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Profiling student preferences for Moodle activities: Implications for student learning and teaching practice

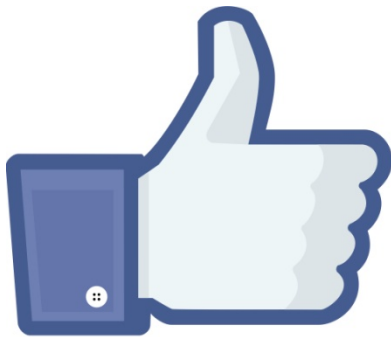
Never Stand Still

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Background

- OB12 transition from OLIVE to Moodle
- CATEI dived from 96% to 75%
- Focus on single technology (e.g. Facebook, Wiki)
- What do students prefer?



Androgogical Context

- Masters level Org Beh course
- Military students are typically (after Newton & Ellis)
 - Didactic information transmission
 - LMS completely self-contained
 - Strong beliefs around procedural/natural justice
 - Unpredictable and high work tempo
- A1 – 2000 words (30%), A2 – MC Test (15%), A3 – 3000 words (40%), A4 – Engt (15%)

Methodological Context

- 2013 cohort (n=86)
 - PCA of engagement; effect on marks
 - n=51 survey responses
- 2014 cohort (n=75)
 - Eliminate Twitter, change marks mix
 - PCA of engagement; effect on marks

A4 – Engagement

Task	2013 Marks	2014 Marks
Discussion Boards	5x2, qun/qul, Wk1-13	5x2, qun/qul, Wk1-13
OB Radio	2/qu, max 6, Wk1-13	2/qu, max 6, Wk1-13
Peer to Peer	3, 2 wks b4 A1/ A3	5, 2 wks b4 A1/ A3
Live Tutorials	2, max. 6, every 2 wks	2, max. 6, every 2 wks
Wiki	3, 1/contrib, Wk 1-13	3, 1/contrib, Wk 1-13
Twitter	4, contrib, Wk1-3, 8-11	-
Total Available	35 marks	35 marks

- Do more than 1 activity
- Students believe they must get 15/15
- 2013: 10.1 (4.7), 3/86=0, 29/86=15, 38 HD
- 2014: 12.2 (4.2), 3/71=0, 39/71=15, 51 HD

2013 Patterns of Engagement

	Engaged	Digitally Literate	Late
Peer-to-Peer 1	0.807		
Peer-to-Peer 2	0.759		
Discussion Boards 1-2	0.602		
Wiki	0.467	0.435	
Live Tutorials	0.407		
Twitter 2		0.762	
Twitter 1		0.673	
Pre-recorded Questions		0.669	
Discussion Boards 3-5			0.908

2013 Engagement Pattern and Marks

	n	2000 word Essay Mark/30	Multiple Choice Test Mark/15	3000 word Essay Mark/40	Total Mark/85
Engaged	30	18.7 (4.3)	10.7 (1.5)	25.1 (4.3)	53.5 (8.3)
Digitally Lit.	32	19.2 (3.4)	11.0 (1.5)	27.5 (4.3)	57.6 (6.4)
Late	24	17.9 (5.1)	9.9 (1.3)	26.4 (3.8)	52.7 (10.5)
F		$F_{2,83}=0.72,$ $p>0.48$	$F_{2,80}=3.47,$ $p<0.04$	$F_{2,81}=2.50,$ $p<0.09$	$F_{2,83}=2.90,$ $p<0.06$
Engaged	11	17.0 (3.6)	10.7 (1.8)	24.4 (5.1)	51.9 (8.0)
Digitally Lit.	22	19.7 (3.4)	11.0 (1.6)	27.1 (4.2)	57.8 (6.7)
Late	24	17.9 (5.1)	9.9 (1.3)	26.4 (3.8)	52.7 (10.5)
Combined	29	19.2 (4.1)	10.7 (1.3)	26.5 (4.2)	55.4 (7.8)
F		$F_{3,82}=1.43,$ $p>0.24$	$F_{3,79}=2.35,$ $p<0.08$	$F_{3,80}=1.05,$ $p>0.37$	$F_{3,82}=1.9,$ $p>0.13$

