trends towards increasing online and blended learning modalities within courses and curricula.

Research Questions

What challenges do faculty experience when utilizing e-learning strategies?

What challenges do students experience when utilizing e-learning strategies?

What knowledge, skills, and attitudes do faculty require in order to effectively utilize e-learning strategies for their teaching?

What knowledge, skills, and attitudes do students require in order to be successful with using e-learning strategies for their learning?

What are the characteristics of exceptional e-learning courses?

What relationships exist between perceptions of faculty and students in relation to the quality of e-learning courses?

Theoretical Rationale/ Framework

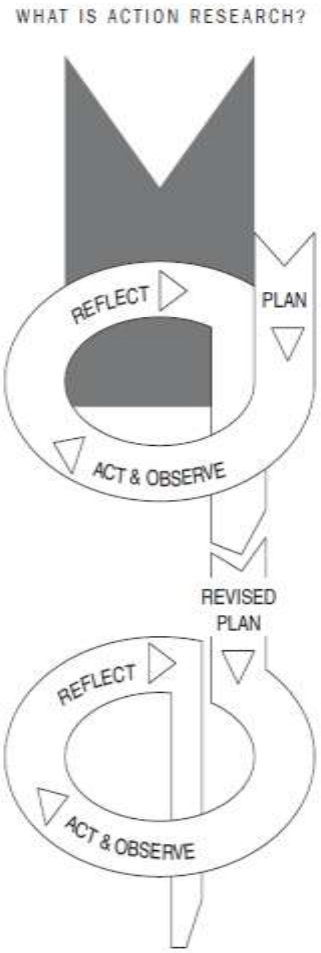


FIGURE 1.1 *Kemmis and McTaggart's action research spiral*

The processes of the MEL project arise out of principles of participative action research and inquiry (Barrett, 2001; Reason & Bradbury, 2001; Kemmis & McTaggart, 2000), as well as design-based research's principle of generating theoretically-informed outcome/s that are reusable (Barab & Squire, 2004; Brown, 1992; Collins, Beranek, & Newman, 1990; Dede, Nelson, Jass Ketelhut, Clarke, & Bowman, 2004; Kervin, Vialle, Herrington, & Okely, 2006; Reeves, 2000; van den Akker, 1999)

Methods



PROJECT PHASE	DATA COLLECTION INSTRUMENTS	TIMELINES
Establish guiding principles for study participation and researcher involvement. (*Preliminary Planning*)	N/A	June 15, 2011
Develop and/or approve documents and instruments to be used in the study. (*Preliminary Planning*)	N/A	August 31, 2011
Obtain institutional ethics approval to conduct research. (*Preliminary Planning*)	N/A	November 30, 2011
Recruit study participants; conduct focus groups with faculty to generate common themes related to issues outlined in the literature review and research plan; conduct ongoing and then final verification of emerging themes with focus group participants. (*Phase I*)	Focus Group Guiding Questions; developed by researchers	January 1, 2012-December 15, 2012
Recruit study participants; conduct focus groups with students to generate common themes related to issues outlined in the literature review and research plan; conduct ongoing and then final verification of emerging themes with focus group participants. (*Phase I*)	Focus Group Guiding Questions; developed by researchers	January 1, 2012-December 15, 2012
Faculty and students to complete an e-learning skills inventories (ESI) to explore their perceptions, skills, knowledge and abilities. (*Phase II*)	ESI; quantitative questionnaire; Likert-scale; developed by researchers or available through published format	January 1, 2010-December 15, 2012 (to be completed concurrently with focus group phase)
Data analysis; triangulation of qualitative and quantitative data. (*Phase III*)	N/A	December 15, 2012-April 30, 2013
Recommendations and subsequent interventions based on data analysis; further data collection (Phase IV)	TBD	April 30, 2013-January 31,2014

Instruments



- Student and faculty E-Learning Skills Inventory
- Student and faculty Focus Group Questions

Snapshot of Student Respondents



Demographic Data:
- 635 responses

Gender:			
	Counts	Percents	Percents 0 100
Male	136	21.4%	
Female	485	76.4%	
Other	4	0.6%	
No Answer	10	1.6%	
Totals	635	100.0%	

Age:			
	Counts	Percents	Percents 0 100
17-19	62	9.8%	
20-22	204	32.1%	
23-25	121	19.1%	
26-28	50	7.9%	
29-35	73	11.5%	
35-64	116	18.3%	
Other	1	0.2%	
No Answer	8	1.3%	
Totals	635	100.0%	

