Preliminary Analysis of the Relationship Among Continuous Self-Improvement, Engagement, & Disengagement

Dale Hilty, PhD ~ Nicole Friedel, BSN Candidate, & Esther Kabungulu, BSN Candidate

Background

Burch, Heller, and Freed (2014) designed a 63-item questionnaire (i.e., Student Engagement Survey; SES). Learning activities, learning outcomes, and student engagement influence the development of the SES items. The operational definition of learning activities assessed "... the quantity, quality, or type of [classroom] activities .... " (Burch et al., 2014, p. 207). The learning outcomes definition designed items measuring higher order, reflective, and integrative learning. Student engagement included items based on operational definitions for physical, emotional, and cognitive dimensions.

Hilty, Gill-Rocha, Parkinson, Blackford, & Cook (2018) evaluated the psychometric properties of the Burch et al., (2014) 63-item SES. Exploratory principal axis factor analysis (EPAFA) was used to determine the number of underlying factors. Traditional BSN nursing students (N=360) completed the SES items. Using the scree test to determine the number of factors, the EPAFA with an oblimin rotation suggested four factors. The scree test indicated four factors (eigenvalues: 17.176, 3.807, 2.942, and 2.151) accounting for 63.6% of the variance. Forty-one (41) of the 63 items loaded on one of the physical engagement, cognitive engagement, deep learning engagement, and engagement skills factors. Coefficient alpha reliability estimates were .921 (Physical), .961 (Cognitive), .905 (Deep Learning), and .937 (Engagement Skills).

Student engagement has been defined as "the level of interest demonstrated by students, how they interact with each other in the course, and their motivation to learn about the topics" (Gray & DiLoreto, 2016, p. 5). Online learning environments are challenged to develop strategies that will engage students, to improve student retention and maximize student achievement of course objectives. Therefore, different online learning strategies require assessment to determine their effectiveness at enhancing student engagement.

Gish & Hilty (2018) used the 41 questions designed to measure student engagement with Masters level graduate nursing students. Advanced Pathophysiology students completed an educational intervention based on a passive learning and active learning experiences for this online course. Learning activities, such as textbook readings, videos and quizzes, were the same for all modules. The difference was in the discussion of the case studies. The case studies are clinical examples of the module content.

In Modules 1, 2, and 3 (passive learning), the students simply read the 4 case studies in each module. There was no discussion of the case studies or additional information added.

In Modules 4, 5 and 6 (active learning), there was active discussion of the case studies by the students. A student case study presenter was assigned to present each of the 4 case studies in each module and to moderate the subsequent discussion. All students then responded to each case study with a comment, a question, a clinical example or an additional resource (article, website, video, or diagram).

Background (Cont'd)

The four engagement constructs (Physical Engagement, Cognitive Engagement, Deep Learning Engagement, Engagement Skills) were used as the dependent variables. Using SPSS 25, the dependent *t*-test analyzed the passive and active learning approaches.

Below are descriptions of the for engagement constructs or scales.

- Physical engagement assesses the physical effort exerted on the task.
- Cognitive engagement includes questions measuring in-class (on-line) and out-of-class learning.
- Deep Learning engagement includes questions measuring higher-order, reflective, and integrative learning.
- Engagement skills assesses writing, critical-analytical thinking, work-related knowledge and skills, development of values and ethics, cultural diversity, and real-world problems.

First, there was no statistical (p=.204) difference between the passive and active learning on the physical engagement factor/scale. Second, there was a statistical (p=.019) difference on the cognitive engagement factor/scale. Third, there was a statistical (p=.002) difference on the deep learning engagement factor/scale. Fourth, there was a statistical (p=.022) difference on the engagement skills factor/scale. These findings demonstrated the students were significantly more engaged while completing the Modules 4-6 assignments.

Aim

The purpose of this educational intervention was to explore the relationship among competitive greatness/continuous self-improvement, engagement, and disengagement.

Methods

Instrumentation used to measure disengagement were Greenglass' avoidance coping scale and Carver's mental disengagement and behavioral disengagement scales. Engagement skills, physical, cognitive, and deep learning engagement common factors/scales were used to measure engagement. Competitive Greatness measured continuous self-improvement (Hilty, 2017; Hilty et al., 2018; Hilty & Gish, 2018).

Hypothesis 1: Determine if there is a relationship among the competitive greatness, avoidance learning, mental disengagement, and physical disengagement scales. Hypothesis 2: Determine if there is a relationship among the competitive greatness, physical, cognitive, deep learning, and engagement skills scales. Hypothesis 3. Determine if correlation coefficients are significantly different from zero.

Findings

Hypothesis 1: Using SPSS 25, the correlational analyses found a significant negative relationship between competitive greatness and avoidance learning (r = -.251, p=.031). The correlational coefficients among competitive greatness, mental disengagement (r= -.187, p>.05), and physical disengagement (r = .007, p>.05) were in coefficient general interpretation (Salkind, 2017) of no relationship.

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Findings (Cont'd)

Hypothesis 2: The correlational analyses found a significant positive relationship among competitive greatness, deep learning engagement (r = .373, p=.001), and engagement skills (r = .24, p=.04). The correlational coefficients among competitive greatness, physical engagement (r = .16, p>.05), cognitive engagement (r = .10, p>.05) were in coefficient general interpretation (Salkind, 2017) of no relationship.

Hypothesis 3. Using SPSS 25 regression analysis, the ANOVA table reported a significant effect (F =2.707, p=.016). The overall regression was significant (r = .472, r-squared = .223).

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