2013 Best Worst Scaling (Huybers, 2013)

Activity	BWS Ratio Score	Rank
Discussion Boards	3.08	1
Peer-to-peer feedback	1.43	2
Pre-recorded questions	1.12	3
Live Tutorials	0.87	4
Wiki	0.56	5
Twitter	0.51	6

2013 Activities and Sentiments

Item	Discussion Boards	Pre-recorded Questions	Peer-to-peer Feedback	Live Tutorials	Twitter	Wiki
Participants/86	85	39	43	18	44	37
Survey Responses/51	46	28	20	23	36	27
Comments	13	7	8	7	17	10
I felt comfortable with...	89%	63%	95%	65%	72%	59%
Participating in... promoted collaborative learning	89%	70%	70%	61%	31%	41%
I learned because of ...	87%	44%	80%	83%	32%	56%

Comments

- Disc - “students regurgitate some rubbish to get marks”
- Qu - “... a great means for student participation as it is not constrained by time”
- P2P – create social presence, but more guidance
- Live Tutes - “realise how much we miss by being part time students”, but frustration
- Twitter – 140 ch, anxiety, threads
- Wiki - “we spent too long trying to figure out what to do”

Activities and the Community of Inquiry

- Discussion boards preferred: comfort, exp, “netiquette”
- Twitter – good for me/bad for them
 - 140 characters and Twitter shorthand
 - Social media policies of ADF
 - Middle aged males in middle management
- Wiki – needed more scaffolding/instruction
- Digital Immigrants – Digital Literacy?



Awareness of Community

- Lack of awareness of learning community
- Do ADFA students isolate themselves?
 - ADF culture suggests so!



2014 Patterns of Engagement

	Live Tutorial	Late	Early	Toe Dip	Digital
Live 6	0.781				
Live 4	0.698				
Live 5	0.667				
Live 3	0.577			0.538	
Live 1	0.550	-0.412			
AD4		0.766			
P2P A1		-0.700	0.404		
AD3		0.618			
AD5		0.595			
AD2			0.865		
AD1			0.759		
P2P A2				-0.767	
Live 2				0.664	
Radio					0.821
Wiki					0.732

