

Kirkwood Community College
CASTLE – Nursing
CASE STUDY QUESTIONS
***Pathway to Success* – ADN Critical Thinking and Motivation Project**

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1. What are the important classroom teaching/learning issues in this case?

Questions/Issues - What and Why?

The Kirkwood Community College Nursing Program for RN is built upon a two semester PN program. The courses in the RN program and utilized for this project are Intro to AD Nursing, AD I, AD II and AD III. These students are in the day program which consists of face-to-face classes ranging in size from 56 to 35. The general outcome for the students is an ability to practice nursing at a safe level in many clinical contexts. This outcome includes abilities to assess, diagnose, plan, intervene with and evaluate a client's progress along the wellness-illness continuum. After graduation from the program, the student must take a national board exam to gain licensure to practice as a Registered Nurse.

The ability to diagnose, plan and evaluate after intervention takes high levels of cognition by Bloom's taxonomy: analysis and synthesis.

The primary goal of this project is to improve the board pass rates for the RN graduates. One of the major issues is the steep transition that students face from the PN level to the Associate Degree level. Here at Kirkwood we have 95-100% of practical nurses passing the board licensure exam, while the RN passing rates have been, by quarter, varying from 74%-95%. Nurse Educators have listened in these past five to eight years to the mantra, that critical thinking must be a theme within the curriculum, (in-services focused for nurse educators we have heard to ask high level questions at the analysis and synthesis level to prepare them for the board experience). Historical analysis of reading, writing, and math scores for entry level students has reached conclusions that all students should be granted access to this program. After reading material in the CASTLE project, this team discussed critical thinking and motivation as two variables that might be influenced by faculty interventions within the curriculum. This could promote greater success for more students in their practice and in their board examinations.

The CREOLE meta-goals that captured our attention as relevant to this educational context are:

Goal 3: develop the ability to think critically and Goal 4: Become motivated to succeed. As a result the team came up with two questions as a basis for this project :

A) Can critical thinking be taught?

Critical thinking skills are widely accepted as necessary in nursing education and practice. Critical thinking has been defined many ways. “Critical thinking is disciplined, self-directed thinking that exemplifies the perfections of thinking and displays mastery of intellectual skills and abilities;” (Paul, 1990). Giving critical thinking a definition is less important than creating and maintaining a habit of critical thinking. Paul discusses “traits of mind” or attitudes, also known as affective states, needed for critical thinking: humility, courage, empathy, integrity, perseverance, faith in reason, and a sense of justice. These attitudes are used during the use of the skills: inductive and deductive reasoning, reflection, creativity, clarification, and basic support (Paul 1990 and Wilkonson 1996). The RN program has taken Wilkonson’s (1996) work on the reasoning a nurse uses in making nursing diagnoses and care planning.

Bloom (1956) defines critical thinking as “a problem solving method involving analyzing and clarifying problems, judging evidence and values, working with assumptions, making inferences and justifying a valid solution.” Kirkwood RN Nursing Education Team identifies with this definition strongly because Registered Nurses are legally required to create and document a valid plan for movement of a client toward wellness from illness. This requires all of Bloom’s definition. NCLEX like questions are the measure of development of critical thinking skills that students must perform upon to receive licensure. In our framework we identify this as “Nursing Logic”, a term Learning System for Registered Nurses (LSRN)(Meds Publishing) uses.

Bloom’s early hypothesis was that all students are able to learn. The differences in achievement are more attributable to educational strategies than to genetic differences. Learners could be taught and consistently remediated until there is mastery of all relevant learning outcomes. Remediation is planned and expected.

This framework fits well in Kirkwood Community College’s philosophy. Criterion referenced assessment is used for progression in the AD Nursing Program. The criterion provide a standard for comparison of a student’s ability to use “Nursing Logic”.

B) Can faculty influence motivation?

While motivation is a complex construct, definitions of motivation generally include extrinsic and intrinsic factors. Extrinsic factors drive someone to perform for the achievement of a reward or compensation. Intrinsic factors drive people to perform simply due to interest and internal satisfaction. The CREOLE materials suggest that there are research supported educational strategies that guide faculty to motivate students. While an individual may have high internal motivation there may be external barriers that prevent them from achieving success (Winn, S. 2002). There will be factors that will influence a student’s motivation that are outside the control of the faculty.

