

Title:

Redesigning a Nursing Course to Increase Self-Directed Learning (SDL): A Pilot Study

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Session Title:

Poster Presentations

Slot (superslotted):

PST: Friday, April 8, 2016: 10:00 AM-10:45 AM

Slot (superslotted):

PST: Friday, April 8, 2016: 12:00 PM-1:15 PM

Slot (superslotted):

PST: Friday, April 8, 2016: 2:30 PM-3:15 PM

Slot (superslotted):

PST: Friday, April 8, 2016: 6:00 PM-7:00 PM

Slot (superslotted):

PST: Saturday, April 9, 2016: 7:30 AM-8:30 AM

Slot (superslotted):

PST: Saturday, April 9, 2016: 10:00 AM-10:45 AM

Slot (superslotted):

PST: Saturday, April 9, 2016: 12:00 PM-1:15 PM

Keywords:

nursing education, nursing students and self-directed learning

References:

Fink, L.D. (2013). *Creating significant learning experiences: Revised and updated*. San Francisco, CA: Jossey-Bass. Fisher, M.J., & King, J. (2010). The self-directed learning readiness scale for nursing education revisited: A confirmatory factor analysis. *Nurse Education Today*, 30(1), 44-48. doi:10.1016/j.nedt.2009.05.020

Abstract Summary:

This poster presentation describes a longitudinal study following nursing students from the first course to graduation to determine if course redesign affected their ability to be self-directed learners.

Learning Activity:

| LEARNING OBJECTIVES | EXPANDED CONTENT OUTLINE |
|--|---|
| The learner will be able to discuss the significance of course design to enhance self-directed learning. | Fink (2013) proposes a taxonomy for significant learning where learning goes beyond foundational learning and students become reflective learners. |
| The learner will be able to integrate recommendations for faculty behavior in order to enhance self-directed learning. | Faculty can positively affect a student’s ability to learn by being available and responsive, motivating and encouraging, and most importantly, by having clear expectations. Nurse educators who strive to include those |

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| characteristics can enhance a student's self-directed learning now and in the future. |
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Abstract Text:

Redesigning a nursing course to increase self-directed learning (SDL): A pilot study

Brief Background and Gap

When educators help students learn how to learn, students can take that skill into their academic, professional, and personal life. Fink (2013) proposes a taxonomy for significant learning where learning goes beyond foundational learning and students become reflective learners. **The gap:** Studies have not focused on the impact of course redesign on students longitudinally (Levine, Fallahi, Nicoll-Senft, Tessier, Watson, & Woods; 2008). Further research is also needed to understand self-directed learning teaching strategies for nurse educators (Samawi, Hara, & Miller, 2012) and to investigate the psychometrics of the self-directed learning readiness scale for nursing education (SDLRSNE) (Fisher & King, 2010).

Purpose and Research Question

The purpose of this pilot study was to determine if course redesign assists students to become self-directed learners over time. **The Research question** is: What is the effect of redesigning a health assessment course using Fink's Taxonomy of Significant Learning strategies in a student's ability to "Learn How to learn?" Faculty added formative assessments like weekly "muddy points," reflections after viewing videos that demonstrated patient communication, and a comprehensive portfolio with an end of the semester reflection.

Design and Analysis

This study utilized a one-group longitudinal quasi-experimental design. **Participants:** Nursing students having a prior bachelor's degree in the accelerated program ($n=14$). **Instrument:** The self-directed learning readiness scale for nursing education (SDLRSNE) by Fisher and King (2010) was administered at the beginning of the summer 2014 courses (Time 1), at the end of summer 2014 (Time 2), and at the end of the following three semesters (Times 3, 4, and 5). The SDLRSNE contains 40 questions, three subscales, and were rated on a 5-point response scale with a reported overall Cronbach's alpha of .924, and .857, .847, and .830 for the subscales of *self-management*, *desire for learning*, and *self-control*. **Analyses:** Descriptive statistics were obtained and internal consistency coefficients for both the overall SDL scale and the three subscales were computed. Normality was also assessed but given the small sample size, the results were not included. A within-subjects model of time was evaluated using the univariate repeated measure analysis of covariance (RM-ANCOVA) on the total SDL and subscale scores across Time 2 through 4, using the Time 1 data as the baseline to adjust for individual differences.

Results and Discussion

The psychometrics. The Cronbach's coefficients showed consistent reliability for both the overall scale and the three subscales across time (see Table 1). The few values below .70 could be improved to meet the criterion by dropping certain items but was not done due to the small sample size. Therefore, the findings were confirmative for the psychometrics of the SDLRSNE. Yet again, due to the limited sample size, further research is needed to provide more evidence on the validity of the scale. One side note worth mentioning is that the items with values below .70 were also items students rated lower (below 4), e.g., *I prefer to set my own learning* (self-management) and *I prefer to set my own criteria on which to evaluate my performance* (self-control). Further research is needed to look into this.

The main analysis. The Mauchly's tests results for all four analyses were non-significant indicating that the sphericity assumption was met. The RM-ANCOVA results showed no significant difference in students' SDL over the semesters except for the self-management subscale, $F(3, 7)=6.07$, $p=.023$, $\eta^2=.72$ with an observed power of .78, demonstrating a linear ascending trajectory. However, the observed power for the non-significant main effects were all low, suggesting a high probability of Type II error that a true difference was not detected. This may be very likely resulted from the small sample size and the ceiling effect due to the homogeneous composition of the participants being in an accelerated program.

Additionally, students were asked to reflect on the past four semesters with these three open-ended questions: "What things have increased your ability to be a self-directed learner," "What things have decreased your ability to be a self-directed learner," and "Did any teaching styles or strategies promote your ability to be more of a self-directed learner?"

- Students consistently reported the importance of a teacher who was available to answer questions, who was motivating and encouraging, and who presented clear expectations for the students. When those situations were not present, self-directed learning decreased and was more difficult. This echoed the students' low ratings ($M=1.67, 1.86, 1.50, 1.38, 1.54$ at the five time points) on the single question on help-seeking (*When presented with a problem I cannot resolve, I will ask for assistance*) while their ratings on all other items between 4 and 5 across time with a few above 3.
- Two students reported that they benefited from having a combination of a recorded lecture, availability of the faculty, and the textbook. The use of more online lectures in the last two semesters of nursing school was described as a hindrance to self-directed learning but also a situation where students had to be figure things out on their own to survive. This may partly explain the drop at Time 5 for students' scores on both the SDLRSNE and its three subscales, which made the trajectories non-linear, especially for self-control. Further research is needed to further examine the longitudinal trajectories for students' development of their SDL as measured by self-management, desire for learning, and self-control.

Conclusion

As mentioned above, the major limitation of this study is the small sample size and the homogeneous composition of the group. The limitation very likely resulted in the non-significant results (given the low observed power) regarding the impact of course redesign on students' SDL over time. Transforming a nursing course to include strategies for significant learning (Fink, 2013) can be an effective way to maintain a student's self-directed learning. Faculty can positively affect a student's ability to learn by being available and responsive, motivating and encouraging, and most importantly, by having clear expectations. Nurse educators who strive to include those characteristics can enhance a student's self-directed learning now and in the future.