Snapshot of Student Respondents

MEL 1-8 student	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable	No Answer	Totals	Mean
7. E-learning technologies enhance my learning.	183.0 28.8%	317.0 49.9%	54.0 8.5%	17.0 2.7%	51.0 8.0%	13.0 2.0%	635.0 100.0%	3.17
8. E-learning encourages me to participate more actively in discussions than traditional learning	106.0 16.7%	201.0 31.7%	192.0 30.2%	62.0 9.8%	70.0 11.0%	4.0 0.6%	635.0 100.0%	2.63
9. I am comfortable taking courses using e-learning technologies.	183.0 28.8%	303.0 47.7%	76.0 12.0%	24.0 3.8%	43.0 6.8%	6.0 0.9%	635.0 100.0%	3.10
14. Overall, I have adequate e-learning skills to take courses using e-learning technologies.	252.0 39.7%	291.0 45.8%	28.0 4.4%	3.0 0.5%	54.0 8.5%	7.0 1.1%	635.0 100.0%	3.38
15. The design of courses using e-learning strategies is important.	302.0 47.6%	240.0 37.8%	22.0 3.5%	5.0 0.8%	55.0 8.7%	11.0 1.7%	635.0 100.0%	3.47
23. I enjoy using e-learning technologies.	165.0 26.0%	286.0 45.0%	84.0 13.2%	25.0 3.9%	62.0 9.8%	13.0 2.0%	635.0 100.0%	3.06
24. I prefer courses that use e-learning technologies for learning rather than courses that use mo	99.0 15.6%	185.0 29.1%	193.0 30.4%	89.0 14.0%	62.0 9.8%	7.0 1.1%	635.0 100.0%	2.52
32. Students attending post-secondary institutions should have moderate to high level e-learning s	241.0 38.0%	296.0 46.6%	60.0 9.4%	12.0 1.9%	21.0 3.3%	5.0 0.8%	635.0 100.0%	3.26

Snapshot of Faculty Respondents



Demographic Data:
- 186 responses

Gender:			
	Counts	Percents	Percents 0 100
Male	63	33.9%	
Female	119	64.0%	
No Answer	4	2.2%	
Totals	186	100.0%	

Age:			
	Counts	Percents	Percents 0 100
26-28	4	2.2%	
29-35	14	7.5%	
35-64	160	86.0%	
>65	6	3.2%	
No Answer	2	1.1%	

Snapshot of Faculty Respondents

MEL 1-8	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable	No Answer	Totals	Mean
7. E-learning technologies enhance student learning.	75.0 40.3%	89.0 47.8%	13.0 7.0%	3.0 1.6%	5.0 2.7%	1.0 0.5%	186.0 100.0%	3.31
8. E-learning encourages students to participate more actively in discussions than traditional lea	34.0 18.3%	57.0 30.6%	68.0 36.6%	20.0 10.8%	7.0 3.8%	0.0 0.0%	186.0 100.0%	2.59
9. I am comfortable teaching courses using e-learning technologies.	56.0 30.1%	85.0 45.7%	20.0 10.8%	3.0 1.6%	21.0 11.3%	1.0 0.5%	186.0 100.0%	3.18
14. Overall, I have adequate e-learning skills to teach courses using e-learning technologies.	52.0 28.0%	83.0 44.6%	31.0 16.7%	4.0 2.2%	15.0 8.1%	1.0 0.5%	186.0 100.0%	3.08
15. The design of courses using e-learning strategies is important.	105.0 56.5%	57.0 30.6%	10.0 5.4%	2.0 1.1%	10.0 5.4%	2.0 1.1%	186.0 100.0%	3.52
32. Students attending post-secondary institutions should have moderate to high level e-learning s	56.0 30.1%	101.0 54.3%	23.0 12.4%	1.0 0.5%	5.0 2.7%	0.0 0.0%	186.0 100.0%	3.17

Discussion Based on Preliminary Survey Findings



- Excellent alpha reliabilities:
  Student survey (.90)
  Faculty survey (.90)
- The responses of students and faculty seem to be consistent agreement or strong agreement with most items
- ANOVA will be conducted once all data have been collected

Lessons Learned & Recommendations for Multi-Site Research Projects

- Dedicate sufficient planning time
- Hold important discussion to determine roles (e.g. PI, Co-PI, Collaborators)
- Develop guidelines for dissemination of knowledge activities (e.g. authorship, etc.)
- Be prepared to navigate challenges with ethics approvals external to your institution
- Be willing to negotiate and hold difficult discussions when disagreement arises
- Consider and respect different organizational structures and processes

Discussion

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