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Active Learning in Nursing Education

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Abstract

ALINE is a pedagogical model developed to aid nursing faculty transition from passive to active learning. Based on constructionist theory, ALINE serves as a tool for organizing curriculum for online and classroom based interaction and permits positioning the student as the active player and the instructor, the facilitator to nursing competency.

Most faculty members agree the internet has irrevocably changed learning. A survey of programs accredited by The National League for Nursing Accrediting Commission showed institutions respondinghad or planned to ad d distance education classes. (1). Draves (2) has estimated online learning will make up 50% of all learning opportunities and formal education offerings in the first half of the 21st century. Now that computers are integrated into the teaching environment, faculties giving token effort to instructional technology are at risk of losing promising students to other schools.

An Online Pedagogical Model

The trend of student demands is shifting learning from the professor imparting knowledge to the professor interacting with the student in a more learner centered environment. (3) Experience has shown taking existing didactic instruction and presenting it via computer technology does not work. To provide quality instruction requires transitioning to a different pedagogical approach, one where didactic instruction coexists with relevant learning experiences based on recognized nursing competencies.

To aid in this transition, an instructional technology model, ALINE, was developed to serve as a guide for implementing active learning in nursing education. ALINE becomes a tool for changing instruction from instructor-based to learner-centered. The model supports current instructional best practices and is built upon familiar instructional elements. ALINE allows looking at instructional delivery as follows

- *A*ction-based - Students are actively engaged in the learning experience.
- *L*earner centered - The action shifts from the teacher to the student.
- *I*nteractive- Students interact to gain competency.
- *N*ursing competency oriented - Skills build on each other for retention over time.
- *E*valuative - Students are continuously involved in performance assessment.

Collectively, these elements are building blocks for on-line instruction. The relationship among the elements is shown in Figure 1. Interactivity is the common element for activities conducted in a learner-centered environment. This interactivity promotes learning and retention of nursing competencies, especially when student evaluative and instructional feedback are part of the learning experience.

Model Rationale

The model was developed in the belief that learning online is different than learning in a classroom. Students are encountering a new kind of classroom, one that includes having a language and a skill-set above and beyond what is required for learning the course's content. An important difference is the student can interact with the learning medium in learner-centered activities which promote active learning. This interaction can be

accomplished through individual or collaborative actions on tasks directly related to developing relevant nursing competencies. Research supporting the model with examples from current literature are summarized as follows:

Action

Dodge (4) recently remarked that active learning has been demonstrated since Socrates. Most educators agree active learning is more than students listening to a lecture. Active learning compels students to participate in the learning experience byperform ing some action. The learning activity defines these actions, which may be to listen, read, consider, relate to, discuss, write about and perhaps even evaluate. The Adams Center for Teaching Excellence at Abilene Christian University extends this definition even further by stating active learning is a multi-directional experience. (5) Student actions denote interactivity, and this interactivity is between teacher and student, student to student or simply student to computer program.

The widespread use of computer-based instruction in the 1980s permitted students to become more actively involved in the learning experience. Opportunities for participating in the learning experience have become greatly sophisticated, promoting active and even virtual learning. Felder and Brent (6) note that although a lotis known about how students learn, little of this learning occurs in classroom lectures. They argue thatgiven you have students for approximately 40 contact hours, why not make learning active? In this way, students try or consider something and are apt to use higher thinking skills than they use in simply listening or reading. Bonwell and Eison (7) believe that thinking about

what they are doing lets students use higher order thinking skills such as critical thinking, idea synthesis, and concept evaluation.

Classroom dialogue, online threaded discussions, and e-mail are common examples of action-based learning techniques. Other activities illustrative of student action activities are journal writing, student debates, peer teaching, student-led case analysis, small group mini research projects, role playing scenarios, simulations and games.

The ALINE model permits repurposing proven content material into learning activities linked to nursing competencies. Active learning specifies actions on the part of the learner. In preparing for active learning, instructors should ask the following:

- Does the course as a whole, and its discrete learning activities and assignments in part, require action on the part of the student?
- Does this action permit students to accomplish the learning objective?
- How will the action be assessed?

Learning Centered

The model embraces a paradigm shift, a shift from instructor led delivery to student-centered participation in the learning experience. In the online classroom, the student is more active and the instructor is more passive than is the rule in traditional teaching. The action shifts to students participating instead of students passively attending. In this scenario, faculty takes on different qualities or characteristics.

As part of her research on learner centered teaching, Wieck (8) studied perceptions of both students and nurse educators to determine qualities each group would find most desirable. Students ranked “approachable” and “good communicator” as the most desired instructor traits. Although “approachable” tied for first place with nurse educators, their most desired trait was “clinical competence,” a trait students did not even identify as one of the top 10 most desired traits. From her research, Wieck concluded new student nurses want instructors they can approach and instruction that is clear and concise.

An aspect of learner-centered instruction supported in literature (9, 10) deals with student learning styles or modalities. This research refers to how students take in, process and organize information. Students do not learn information in the same way. Some students are more visually oriented than others, and some students process information more in depth than others, preferring to synthesize or evaluate information rather than depend on rote memory.

Interaction

Most learner centered activities have interaction at their core. Most likely, all learning models recognize some kind of interaction as a learning requirement. (11) Interaction deals with exchanges among people or people interfacing with a computer-based program. Interactions in the ALINE model occur among students and faculty as student to student, student to faculty, or faculty to student. Zirkin and Sumler (12) noted that the amount of interaction has a direct impact on both student achievement and satisfaction, with more interaction impacting favorably.

Nursing Competencies

Teaching to nursingcompetencies keeps the instructional focu s on the learner. The instructional module's learning objectives delineate the skills and knowledge necessary to achieve competency as well as the criterion by which the competency can be assessed. Curriculum geared to mastery of competencies necessary for quality nursing gives students a sense of accomplishment and sets them up for assessing their progress.

Evaluation

Continuous feedback keeps students informed on their progress. The model stresses that feedback is critical to active learning as it provides a way to correct and reinforce learning for comprehension and retention. Students actively involved in the learning activity are more likely to be involved in the learning assessment. In this way, assessment becomes less of a test and more of constructive feedback, which can take the form of instructor comments, peer reviews, student self-assessment, or computer-based responses.

The ALINE model permits different types of evaluation. Instructors may look for how well the actions permitted mastery of the nursing competencies and whether or not learner-centered activities were valid in meeting the learning objectives. Additionally, instructors are concerned with course quality, raising questions such as "Are the materials accurate and relevant?" and "Were students satisfied with the learning outcomes?"

Theoretical Framework

In developing curriculum, instructional elements should balance between the learning objective and criteria for assessment as well as course access and quality of content. The

challenge to curriculum developers is to maintain the balance and not overbuild on one element to the detriment of another. To achieve sound instructional design, a learning theoretical approach is helpful. According to Bonk and Cunningham (13), one approach to design uses a constructivist paradigm. Drawing on Piaget, cognitive constructivists focus on knowledge constructions learned or discovered in interaction. This approach supports the use of collaborative learning tools for learner center instruction. These tools are useful both in a cognitive and social constructivist framework. The cognitive context permits focus on relevancy of content and building on prior knowledge to develop nursing competencies, and the social aspect builds on the potential for dialogue, group discussion, dynamic negotiation and performance assessment.

In reference to online teaching, Twomey (14) notes that constructivism appears to be a suitable and generally acceptable theoretical framework. In this approach, the learner is the active doer, and the teacher is learning's facilitator. Learning is experiential, focusing on student dialogue rather than the instructor's lecture. In constructivist terms, the students' learning experiences become building blocks which permit students to construct meanings from new knowledge as they develop their nursing competencies.

Online discussed

In 1998, Bennett (15) described probable scenarios in distance education. Briefly, the possibilities ran from a gross reduction of traditional university values and practices in favor of online instructional delivery to a revived interest in pedagogy with innovative classrooms and laboratories brought about by on-going telecommunications

improvements. ALINE accommodates the latter scenario. Advancements in technology permit actions to be learner centered with sufficient interactivity to sustain interest while maintaining instructional quality. The internet provides an almost infinite extension of the library and laboratory for competency development. The ability to give instant feedback enhances the learning experience and allows vast improvement of evaluative criteria.

A national nursing shortage contributes to the pressure to teach online.Some schools ar e developing hybrid courses which combine online and classroom activities. (16) From this perspective, online experiences can take different formats, as seen in video teleconferencing, virtual presentations with synchronous instructor/student interaction, student call in response to internet based live presentation, and online presentations for download and completion.

Learning Activity Example

The basic instructional elements an instructor is likely to consider in developing a nursing curriculum module are the learning objective, the methodology for teaching the objective, and assessment of how well the objective was met. Putting this into the ALINE model, the following questions would be asked:

- What is to be discovered?
- What learning activities permit skill and knowledge development?
- What learner actions support the learning activities?
- What learning styles are best employed?
- What interactions among students and faculty accommodate mastery learning?

- Are the learner-centered activities relevant to the nursing competency?
- How is learning assessed or performance evaluated?

Displaying responses to these questions on a one page layout, such as can be done on a web page, permits designers to visualize the overall instructionaldesign . This one-page layout becomes a planning resource modifiable at need or as new materials and actions are devised. For an example, see the page shown as Figure 2.

As most nursing students encounter ethics at some point in time, the topic “Ethical Decision-making” serves to demonstrate how to organize a learning activity using the ALINE model. Initial planning steps are shown in Table 1. When put into an ALINE framework, the actions required by students are to read an assigned text chapter, find an article in current professional literature which supports their position, and participate in the online discussion with a minimum of two postings. The learner-centered objective is that given an ethical question, students are to take a position and support it with examples from literature. Interaction occurs among the students in threaded onlineresponses and group discussions between students and faculty. The nursing competence addressed is teaching ethical standards to meet the needs of patients while considering ethical implications of scientific advances in adapting practices. Evaluation consists of setting up the grading criterion and monitoring web based discussion.

Summary

Faculties are generally cognizant of the need to move from traditional, instructor-centered curriculum to strategies which capture students' interest. Although most faculties realize learning boundaries have expanded beyond the brick and mortar classroom, not all have made this transition. ALINE was developed to aid this pedagogical shift and to serve as an organizational tool permitting an integrated approach to collaborative and distributed learning. The geriatric nursing faculty at The University of Texas School of Nursing uses ALINE to achieve active learning in the classroom. Currently available are learning activities on ethical considerations, attitudes toward aging, environmental assessment, and executive function in activities of daily living. Persons interested in these active learning modules are invited to visit our website atwww.uthcoa.org .

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