

Learning Outcomes Associated with Group Assignments

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Abstract

A research study was conducted to determine if required participation in group assignments impacted learning outcomes in a nursing theory course. Students enrolled in a required online masters level nursing theory course completed course assignments individually, or within groups, dependent upon the course section. The data collected consisted of responses on a non-graded multiple item test intended to assess knowledge related to nursing theory content, administered after course completion and grade notification, and self-disclosed demographic data. Data were collected from 23 volunteer graduate nursing students. Results demonstrated theory knowledge is not affected by group assignments as long as the course content is consistent, learning outcomes are not affected.

Keywords: cooperative learning, group assignments, online learning, nursing theory, graduate education

Introduction

Group assignments provide the opportunity for cooperative learning. Cooperative learning, frequently used in healthcare education, is different from individual, competition-based learning. Group assignments require students to learn together in a team environment. This team environment mimics many healthcare situations where patient outcomes are directly affected by the ability to learn, understand, and retain shared information with each other. Johnson, Johnson, and Smith (1991) cite over 600 studies that indicate students learn better when they learn together in groups. Research by Keyes and Burns (2008) concluded that group assignments improved undergraduate student learning while developing essential teamwork, communication, and leadership skills. The student participants in this study believed that group assignments helped them accomplish more and improved their understanding of major concepts. Application of these results to other disciplines and to an online educational environment has not been performed.

In 2004, the Institute of Medicine (IOM) recommended that learning environments foster high quality, theory guided practice. As a consequence or in response to this recommendation, healthcare education is being reengineered to deemphasize tasks and to focus on purpose and process. According to the American Academy of College of Nursing ([AACN], 2009) clinical and organizational decision-making skills of nurses are paramount. Health promotion/disease prevention is one of the highest priorities of advanced practice nurse (APN) education and practice. (Bellack & O'Neil, 2000). Therefore, APN curricula frequently introduce graduate students to several theoretical frameworks to promote health and

health behavior change in individuals (Burman et al., 2009). The integration of theory throughout all courses is necessary for the development of strong clinical skills. Theoretical knowledge is integral for guiding nursing practice (Milton, 2005). This knowledge provides a foundation to identify and implement interventions which address healthcare challenges and assure that care is evidence-based. It seems reasonable to assume that learning theoretical knowledge by completing group assignments provides education that is useful while enhancing the communication skills necessary to be effective in healthcare settings.

A review of the literature failed to identify research which assessed the impact of group assignments on knowledge when content is taught in an online format. The purpose of this study was to determine how knowledge was affected by participation in group assignments. As educators, it is important to know how group assignments influence learning outcomes. These data were needed prior to implementing group assignments throughout all sections of the online required theory course.

Internet technology has changed the modalities utilized in nursing education. Online learning and the use of web-based formats prevent distance from being a barrier in nursing education. Online nursing education programs have proliferated in recent years. Graduate nursing faculty are expected to implement effective educational strategies and course formats which provide appropriate education. Online courses, from the perspective of the student, are as effective in achieving learning outcomes as traditional classroom formats (Ward-Smith, Peterson, & Schmer, 2010). Online learning provides 24/7 access to course materials and the use of multiple modalities to provide content compared with a lecture driven course.

Learning, from the student perspective, in an online course, requires active engagement, participation, and self-direction to complete the required assignments (Song & Hill, 2007). Group assignments may provide a teaching-learning strategy that fosters attainment of course outcomes as effectively as the traditional teacher-dominated classroom (Kinyon, Keith, & Pistole, 2009). Completing assignments within groups provides the opportunity to develop relationships, negotiate workload, cope with school-related stress, and self-evaluate (Levin, 2002). Previous research described advantages and disadvantages of group assignments from the student perspective (Ward-Smith, Peterson, & Schmer, 2010). However, students' overall knowledge of theoretical foundations was not assessed in the previous study.

Within this course, one assignment required students, either individually or in a group, to develop a Powerpoint® presentation of a nursing theory. Several websites were provided to identify appropriate nursing theories (www.nursingtheory.org; www.nursingavenue.com). The content of the presentation had to include biographical information about the author (developer) of the theory. Each presentation also had to identify which nursing concepts (nurse, health, patient, environment) were included in the theory, examples of clinical application of the theory, and examples of qualitative and quantitative research questions addressed by the theory.

Students had the choice of working in groups or individually, and the instructors provided no incentive for either choice. At the beginning of the semester, a Discussion Board provided an opportunity for students to introduce themselves, state their educational tract (nurse practitioner or educator) and describe themselves using no more than five statements. Throughout the semester, the Discussion Board format allowed students to comment and critique other students' postings. A Discussion Board was provided for the expressed purpose of group formation – an area where students with similar interests could decide to work together, or express the desire to work alone. The most frequently identified reason for working alone was the work-schedule of the student. Students who routinely work night-shifts or weekend-only shifts expressed difficulty arranging meeting times.

Once identified, a group-specific Discussion Board was provided, in an effort to enhance the ability to work collaboratively. During the semester in which data were collected for this study, there were two sections of the masters level theory course. Each section was formatted similarly, using the same syllabi, assignments, and grading matrix. Assuring that each section of the course had comparable outcome requirements was critical to determine how group assignments are associated with learning outcomes. The purpose of this study was to determine if knowledge was affected by participation in group assignments.