These factors include, but are not limited to, family, career and social responsibilities, time, money, lack of child care, scheduling problems, transportation issues, and lack of self-confidence.

2. What teaching/learning strategies might be helpful? – How and Why?

A. Assess/measure motivation in class

The students in AD I were given/will be given a 12 question self assessment of engagement in school, effort in the classroom, and the value of learning and RN education. They ranked the statements on a scale of very true to somewhat true to not at all true. See attachment A.

This was modified from Hardre' and Reeve, Journal of Educational Psychology Vol. 95, 2, 347-356, 2003 . This tool will be used for every class in the day program from Spring 2005 through December 2005

These educators wanted to gain information about the students motivation. We had the belief ahead of this assessment that the students were not motivated to complete the required course readings and assignments.

B. Present and practice a critical thinking method

This team synthesized a Power Point presentation entitled “Pathways to Success” (attachment C) that was presented by the team to the Spring 2005 AD Nursing I cohort. Key parts of that presentation are: professionalism, preparation for test-taking, strategies for test-taking and practice test-taking. In addition, concepts addressed are stress management, using Nursing Logic and readiness to learn. We present this to set the stage for our interventions of teaching critical thinking and motivating. This Pathway will be given to every class through December 2005. It was altered in May 2005 after the first delivery for improvement.

“Nurse Logic”.

Kirkwood Community College purchased the LSRN (Learning System for Registered Nursing). This e-learning package is grounded in the NCLEX (national Council Licensure Examinations) test plan. NCLEX test plan is used to test graduates of the program for licensure within a state. Recently, MEDS PUB has added a five part program that introduces the student to “Nurse Logic”. There are five areas that receive emphasis for the student: Critical reading, strategy techniques, nursing guidelines, alternative item formats and prioritizing. We asked the students in the Spring, day program Intro to ADN Class (first cohort) to complete these modules and to use the suggested logic in their dialogue in the classroom and on exams for the course. They also took Final # 1 from this e-program as a baseline in their ability to use Nurse Logic on nursing tests. Final # 1 and Final # 2 (to be used for post test) were selected because of the reasonable match between the three tables of specification (classroom (1) and LSRN (2)). Each final covers content organized by: communication, health promotion, health maintenance, management, medical – surgical, pediatric, pharmacologic, psychiatric, safe environment, and women’s health. In addition, each final is organized by nursing process: assessment, diagnosis, planning, implementation and evaluation. All questions are at application level and higher on Bloom’s taxonomy.

C. Nelson (1989) and Kloss (1994) suggest some behaviors educators might use to encourage development of critical thinking skills. The following seemed reasonable to include in the nursing classrooms: query students in a socially acceptable way to identify their evidence for their point of view, encourage them to compare and contrast the advantages and disadvantages of a point of view. Ask them to analyze for differences in ideas and support their point of view with concrete examples. In addition, create opportunities for exchange of comments among groups of students. (Module 1, Chapter 4 page 9/10) .

Table of specification for assessment on Critical Thinking as measured in use of Nurse Logic

BY CONTENT	Final # 1	Final # 4	Course
Communication	7%	2%	
Health Promotion, Health Maintenance	6%	4%	
Management	8%	8%	
Medical-surgical	22%	38%	
Pediatric	13%	11%	
Pharmacologic	19%	8%	
Psychiatric	9%	8%	
Safe, effective environment	8%	8%	
Women’s Health	8%	8%	
By NURSING PROCESS			
Assessment	14%	19%	
Analysis/Diagnosis	20%	30%	
Planning	17%	15%	
Implementation	33%	27%	
Evaluation	16%	9%	

A) Motivate students by:

This team of faculty agreed to a one page document (see attachment B) that was a potpourri of strategies pulled from Module 2 Chapter 3 of the Creole materials from Florida Community College. Faculty read this list prior to teaching a class on a weekly to bi-weekly basis to assist in the conscious use of motivational techniques.

3. What learning theories might support or inform these teaching/learning strategies?

- 1) Knowles – module 2, Chapter 1
- 2) Brookfield – module 2, Chapter 1
- 3) Mezirow
- 4) Kitchener, King, Wood, & Davidson
- 5) Bloom

Knowles (The Adult Learner A Neglected Species, 1992) developed the theory of adult learning. He noted that adults have special needs as learners and they have a tendency toward self-directedness. Knowles also identified that their experience forms the basis for the learning process. Mature students want and constitute a thrust in the direction of self-determination. They bring a strong sense of independence even though they may need and want help in certain positions and contexts. They have gathered their experiences to this part of life and these frame their intentions as a focus for learning. They are motivated by what is most useful to them in their work.

Mezirow (1990) and Cranton (1994) support that practical application is important and describe a theory of “transformative learning”. The adult learner must understand the bearing of the new information in their life/profession. A student’s learning is built upon their mirror image and interpretation of their own experiences, beliefs, and assumptions. They need support in written and oral discussion which assists them to reflect on their past and present experiences. “Adults encounter disorienting dilemmas which lead them to critically evaluate distortions in their knowledge base, technical, practical and self-knowledge” (Mezirow, 1990 & Cranton, 1994). These students need to be shown respect and appreciation in learning situations.

Brookfield (1995) asserted that a collaboration between teacher and student needed to occur. Within this relationship the learner must be respected for their past experiences, current knowledge level and current needs. Teachers need to explore ways that the teaching is being perceived by students. Teachers and learners need to stay open to confronting assumptions. Within the partnership, discussion must be held about course changes. He described a type of reasoning in adults: situational (page 221). It does not always stay congruent with formal logic, this reasoning is, rather, sensitive to the context and personal, eccentric applications.

4. What questions or hypotheses does this case raise that might be further investigated in a classroom research project?

Hypothesis before assessment data collected

- 1) When nurses are exposed to “Nursing Logic” then the scores on the post-tests will improve from the pretest.
- 2) When instructors use motivational strategies, critical thinking and motivation will improve.

Questions raised during intervention period/after assessment data collected:

If students are motivated to a sufficient level, but socioeconomic variables present barriers that might prevent success, what is the role of educator in preparing the student for a realistic view of the barriers and the intensity of the program if the student proceeds with extreme barriers present in their life?

5. What classroom assessment data could be collected to test out these questions or hypotheses?

- 1) Pretest (final # 1) and posttests (final # 4) of nursing exams at application level or higher.
- 2) Measure motivation (valuing, engagement and competence) pre and post ADN program.

The pilot group (AD I) of Spring 2005, day program, (N=46) will be compared to themselves at the end of Fall 2005 semester (AD III) in their ability to critically think as evidenced by an improved score (% correct) on Final # 4 of LSRN, as compared to Final # 1. This cohort will have the benefit of two types interventions on critical thinking and one type on motivation throughout their AD program. Pre and Post tests on critical thinking (Nurse Logic) and motivational surveys will be analyzed.

Conclusions: Cohort # 1, 2, 3

Data and analysis of Critical Thinking also known as “Nurse Logic”

Cohort # 1 (Spring 2005)

46 AD I Nursing students interacted with the “Nurse Logic” e-program and took Final # 1 of the LSRN package as a baseline assessment of performance.

Nurse Logic-Five Modules	Critical Reading	Strategy Techniques	Nursing Guidelines	Alternate Item Format	Prioritization
High	100%	100%	92%	100%	100%
Low	44%	36%	24%	40%	40%

Final # 1 Low 46% High 82% Average 61%	Final # 2
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Analysis of Motivation Assessment

The following description reflects the self-assessment of student’s motivation in a selected AD I Class (day program) in Spring 05. The vast majority of students felt interested while in the classroom. However approximately a third felt very frustrated and half felt somewhat frustrated when in the classroom. Nearly all of the students felt very - to somewhat involved in class. Approximately 50% of the group feel they are putting forth high effort in the class. Only 2% feel that they are rarely putting forth effort in classroom activities.

All students value learning and education and expect what will be learned in the RN program to be valuable. Approximately 50% of the group feel they are putting forth high effort in the class. Only 2% feel that they are rarely putting forth effort in classroom

activities. Our current interventions may assist to motivate that 2% and the other 48% to give higher effort.

Additional Data to be collected:

Cohort # 2 - Summer 2005

Cohort # 3 - Fall 2005

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