

# 6<sup>th</sup> Professional Development Meeting - Nov. 25, 2015

Sharing of progress and preliminary results on survey

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Practicing Blended Learning on a Collaborative Platform: A Pilot Study in FEHD (Institutional-level TDG, 2016-2016)

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# Subscales of student survey

Subscales	Definition	Number of items (Pre-test)	Number of items (Post-test)
Extrinsic Motivation	The motivation to carry out an action in order to reach some separable goals	3	3
Introjected Motivation	The motivation to behave in order to reduce the guilty pressures	3	3
Identified Motivation	The motive to behave because of internalization of personal goals that associated with extrinsic motives	3	3
Intrinsic Motivation	The motive to carry out an action for the inherent pleasure that associated with the action itself	3	3
Enthusiasm toward Blended Learning	A strong feeling aroused by active interest in something that people like or enjoy.	5	5
Preference for Learning Method	These learning methods were lectures, written test and exam, written tasks, group projects and presentations, instruments for problem solving in authentic contexts, online discussions, peer evaluations and critique, authentic products for learning context, I.T.-facilitated self studies or exercises, case-based studies, and professional sharing from relevant sectors.	11	11

# Subscales of student survey (continue)

Subscales	Definition	Number of items (Pre-test)	Number of items (Post-test)
Behavioral Engagement	Effort, attention and persistence in an activity	0	6
Cognitive Engagement	The self-monitoring of oneself, his/her works, skills and strategies employed in an activity	0	9
Emotional Engagement	Emotions showing motivated involvement in an activity	5	5
Positive and Negative Affect	It involves cross-culture positive and negative dimensions of trait affect. The positive affect includes “determined”, “inspired”, “active”, “attentive”, and “alert”. The negative affect includes “nervous”, “afraid”, “hostile”, “ashamed”, and “upset”.	10	10
Before Class Emotion	Assess eight emotions: enjoyment, hope, pride, anger, anxiety, shame, hopelessness and boredom.	7	7
During Class Emotion		11	11
After Class Emotion		6	6

[Details of subscales](#)

# Data collection—First semester

Couse code	Couse title	Class size	Pre-test	Post-test
			Number of participants	Number of participants
TLS 3008	Teaching Innovations	12	11	11
TLS 6036	Teaching Strategies to Enhance Student learning	12		
FEX 4139	Teaching Strategies to Enhance Student learning	60	56	
PSY 2007	Social Psychology	41	41	33
ECE 1046	The Young Child in a Technological World	45	45	
CUI 5046	Curriculum and Assessment	42	20	
EDA 5055	Enhancing Participatory Capability of Deputy School Heads	20	3	

# Pre-test results—Demographic information

Course	Gender		Mean age (SD)	Year of Study					Total n
	Male	Female		1	2	3	4	miss	
FEX4139	0	56	24.26 (3.07)	0	55	1	0		56
PSY2007	9	32	20.58 (1.36)	0	0	41	0		41
TLS3008	4	7	22.55 (0.82)	0	0	1	9	1	11
ECE1046	3	42	19.65 (1.41)	0	45	0	0		45
EDA5055	0	3	41.00 (4.24)	1	0	0	0		3

# Pre-test results—Student motivation, enthusiasm, and emotional engagement

- ▶ Students' four types of motivations and enthusiasm were scored on a 6-point Likert scale.
- ▶ Students in four of these classes (FEX4139, PSY2007, ECE1046) scored lower on the introjected motivation than other types of motivation.
- ▶ The students in Class EDA5055 scored much lower on both the extrinsic and introjected motivation than the other two types of motivation.
- ▶ Students in all the class showed acceptable enthusiasm toward courses.
- ▶ Students' emotional engagement was scored on a 4-point Likert scale.
- ▶ Students in all classes have generally high level of emotional engagement (scored above 2.5). Students in Class TLS3008 and Class EDA5055 scored more highly on their emotional engagement than did students in the other three classes.

# Pre-test results—Student motivation, enthusiasm, and emotional engagement

Subscales	FEX4139		PSY2007		TLS3008		ECE1046		EDA5055	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Extrinsic motivation	4.14	0.76	4.20	0.89	4.45	0.96	4.10	1.09	1.89	1.02
Introjected motivation	3.67	0.81	3.51	0.91	4.55	0.70	3.15	0.99	2.33	1.33
Identified motivation	4.56	1.90	4.80	0.84	4.79	0.86	4.06	0.81	5.11	0.19
Intrinsic motivation	4.07	0.67	4.63	0.86	4.85	0.86	4.31	0.83	5.22	0.19
Enthusiasm	3.83	0.67	4.00	0.96	4.47	0.60	4.19	0.87	4.47	0.58
Emotional engagement	2.80	0.32	3.03	0.42	3.06	0.57	2.70	0.61	3.60	0.40

# Pre-test results—Preferences for instructional methods

- ▶ Preferences for instructional methods were scored from 1 to 6.
- ▶ All the instructional methods were acceptable to students (scored above 3).
- ▶ Authentic products for learning context and professional sharing were mostly preferred by students in Class FEX4139.
- ▶ Lectures were mostly preferred by students in Classes PSY2007, ECE1046, and EDA5055.
- ▶ Students in Class TLS3008 preferred case-based studies most.