Method

Research activities commenced once Social Science Institutional Review Board (SSIRB) approval was secured from the study site. This study was determined to be of minimal risk, thus approval was expedited and consent was assumed upon submission of the study materials. Participation was solicited from students who passed the required online masters level nursing theory course. Typically, students in this program are part-time, and are enrolled in two three-hour courses each semester. All study activities were performed within the password protected University email system and used the online course format BlackBoard®. An initial email was sent to all potential participants, from each course section, from the researcher who was not an instructor for the course. This email described the study aim and goals, the amount of time required for participation, dates of data collection, how to access the researcher if there were questions, and how to access the study materials. Once the data collection interval was complete, all responses were collated, managed, and analyzed.

Data collection occurred over the three week period between the semester break and the first week of the subsequent semester. This timeframe was chosen to prevent a burden on participants associated with a new semester and new courses, but before the knowledge gained in the theory course was diminished. Study participation included responding to multiple choice items which assessed theoretical knowledge and providing demographic data which allowed the researchers to describe the study participants. Study data were collected using a Blackboard® format. This prevented the ability to link study data to individual participants, providing confidentiality to the responses.

Results

Grade rosters revealed that there were 54 students who met study inclusion criteria. Data analysis indicated that there were 31 attempts to complete the study survey, for a 57% response rate. Twenty-three participants completed all required sections, which were used for analysis. Nineteen (83%) of these participants described themselves as part-time students; the remaining four (17%) indicated their status was full-time. Seventeen (74%) participants were taking six to eight credits hours in the current semester, four (17%) were enrolled in nine or more credit hours and two (9%) were taking three to five credit hours. Prior to this course, 10 (44%) had completed six credit hours and seven (30%) completed nine credit hours. Two participants (9%) completed 12 credit hours, another two (9%) had completed 15 credit hours, while two participants reported the completion of 26 hours (4%) and 20 hours (4%) respectfully. All participants reported completing their bachelor's degree between 1994 and 2008, with 2004 (N=4; 17%), 2007 (N=4; 17%) and 2008 (N=3; 13%) the most frequently reported years. Seven (30%) participants reported completing the course assignments individually; 16 (70%) stated their assignments were completed in a group format.

Individual scores on the 10-item multiple choice survey ranged from 100% (N=13; 57%) to 70% (N=3; 13%). The items on the survey were developed using the AACN criteria, thus mimicking the advanced practice nursing (APN) certification examination taken upon graduation. The most frequently missed item (N=10; 43%) assessed the ability to place a theory into the appropriate category (grand, middle, or practice). This incorrect response occurred regardless of group or individual assignment. Non-parametric analysis between each study group (McNemar change test) failed to detect a significant difference. Since study group differences were not apparent, further analysis was performed on the study sample as a whole. Responses to the other survey items reflected knowledge of concepts and constructs, the differences between grand, middle, and practice theories, the clinical applicability of different ways of knowing, and the purpose of theory. Table 1 describes the study population and results of the survey.

Limitations

Participants were obtained from one university setting and the small number of participants limits the generalizability of this study. All participants in this study passed the required course, which may have positively skewed the ability to respond correctly to the survey items.

Discussion and Conclusion

The results of this study indicate that knowledge acquired in this nursing theory course is consistent whether obtained by group assignments or with independent work, and use of an online format was successful for group assignments. Participants in this study successfully obtained the theoretical knowledge necessary to matriculate to subsequent courses and to correctly answer theory-related

questions on APN certification tests. The results of the statistical analysis failed to identify any particular group, defined by age, educational tract, previous coursework, or participation in group work, which impacted the survey results.

Table 1. *Participant Demographics*

Enrollment Status	Full-time = 4 (17%) Part-time = 19 (83%)
Current Enrollment	3-5 Credit Hours = 2 (9%) 6-8 credit hours = 17 (74%) 9 or more Credit Hours = 4 (17%)
Prior Course Completion	6 Credit hours = 10 (44%) 9 Credit Hours = 7 (30%) 12 Credit Hours = 2 (9%) 15 Credit Hours = 2 (9%) 20 Credit Hours = 2 (9%)
Baccalaureate Graduation	1994-2003 = 12 (52%) 2004 = 4 (17%) 2007 = 4 (17%) 2008 = 3 (13%)
Participation in Group Work	Yes = 16 (70%) No = 7 (30%)
Correct Survey Responses	100% = 13 (57%) 90% = 4 (17%) 80% = 3 (13%) 70% = 3 (13%)

Results from this study indicate that course assignments may be completed using a group work teaching method, without impacting learning outcomes. The ability to complete an assignment within a group work setting is an important skill for nurses with master's degrees. Most healthcare setting are multidisciplinary, thus the ability to work with others, negotiate, and collaborate toward a unified goal is desired. In fact, The IOM (2011) cites the need for collaborative and cooperative partnerships as a cultural change vital to improving patient care.

As educators, including group assignments into course requirements compels students to work together, negotiate workload, deal with the unenthused or disengaged peers, and develop a product (course assignment) within a stated timeline. These skills, in addition to theory knowledge, will allow all of us to receive timely, cost effective, and appropriate care.

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