

OUT-OF-CLASS EXPLORATIVE LEARNING ACTIVITY ENHANCES PRE-REGISTRATION NURSING STUDENTS' ENGAGEMENT IN MICROBIOLOGY CLASS

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OBJECTIVE

Pre-registration nursing students always perceive the microbiology module embedded in nursing curriculum uninspiring and challenging that leads to remarkable low levels of learning motivation and engagement in class. To address, an out-of-class, student-centered, authentic explorative learning activity combining photo-taking and reflective sessions is designed and introduced into the microbiology class. Mixed method approach is adopted to examine the effectiveness of such novel explorative learning activity in the enhancement of pre-registration nursing students' engagement in the microbiology class.

METHODOLOGY

Explorative Learning Activity

- Students were divided into a group of 4 to 5
- Think of cleanest and dirtiest place around campus
- Use of rapid and portal ATP checker to provide quantifiable data (cleanliness rating)
- Reflect their initial thoughts and research-informed data according **SHOWED** questions:

1. What do you See here?
2. What is really Happening here?
3. How does this relate to Our Lives?
4. Why does this problems or situation exist?
5. How can this image Educate others?
6. What can we Do about this problem or situation?

Effectiveness Evaluation:

- Quantitative pre-and post-intervention student engagement questionnaire (Kember, 2009)
- Semi-structured interview questions

RESULTS

BACHELOR OF NURSING (FULL-TIME)

	Pre-intervention (Mean ± SD) (n=188)	Post-intervention (Mean ± SD) (n=188)	Statistical Significance (p-value)
Problem solving	5.8 ± 1.301	6.89 ± 1.247	<0.001
Interpersonal skills and groupwork	5.71 ± 1.405	6.86 ± 1.282	<0.001
Active learning	6.01 ± 1.332	7.16 ± 1.079	<0.001
Critical thinking	5.79 ± 1.230	6.94 ± 1.157	<0.001
Creative thinking	5.76 ± 1.275	6.95 ± 1.158	<0.001
Self-managed learning	5.84 ± 1.324	6.94 ± 1.207	<0.001
Total	34.9 ± 6.951	41.74 ± 6.652	<0.001

MASTER OF SCIENCE IN NURSING (FULL-TIME)

	Pre-Intervention (Mean ± SD) (n=19)	Post-Intervention (Mean ± SD) (n=19)	Statistical Significance (p-value)
Problem Solving	6.26 ± 0.872	6.95 ± 0.970	0.015
Interpersonal skills and groupwork	6.26 ± 0.653	7 ± 1	0.007
Active learning	6.58 ± 0.961	7 ± 1	0.057
Critical thinking	6.26 ± 0.872	7.05 ± 1.026	0.004
Creative thinking	6.21 ± 0.787	7 ± 1.106	0.002
Self-managed learning	6.26 ± 1.098	7.05 ± 1.026	0.007
Total	37.84 ± 4.413	42.05 ± 5.977	0.003

Selected Students' Quotes (n=128):

- "PhotoVoice learning activity is very interesting and funny"
- "PhotoVoice learning activity provides good learning environment"
- "PhotoVoice learning activity allows me to participate more"
- "I am impressed by the result"
- "I have hands-on experience to rate the cleanliness of inanimate object"
- "I can find out the answer by myself"

VISUALS AREA

ATP
CHECKER



SITES SAMPLING



REFLECTION SESSION



OTHER GROUPS' SAMPLING SITES



ANALYSIS

Explorative learning activity significantly:

- Enhances pre-registration nursing students' involvement in microbiology class
- Elevates pre-registration nursing students' learning motivation
- Enriches pre-registration nursing students' learning experiences

CONCLUSION

This study supports that the integration of explorative learning activity augments pre-registration nursing students' engagement in the microbiology class.

References:

Kember, D., & Leung, D. Y. (2009). Development of a questionnaire for assessing students' perceptions of the teaching and learning environment and its use in quality assurance. *Learning Environments Research*, 12, 15-29.