# Pre-test results—Preferences for instructional methods

Subscales	FEX4139		PSY2007		TLS3008		ECE1046		EDA5055	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Q5a. Preference-Lectures	4.21	0.82	5.00	0.92	4.55	0.52	4.33	1.07	5.67	0.58
Q5b. Written test and exam	3.77	0.93	4.59	0.92	3.91	1.14	3.22	1.26	1.67	1.15
Q5c. Closed-ended Written Tasks	4.09	0.72	4.46	0.90	4.27	0.90	3.47	1.22	4.33	0.58
Q5d. Group Projects and Presentations	4.18	0.83	4.46	0.74	4.36	0.92	3.60	1.23	2.67	1.53
Q5e. Instruments for Problem Solving in Authentic Contexts	4.25	0.79	4.56	0.74	4.45	1.04	3.84	1.15	4.67	0.58
Q5f. Online Discussions	3.77	0.79	3.88	1.00	4.09	0.94	3.59	1.06	3.33	2.08
Q5g. Peer Evaluations and Critique	3.93	0.71	4.20	0.78	4.36	0.92	3.43	1.19	4.67	0.58
Q5h. Authentic Products for Learning Context	4.27	0.77	4.46	0.78	4.64	0.67	4.11	1.01	4.67	0.58
Q5i. I.T.-facilitated self studies or exercises	4.00	0.76	4.24	0.83	4.64	1.03	4.16	0.98	4.00	1.73
Q5j. Case-based Studies	4.20	0.64	4.54	0.90	4.91	0.70	3.96	1.09	5.33	0.58
Q5k. Professional Sharing from relevant sectors	4.27	0.82	4.59	0.81	4.45	0.82	3.93	1.25	5.33	0.58

# Post-test results—Changes after attending the courses

- ▶ Students in Class PSY2007 significantly increased their preferences for the teaching methods of authentic products for learning context and case-based studies.
- ▶ In addition, students in Class PSY2007 increased positive affect related to attending the course.
- ▶ Students in Class TLS3008 significantly increased their interests in course contents, introjected motivation, identified motivation, intrinsic motivation, enthusiasm toward the course, and emotional engagement.
- ▶ Regarding teaching methods, students in Class TLS3008 increased their preferences for online discussions, I.T.-facilitated self studies or exercises, and case-based studies after attending the courses.

# Post-test results—Changes after attending the courses

Subscales	PSY2007 (Pre-test)		PSY2007 (Post-test)		T test	df	TLS3008 (Pre-test)		TLS3008 (Post-test)		T test	df
	Mean	SD	Mean	SD			Mean	SD	Mean	SD		
Q2. Interest in the course topics	4.80	0.68	4.83	0.66	1.57	23	4.74	0.81	5.43	0.41	-4.82***	8
Q3a. Extrinsic motivation	4.20	0.89	4.44	0.78	-1.02	26	4.45	0.96	4.36	0.95	1.00	10
Q3b. Introjected motivation	3.51	0.91	3.36	0.77	1.42	26	4.55	0.70	4.76	0.76	-2.61*	10
Q3c. Identified motivation	4.80	0.84	4.91	0.70	0.55	24	4.79	0.86	5.64	0.55	-5.60***	10
Q3d. Intrinsic motivation	4.63	0.86	4.80	0.68	0.31	26	4.85	0.86	5.64	0.41	-4.35***	10
Q4. Enthusiasm	4.00	0.96	3.93	0.68	1.45	26	4.47	0.60	5.29	0.43	-7.72***	10
Q8. Emotional engagement	3.03	0.42	3.16	0.38	-0.67	26	3.06	0.57	3.57	0.35	-5.16**	5

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

# Post-test results—Changes after attending the courses

Subscales	PSY2007 (Pre-test)		PSY2007 (Post-test)		T test	df	TLS3008 (Pre-test)		TLS3008 (Post-test)		T test	df
	Mean	SD	Mean	SD			Mean	SD	Mean	SD		
Q5a. Preference-Lectures	5.00	0.92	5.33	0.69	-1.16	26	4.55	0.52	4.64	0.50	-1.00	10
Q5b. Written test and exam	4.59	0.92	4.70	0.98	-1.54	26	3.91	1.14	3.91	1.14	0	10
Q5c. Closed-ended Written Tasks	4.46	0.90	4.45	1.15	-0.27	26	4.27	0.90	4.36	0.92	-1.00	10
Q5d. Group Projects and Presentations	4.46	0.74	4.24	1.03	0.96	26	4.36	0.92	4.55	0.82	-1.49	10
Q5e. Instruments for Problem Solving in Authentic Contexts	4.56	0.74	4.58	1.03	0.72	26	4.45	1.04	4.82	0.60	-1.79	10
Q5f. Online Discussions	3.88	1.00	3.79	1.05	1.66	26	4.09	0.94	4.82	0.75	-2.67*	10
Q5g. Peer Evaluations and Critique	4.20	0.78	4.03	0.81	1.31	26	4.36	0.92	4.55	0.69	-1.00	10
Q5h. Authentic Products for Learning Context	4.46	0.78	4.91	0.91	-3.65***	26	4.64	0.67	4.73	0.47	-1.00	10
Q5i. I.T.-facilitated self studies or exercises	4.24	0.83	4.24	0.83	0.75	26	4.64	1.03	5.27	1.01	-3.13*	10
Q5j. Case-based Studies	4.54	0.90	4.91	0.72	-2.36*	26	4.91	0.70	5.36	0.67	-2.89*	10
Q5k. Professional Sharing from relevant sectors	4.59	0.81	4.39	1.20	1.02	26	4.45	0.82	4.64	0.81	-1.49	10

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .