The Utilization of Adult Learning Models to Increase Course Evaluation Scores in a Poorly Evaluated Graduate Level APRN Pharmacology Course

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The Dilemma of Online Coursework

- **The feelings of:**

  - **Separation from peers and instructor**

    - Online learners are often alone, without peers and do not see their instructor during a course

  - **Poor incentive to interact with text/resources**

    - Fulfillment of assignments by skimming and utilizing "short-cut" opportunities

  - **Discussion grades based upon quantity of responses not necessarily quality**

    - Discussion grades based upon number of discussion posts

    - Instructor "polices" for academic rigor

History

- The online Pharmacological Principles of Clinical Therapies N543, a foundational course for Nurse Practitioner students at the UNM College of Nursing, had historically been poorly evaluated by students taking the course. Student IDEA scores were consistently low in all areas measured, and the course was also consistently identified by the UNM College of Nursing faculty as a course in need of significant and urgent improvement.

Theoretical Models Employed

- Bloom's Revised Taxonomy of Learning Domains

- Cognitive (mental skills)

- Affective (growth in self)

- Psychomotor (physical skills)

Revised Cognitive Domains

1. *Remembering:* recall of previous information learned.

2. *Understanding:* comprehension of the meaning, translation, interpolation, and interpretation of specific instructions or problems and ability to rephrase in one's own words.

3. *Applying:* Use of a concept in a new situation, or the unprompted use of abstract thought. The ability to apply classroom ideals in the workplace.

4. *Analyzing:* The ability to separate material and concepts into specific parts and the ability to distinguish between fact and inference.

5. *Evaluating:* The ability to make decisions about the value of specific ideas or materials to their learning environment.

6. *Creating:* The ability to build structure or pattern from diverse elements and put parts into a whole with an emphasis on creating a new meaning or structure

Four Models of Adult Education

- **Pedagogy:** Assumes that the learner needs to acquire certain knowledge or mastery- "empty mug" scenario.

- **Andragogy:** The learner has some experience, still deficit-based- ½ empty mug scenario.

- **Transformation:** The creation of a learning environment for learning and transformation to occur.

- **Appreciation:** Does not focus on new learning, but appreciates and gives voice to existing wisdom, knowledge, and insight. It is an environment co-created by the student.

Intervention

1. Each student was asked to **read the text** in preparation for the course.

2. Each student was assigned a specific drug class/topic to **create a scholarly and informative paper or power point presentation** to engage their peers and facilitate learning.

3. Each student **was assigned a presentation to "respond to"** by teasing out alternative points of view, other therapies, and any other additional information or experience pertaining to the topic offered in a scholarly fashion.

4. **Test questions were derived exclusively from these paired presentations**, which encouraged the students to read and stay abreast of the shared knowledge and ask their peers for clarification when applicable.

5. The **instructors managed this shared learning environment** on the discussion boards, providing additional information, knowledge, resources and/or practice caveats when needed.

Quality Matters as a Course Rubric

- The **Quality Matters Program (QM)** is an international organization representing broad inter-institutional collaboration and a shared understanding of online course quality. QM's quality assurance processes have been developed to improve and certify the design of online and blended courses

Student to Text &

Student to Student

- Students are assigned to **author a research paper or presentation** about a class of medication using the text and current sources.

  – Open Access Online Pharm-textbook with downloadable graphics

  – Current sources include DynaMed, UpToDate, WebMD

    - *Peer reviewed and preceptor modeled resources

- Students ask **five-questions of their peers**, about their research papers using Bloom's Taxonomy of Learning

  – See next slide

- Questions are posted in a discussion forum online.

  – Each of their **peers must respond to one question** and use supporting evidence/citations

