Integration of Andragogy into Preceptorship

Katherine Leigh, Kelli Whitted, Bernita Hamilton, & Shellye Vardaman

Abstract

Return of registered nurses to school dictates that mobility programs integrate principles and design elements of adult learning theory. The Decisional Matrix for Preceptorship Experiences (DMPE) was designed to support mutual needs assessment and identification of individualized clinical learning activities. Using the Andragogy in Practice Inventory (API), this project evaluated the extent to which the DMPE reflected the principles and design elements of andragogy in the final preceptorship experience in the RN-BSN program. Participants' ratings on the API supports that the DMPE was reflective of adult learning principles and design elements. Key course indicators support effectiveness of the DMPE.

The Institute of Medicine (IOM) brought to the forefront of nursing practice and education the need to increase the number of baccalaureate-prepared (BSN) nurses by 2020, with 80 percent of the nursing workforce educated at the BSN level (IOM, 2011). With this recommendation, the need to provide a seamless transition for associate degree nurses caused educational mobility programs to consider teaching strategies that encourage adult learners to further their education. According to the American Association of Colleges of Nursing (1998), educational mobility is the process by which individuals obtain additional knowledge and/or skills through either formal or informal education.

Registered nurses (RNs) returning to school enter with all the needs and requirements of the adult learner. For faculty, it is imperative that key concepts of andragogy be incorporated into learning activities. Adult learning theories, specifically andragogy, posit that the instructor act as a guide in the learning

process and encourages student participation through the connection of their own experiences to the content (McGrath, 2009). As RNs, these learners possess varying levels of experiential knowledge when they enter mobility programs.

Andragogy, an adult learning theory by Malcolm Knowles (1973, 1984), is based on four assumptions: self-concept, adult learner experience, readiness to learn, orientation to learning, and motivation to learn. These assumptions suggest that learning needs of adults vary from those of children and even traditional college-aged students in educational situations. In addition, andragogical process design elements need to be integrated into the curriculum for adult learners. These design elements include (a) preparing the learning, (b) offering a mutually respectful climate, (c) mutual planning [by learners and facilitators], (d) mutual assessment of needs, (e) mutual negotiation of learning objectives, (f) designing learning plans that involve learning

contracts and projects, (g) learning inquiry and independent study projects, and (h) evaluation through evidence (Knowles, Holton & Swanson, 2011).

Aim/Purpose

In response to feedback from students, the Decisional Matrix for Preceptorship Experiences (DMPE) was developed as a tool to incorporate the design elements from Knowles' (1973, 1984) theory. It was determined that a mutual assessment of needs and development of individualized learning plans were lacking. For example, post-licensure students did not require placement in a critical care area if they had previous work experience there. However, the student may have additional needs in which the instructor was unaware. Through mutual needs assessment, individualized learning projects and contracts have been developed to meet course learning outcomes and student needs. This research discusses the use of the DMPE for facilitating clinical learning experiences for adult learners in a post-licensure educational mobility program (RN-BSN).

The DMPE was developed by faculty in the RN-BSN program. In keeping with Knowles' (1973, 1984) adult learning principles, learning activities were chosen to include adult students' prior experiences. In addition, faculty felt that adult learners were more apt to be interested in learning activities that were relevant or had an impact to their work or personal life. By including the adult learners in the selection of their learning activities, it promoted student involvement in both the planning and evaluation of their learning.

Background

Faculty in RN-BSN programs share the common goal of developing knowledgeable and skilled graduates who are pleased with their education while ensuring that course outcomes are met or exceeded (Phillips & Vinten, 2010; Steiner, Hewett, Floyd, Lewis, & Walker, 2010). Research has shown that adult learners benefit from being active participants in their learning process. Faculty should offer adult learners the chance to become actively involved in their educational experiences and should encourage them to become self-directed learners (Chan, 2010;

Johnson-Farmer & Frenn, 2009; & Steiner et al., 2010).

Learner-centered methods facilitate learning by adults. The learner-focused approach should apply to program development, training strategies, and student evaluations (Steiner et al., 2010). Innovative teaching strategies such as reflection, self-awareness, self-direction, and self-evaluation can be utilized to accomplish this. Nursing faculty are encouraged to stimulate and support students by utilizing methods developed with each student's past experience and current learning needs (Phillips & Vinten, 2010; Taylor & Kroth, 2009). The role of faculty is changing from being a source of information to a facilitator of learning. Faculty are beginning to partner with adult learners and move into facilitative roles (Phillips & Vinten, 2010; Taylor & Kroth, 2009; Johnson-Farmer & Frenn, 2009).

Educational technology has transformed faculty's capability of facilitating nursing competencies with the use of online learning. Online educational programs in healthcare have provided positive educational learning experiences (Gerkin, Taylor, & Weatherby, 2009). Faculty in such formats have also been referred to as facilitators of learning. In online learning, faculty must support the student and assist each student individually in determining the most suitable pathway for that student (Steiner et al., 2010).

The learner centered approach is applicable to distance education in nursing, as well. This approach builds on the learner's existing knowledge formulated by academic and work experiences. The relationship between the faculty and the adult learner should be one in which faculty guide students and allow options to meet student's individualized needs to enhance their distance education program. The faculty and the adult learner share responsibility of the learning process by allowing the students to choose their learning activities (Bergstrom, 2010).

The best-known concept of adult learning and possibly the most commonly practiced theory of adult education is andragogy. This theory defines the importance of developing a learning experience tailored to adult learners (Holton et al., 2009). The theory of andragogy has been shown to address the distinctive needs of adult learners by advocating communication between faculty and learner. The philosophies of andragogy stimulate trust between faculty and learner and also increase self-awareness in

adult learner. When andragogical principles are applied, faculty and adult learner become partners in formulating course content and methods to meet the adult learners' needs (Chan, 2010).

McGrath (2009) identified andragogy as the most learner-centered method in adult education. The andragogical philosophy requires that faculty form a relationship with the learner allowing discussion and involvement. Evaluation methods are collaboratively agreed upon by both parties with the learner having accountability for their learning (Holton et al., 2009). Due to the fact that adult learners possess more knowledge, skills, and beliefs, the faculty may assume the role of facilitator and not instiller of knowledge (Taylor & Kroth, 2009).

The basic principles of andragogy inform educators how to effectively change adult education from a teacher-centered approach to a learner-centered approach. These principles of adult learning define how faculty can effectively impact their students. In all areas such as students' learning needs, curriculum design, course delivery, and student assessment the focus is a learner-centered approach (Holton et al., 2009).

The design elements of andragogy guide learning activities that occur before, during, and after the adult learning experience. Learning activities grounded in the process design elements are crucial to adult education. The andragogical principles and process design elements have proven useful in all stages of formal learning and have extended outside traditional learning to specialized learning including nursing (Holton et al., 2009).

The Andragogical Practices Inventory (API) was created to measure learner satisfaction and evidence of learning with andragogical teaching approaches. Modified in 2010, the API examines the progression of andragogy and how it can influence learning outcomes. The tool was found instrumental in evaluating if learners perceived that principles and design elements of andragogy were evident in learning experiences (Holton et al., 2009). This tool was used with permission of the authors.

Methodology

DMPE is a pathway designed to customize student's clinical experience and facilitate achievement of course learning outcomes. The purpose of the pilot project was to measure the extent to which the DMPE reflected the principles and design elements of andragogy in Advanced Nursing Theory Practicum, the last practicum course in the curriculum, and facilitated achievement of course student learning outcomes.

Sample

After approval by the university institutional review board, the convenience sample used in the study included RN-BSN students enrolled in their senior level practicum course in the program.

Procedure

Preparation for the practicum experience. A preceptorship model is used for guiding clinical experiences in Advanced Nursing Theory Practicum. In preparation for the preceptorship, students were sent information in the preceding semester about selection of preceptors and clinical areas, and assessment and identification of individual learning experiences. As shown in Figure 1, students completed a preceptor information form and the DMPE instrument. Completion of the DMPE instrument facilitated the students' participation in selection of a variety of learning activities in order to meet specific objectives and course learning outcomes.

Figure 1
Decisional Matrix for Preceptorship Experiences

Decisional Matrix for Preceptorship Experience in an RN to BSN Program

Matrix Entry Levels
(select your entry level and describe your areas of experience and the different roles that you have performed in that area)

◯ **Beginner:** new nurse with <2 year experience
Areas of Experience and Role:

◯ **Moderate experience:** nurse with 2-5 years of experience
Areas of Experience and Role:

◯ **Highest experience:** >5 years of experience
Areas of Experience and Role:

Selected Area of Preceptorship of Complex Care
(select an area of Preceptorship of interest to you and an area that will provide you with the opportunity to expand your knowledge)

◯ Inpatient setting	◯ Outpatient setting
◯ Provider of Care (Staff Nurse)	◯ Provider of Care (Staff Nurse)
◯ Coordinator of Care	◯ Coordinator of Care
◯ Manager of Care	◯ Manager of Care
◯ Direct Provider of Care	◯ Direct Provider of Care
◯ Indirect Provider of Care	◯ Indirect Provider of Care
◯ Other:	◯ Other:
◯ Long-term care	◯ Other Specialty Area-Location:
◯ Provider of Care (Staff Nurse)	◯ Provider of Care (Staff Nurse)
◯ Coordinator of Care	◯ Coordinator of Care
◯ Manager of Care	◯ Manager of Care
◯ Direct Provider of Care	◯ Direct Provider of Care
◯ Indirect Provider of Care	◯ Indirect Provider of Care
◯ Other:	◯ Other:

Facility:	Department:
Address:	Contact Number:
Preceptor Name:	Preceptor's Title:
Email:	

Student Name:
Conference Date Scheduled:
Campus and Faculty Assigned:
Contact Number:

Completion of the DMPE. The administration of the DMPE instrument consisted of four essential steps: (1) faculty distribution of the instrument to the student, (2) student completion of the DMPE orientation module, (3) student completion of the matrix and return to faculty by the designated date, and (4) faculty and student collaboration, either by conference call or in person meeting, to finalize the selection process of learning activities.

The first step of the DMPE was the distribution

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of the instrument to students the semester prior to their enrollment in Advanced Nursing Theory Practicum. Students received an email with the Preceptor Information Form and the DMPE Instrument. Students received instructions to view an orientation module for the DMPE instrument in Blackboard Learning System under the RN-BSN

Track Orientation.

In the next step, students viewed the DMPE orientation, which consisted of a voice over power point presentation explaining the essential components of the instrument.

The third step involved completion of the DMPE and return to faculty by the designated date. Completion of the DMPE required students to self-reflect on previous nursing experiences related to the course learning outcomes. The individualized agreement provided the student with specific opportunities to guide their preceptorship experience. As shown in Figure 2, specific objectives and learning activities were developed and matched with course learning outcomes to provide a richer experience and to meet individual student needs.

Figure 2

Example Course Learning Outcome

For example, students were given five activities to select to meet one of the outcomes of applying theoretical models and principles of evidence-based practice to professional nursing care. Options included the following assignments:

- apply the PICO acronym to specific questions from the clinical setting

- appraise one clinical practice guideline (CPG) using an established instrument for critique of CPG (e.g., AGREE instrument)
- read/review a systematic review relative to the clinical setting
- describe an organized approach used to achieve performance improvement in the clinical setting (e.g., Plan, Do, Study, Act (PDSA))

- complete a module on the Institute of Medicine (IOM's) framework for improving quality in health care settings.

Students selected a minimum of one activity per outcome but were not limited on the number of assignments to select. Some activities included travel abroad opportunities which provided students with a global perspective about health and nursing care. The study abroad experience facilitated student achievement of the course learning outcome related to demonstrating the role of the nurse in meeting the complex, multi-system health needs in a socially and culturally diverse global society. Also, the study abroad experience allowed students to interpret research and current evidence for improvement of health states through scholarly presentation to international peers. The DMPE encompassed certain activities such as the Budget Paper and Change/Collegiality Paper that were designated as required.

The fourth step of the DMPE was the collaboration between student and faculty. Students were required to schedule dates and times of meetings either by phone or in person to discuss the DMPE and selection of learning activities. Faculty reinforced the expectations of preceptorship experience and the purpose of the DMPE. Students were encouraged throughout the preceptorship experience, to explore a variety of clinical opportunities that were of interest to them and that would meet the course learning outcomes. Students were allowed to revise the DMPE and add other activities to meet course learning outcomes.