2014 Engagement Pattern and Marks

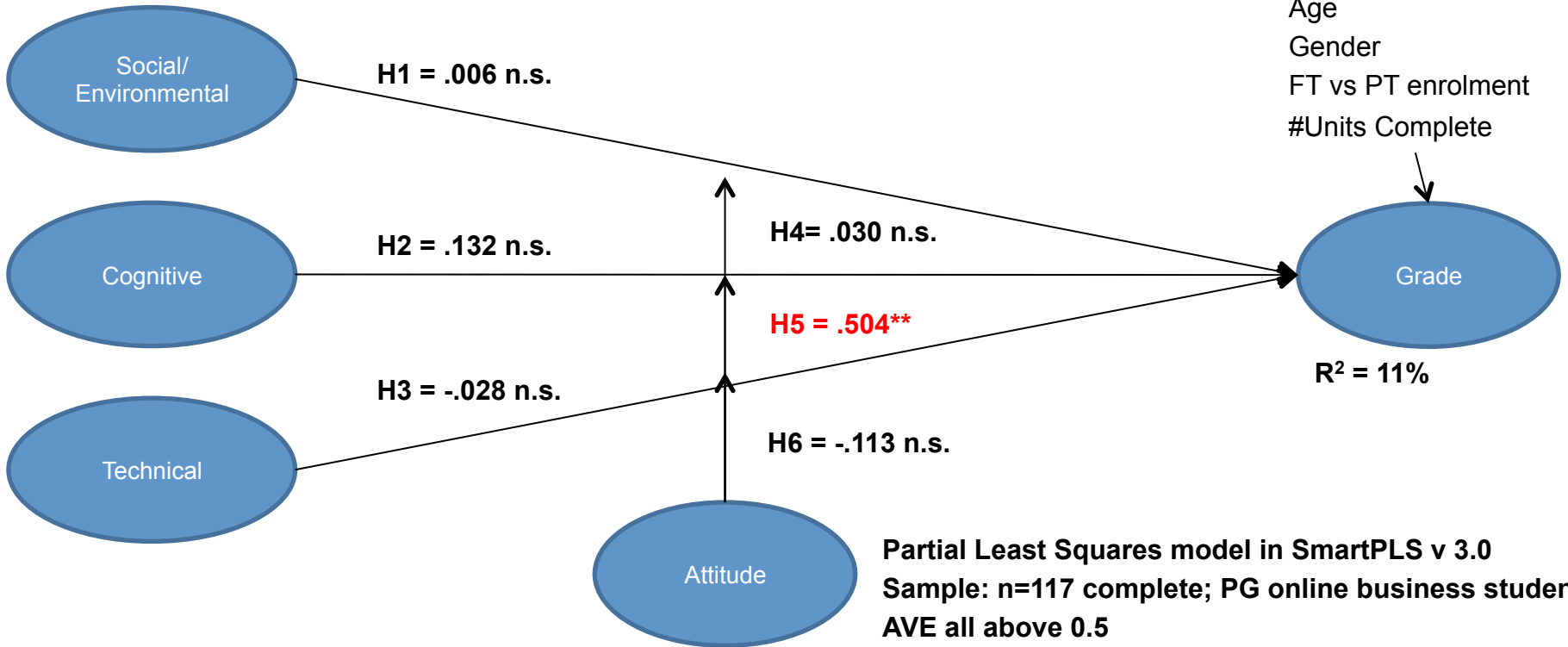
Group	n	2000 word Essay	MC Test	3000 word Essay
Live	9	61.2 (12.5)	66.0 (18.7)	70.2 (10.4)
Late	13	64.4 (11.3)	64.9 (10.0)	62.2 (15.3)
Early	13	61.7 (12.7)	68.9 (15.1)	65.2 (11.3)
Toe Dip	10	64.9 (10.7)	75.5 (13.5)	61.9 (13.4)
Digital	10	59.7 (10.2)	70.0 (14.3)	67.8 (8.9)
		$F_{4,50}=0.39,$ $p>0.81$	$F_{4,50}=0.50,$ $p>0.73$	$F_{4,50}=0.87,$ $p>0.48$

2014 Digital Literacy Survey

- Based on 2013 results
- Quality assurance survey of ZBUS8XXX students
- Ng (2012). *Computers & Education*, 59, 1065-1078
 - Attitudes towards ICT for learning (e.g. I like using IT to learn)
 - Digital Literacy
 - Social/Emotional – use internet responsibly and effectively (e.g. netiquette)
 - Cognitive – critical thinking in handling digital information
 - Technical – skills to operate IT
 - Demographics – age, gender enrolments, units complete
 - Dependent variable - WAM
- N=117 useable responses

Digital Literacy and Online Distance Student Performance

Digital Literacy Types



Partial Least Squares model in SmartPLS v 3.0
Sample: n=117 complete; PG online business student
AVE all above 0.5
Composite Reliability all above 0.7
Cronbach's Alpha all above 0.7
VIF all above 1.5
No correlations exceed 0.69
500 Bootstrap samples

Concluding Thoughts

- Balancing synchronous and asynchronous activity
 - Good and bad for students and lecturers
- Different communities of engagement
 - Early, mid, late, talkers and writers
 - Visual, verbal and kinaesthetic learners
- Role of digital literacy
 - Bigger samples to unpack effects
 - Teaching students how to learn on-line
 - Cresting a decade of experience...

Questions, Thoughts, Insights and Reflections Welcome!

Thank You

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