Bloom's Cognitive Domain

Bloom's Cognitive Domain

Creating

Evaluating

Analyzing

Applying

Understanding

Remembering

Cognitive Domain
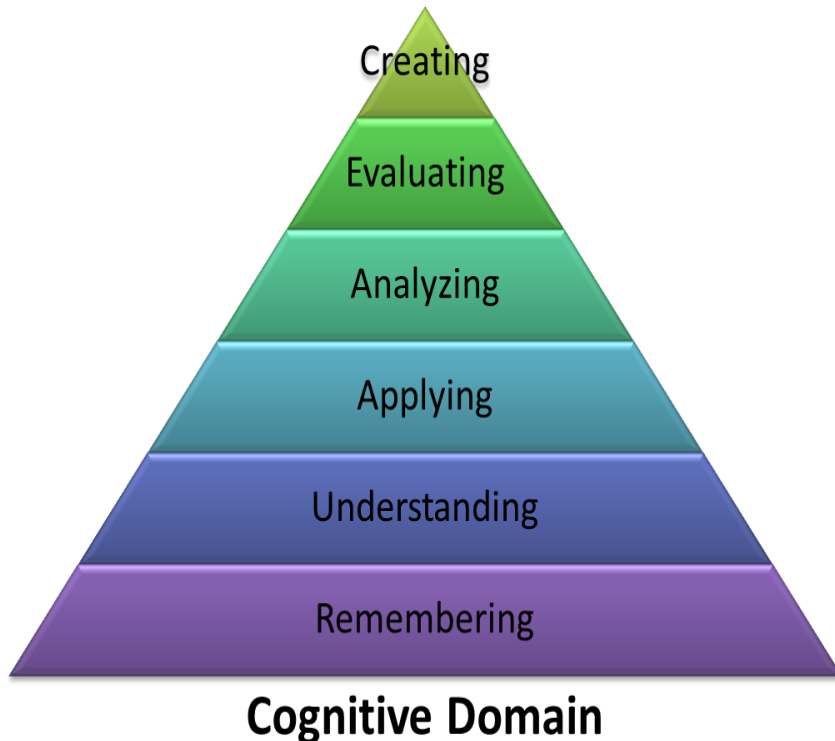
- **Student Author Question for anti-Parasitic medications** *(creating)*:

Jane comes to see you about ongoing flu-like symptoms with cervical lymphadenopathy, conjunctivitis, & photophobia. She was recently diagnosed with HIV. Jane lives alone and has a pet cat. **What is your differential and what actions will you take?**

4 Models of Adult Education-Specifics

- **By creating this environment of:**

- Student **immersion** into the material

- **Scholarly discussion** with peers on the material

- **Assessment** of growth and learning directly from the environment

- The faculty is a **"guide"** vs. a "lecturer"

- These are consistent with

  - **Transformation** learning model- creating a learning environment

  - **Appreciation** learning model- building on knowledge/experience

IDEA Scores- The Data

Adjusted Scores	Progress on relevant objectives	excellent teacher	excellent course	Overall Ratings	summary evaluation
Spring 09	2.7	3.5	1.9	2.7	2.7
Spring 10	3.2	3	2.6	2.8	3
Spring 11	2.2	2.2	1.2	1.7	2
Spring 12	2.1	1.6	1.2	1.4	1.8
Summer 12	2.2	3	2	2.5	2.4
Spring 13	3.6	3.8	2.9	3.3	3.5

**IDEA is a nonprofit organization whose mission is to provide assessment and feedback systems to improve learning in higher education. IDEA supports the evaluation and development of both programs and people. Extensive data collection, research, and feedback from our clients have resulted in continuous enhancement of our services. The emphasis of IDEA always remains on improving teaching, learning, and the higher education process, while remaining true to our Core Values of Integrity, Quality, Collaboration, Service, and Knowledge.