Upon completion of the individualized learning activities, students were required to address each activity and learning outcome in their course journal. Graded assignments and final clinical journals were used to evaluate the extent to which student learning outcomes were met. Students were also required to complete course evaluations. Refinement of the DMPE was based on student and faculty feedback.

Instrument

The API, version 2, (Holton & Bates, 2010) was administered to evaluate the extent to which andragogy occurred with each student. The revised API is a 60-item instrument that took approximately 15 minutes to complete. This instrument consists of a series of self-report questions, rated on a five-point Likert scale with 1 being strongly agree and 5 being strongly disagree that assessed adult learning principles and design elements. Students were given the option to complete the survey. Completion of the API constituted informed consent. An agreement was entered and permission was granted for use of the API in this study.

Results

Review of faculty evaluations of student performance outcomes yielded summary findings for achievement of course learning outcomes. Results support that students exceeded the standard for successful performance of each learning outcome prior to and after implementation of the DMPE in Advanced Nursing Theory Practicum. Overall achievement of course student learning outcomes were determined by student performance on the Clinical Evaluation Tool (90% receive satisfactory ratings or higher), Clinical Journal (80% score 74 or above), Change Paper (80% score 74 or above), and Budget/Staffing Paper (80% score 74 or above). Prior to implementation of the DMPE, students demonstrated a 94.4% (n=32) overall achievement of course learning outcomes. Subsequent evaluations following implementation of the DMPE supports a higher level of overall achievement of course student learning outcomes with 99.2% (n=25) and 98.3% (n=42) in 2012 and 2013, respectively. Course evaluations revealed positive feedback from students about the DMPE implementation in the final clinical experience of the RN-BSN program.

In spring 2013, 23 students completed the API via Survey Monkey. Mean scores for the Andragogical Principles Scales and the Andragogical Design Elements Scales and Cronbach's alphas were computed by the instrument author and returned to the researchers.

Using SPSS version 19, further analysis included mean and frequency scores for individual items on the API and summary description of the sample.

Students participating in the evaluation of the DMPE were over the age of 25 (n=22, 95.6%), female (n=19, 82.6%), African American (n=8, 34.8%) or Caucasian (n=13, 56.5%).

Mean scores for the six Andragogical Principles Scales are shown in Table 1. The lower the mean score, the stronger the agreement that faculty and the course facilitated student learning based on principles of andragogy. Findings indicate agreement/strong agreement that andragogical principles were evident in the implementation of the DMPE.

Cronbach's alphas for the Andragogical Principles Scales reflect strong internal consistency of the instrument. As shown in Table 1, Cronbach's alphas ranged from .91 to .96.

Table 1
Mean Scores for Andragogical Principles Scales

Scale	N	Minimum	Maximum	Mean	SD	Cronbach's Alpha
Readiness to Learn	23	1.00	4.00	2.130	.832	.91
Orientation to Learning	23	1.00	5.00	1.946	.872	.93
Self-Directed Learning	23	1.00	4.60	1.878	.760	.92
Need to Know	23	1.00	4.25	1.837	.763	.92
Intrinsic Motivators to Learn	23	1.00	4.25	1.815	.755	.92
Prior Experience	23	1.00	5.00	1.739	.828	.96

Mean scores for the eight process design elements of andragogy are shown in Table 2. Again, a lower mean score is indicative of strong agreement or agreement that the design element was incorporated into the DMPE and the course. With exception of Learning Activities, all andragogical design elements reflect ratings of agreement. One item related to learning activities was negatively worded "learning activities required little action on my part".

Prior to recoding, the item had a mean score of 3.22 (n=23, SD 1.38) indicating disagreement with the statement. In contrast, another item "learning activities required my full and active participation" had a mean score of 1.78 (n=23, SD .998). Cronbach's alphas for the Andragogical Design Elements Scales ranged from .62 to .96, indicating moderate to strong internal consistency.