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IDEA Scores- The Data
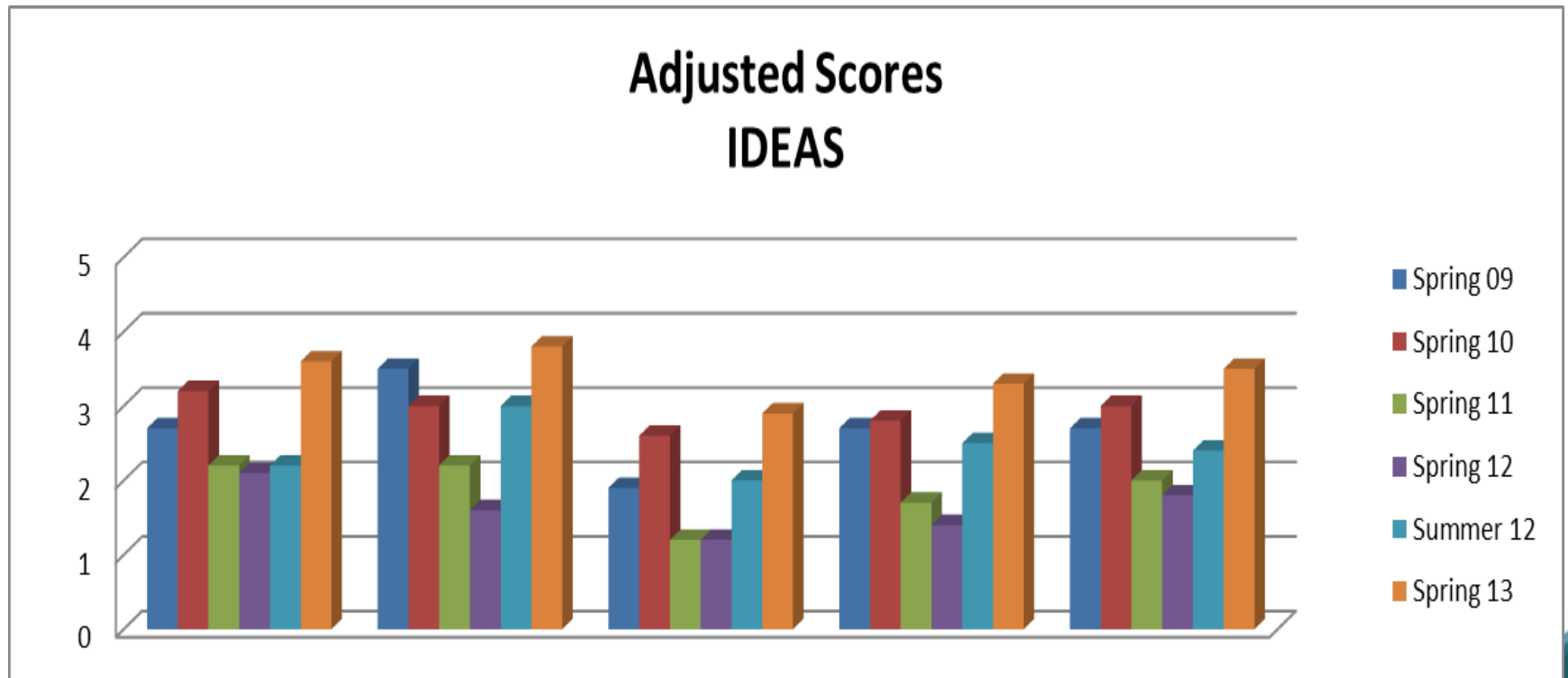
*Scores are valued 0-5, with a population median of n=24

Conclusion

- The methods employed utilized all the domains of Bloom's Revised Taxonomy, specifically **all the Revised Cognitive Domains.**

- The students were asked to **recall** what they had read

- Have sufficient **understanding and comprehension** to **analyze, create and apply** the new information in presentation form

- **Evaluate their peers** in a scholarly fashion

Conclusion

- The methods employed also adequately utilized all four of the Models of Adult Education, specifically **the higher level models of andragogy, transformation, and appreciation** which are **unique to graduate level Advanced Practice Nurses.**

- Although the students in the programs come with a **large amount of knowledge and experience from their Nursing careers**, there is still need for more foundational learning discussed in andragogy.

- The Blackboard Learn discussion board **environment was created and structured for transformation** to occur, and the environment was student co-created by the student population.

- The entire process was **reliant upon the student involvement.**

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"Transition from an undergraduate to a graduate student can be difficult,...You should not only become smarter, but you should develop a greater appreciation for the amount of commitment and hard work required to accomplish worthwhile goals."

References

1. Krathwohl, D. (2002). A revision of Bloom's taxonomy: an overview. *Theory in Practice*, 41(4). Retrieved from:

   http://www.unco.edu/cetl/sir/stating_outcome/documents/Krathwohl.pdf

2. Pawlak, K. & Berquist, W. (2013). Engaging experience and wisdom in a postmodern age. *Four Models of Adult Education*. Retrieved from:

   http://www.psychology.edu/about/four-models-of-adult-education/

3. Russell, S. (2006). An overview of adult learning processes. *Urologic Nursing,* 26(5). 349-352.

4. Cox, B., Cullen, K., & Buskist, W. (2007). Making the transition from undergraduate to graduate student: insights from successful graduate students. *Eye on Psi,* 12(2). 28.

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