Table 2
Mean Scores for Andragogical Design Elements Scales

Scale	N	Minimum	Maximum	Mean	SD	Cronbach's Alpha
Learning Activities	23	1.00	3.80	2.313	.679	.62
Mutual Planning	23	1.00	4.25	2.054	.819	.89
Preparing the Learner	23	1.00	4.60	2.026	.830	.96
Diagnosis of Learning Needs	23	1.00	4.50	2.011	.931	.95
Climate/Setting	23	1.00	4.67	1.985	.883	.96
Design Learning Experience	23	1.00	4.00	1.978	.849	.94
Setting Objectives	23	1.00	3.60	1.904	.772	.91
Evaluation	23	1.00	4.00	1.899	.677	.74

Mean scores and frequencies for the 60 items on the API were reviewed. Mean ratings for items ranged from 1.57 to 3.22. Forty-eight items were rated 2 or less indicating agreement or strong agreement that DMPE reflected principles and design elements of andragogy. Consistent with adult learning theory, participants reported responsibility for own learning (m=1.57, SD .896, n=23), role in own learning (m=1.78 SD .850), prior life and work experiences helped learning (m=1.74, SD .864), learn because of the inner fulfillment (m=1.65, SD .714), knowledge gained in this learning experience has immediate application to my life or work (m=1.83, SD .869). Two items received ratings greater than 3. Participants indicated disagreement that faculty relied heavily on lecture (m=3.26, SD 1.176) and learning activities required little action of the part of the learner (m=3.22, SD 1.380).

Limitations

The evaluation of the effectiveness of the API is limited by small sample size and convenience sampling of participants. Twenty-three of 42 students participated. Perceptions of those who participated may not be representative of the students as a whole.

The small sample did not allow continued factor analysis of version 2 of the API instrument at this

time. One item of the API was not applicable to adult learners in a practicum learning experience. The item asked the participant to rate the instructors' reliance on lecture. Lecture is not a common teaching strategy in a practicum-focused nursing course.

Conclusions

This pilot study provided insight into the effectiveness of a decisional matrix for assisting adult learners with development of appropriate clinical learning activities for achievement of course outcomes. RNs bring varied personal and professional experiences to the academic setting when pursing advanced degrees. These adult learners are goal-oriented and seek purposeful learning experiences to achieve outcomes for advanced preparation and advance their knowledge and skills in their professional roles. Moreover, the DMPE offers an innovative approach for mutual assessment and diagnosis of learning needs, mutual planning and design of meaningful objectives and learning experiences, and evaluation of achievement of individual objectives and course learning outcomes. The DMPE is a valuable tool for facilitating students input into their own learning.

Student performance supports that the DMPE

was effective in creating an individualized approach for the adult learner and facilitating achievement of course learning outcomes. Key course indicators of student performance validated achievement of learning outcomes. Moreover, participants' rating of items on the API supports that the DMPE was reflective of adult learning principles and design elements important for RN-BSN students.

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Katherine Leigh is an Assistant Professor at Troy University. She joined Troy University in 2010 after nearly five years of service at Chipola College. With over seventeen year of nursing experience, she teaches in the RN to BSN program for the School of Nursing. She received her Doctorate of Nursing Practice from University of South Alabama in 2010, her Master of Science in Nursing from University of South Alabama in 2006, her Bachelor of Science in Nursing from Florida State University in 2000, and her Associate in Science at Chipola Jr. College in 1998.

Kelli Whitted is an Assistant Professor at Troy University in the Graduate School of Nursing. She joined Troy University full time in 2011 after nearly two years of serving as adjunct clinical faculty. With over twenty one years of nursing experience, she teaches in the FNP program for the School of Nursing. She received her Doctorate of Nursing Practice from Troy University in 2011, her Master of Science in Nursing from Troy University in 2001, and her Bachelor of Science in Nursing from Georgia College and State University in 1994.

Bernita Hamilton is a Professor at Troy University.   With 39 years of experience in nursing, nursing education, and nursing administration, she currently teaches in the master's and doctor of nursing practice programs. In 1997, she earned a PhD in Nursing from Georgia Regents University. She completed a Master's of Science in Nursing in 1979 and a Bachelor of Science in Nursing in 1976 from the University of Alabama at Birmingham.

Shellye Vardaman is an Associate Professor and Coordinator of the RN-BSN/MSN track at Troy University. She has over twelve years of teaching experience in nursing education in various programs (BSN, RN-BSN, MSN, and DNP). Dr. Vardaman is a Certified Nurse Educator from the National League for Nursing. She earned her PhD in Nursing from The University of Texas at Tyler in 2011, MS in Nursing in Adult Health Education from Troy State University in 2003, and BS in Nursing from The University of Alabama in 1996.