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Incorporating reflective learning in a medical nutrition therapy lecture-lab course

Kay Stearns Bruening, Ph.D., RDN, FAND Associate Professor, Nutrition Science & Dietetics



Context

- SU's accredited dietitian education programs approved to become a demonstration program for new Future Education Model (FEM)
- Competency-based education
 - 37 competencies, 220 performance indicators
- FEM incorporates self-reflection to build meta-cognition
 - Ability to assess own knowledge/skills/learning

Conscious Competence Model

Stage 3	Consciously Competent	Consciously Incompetent
Stage 4	Unconsciously Competent	Unconsciously Incompetent

Stage 2

Stage 1

Benefits of reflective learning

- For Student:
 - Builds meta-cognition student "learns to learn"
 - Learn to recognize gaps between what they know and what they don't yet know
 - Helps in problem-solving
- For instructor:
 - Formative assessment can monitor student learning and progress
 - Opportunity to provide feedback/coaching/correction
- For the health care professions
 - Promotes safe and competent health care
 - Continuous quality improvement

MNT written learning reflection

<u>Pre-question</u>: Before this {learning activity}, what did you already know about ____ ?

Post questions:

From this learning activity, I learned:

The most challenging aspect for me was:

I experienced the following learning breakthrough or realization while working on this ____:

The greatest struggle/uncertainty for me was:

The most interesting thing about _____ was:

The most boring thing about _____ was:

Evidence of learning (hooray!)

- The most challenging aspect of this case was the biochemical data and implications. There was a lot to learn here and many were interconnected. This really gave me practice & now I feel well prepared.
- [RE: hemodynamic stability in ebb & flow phase of critical illness] When he was admitted to the ED, his BP was 90/70. Two days later BP was 129/92. This gave me an illustration of exactly what happens to BP when moving through the 2 phases.

Evidence of learning something WRONG $\ensuremath{\mathfrak{S}}$

- Opportunity to provide feedback!
- ...the patient was severely anemic with RBC count of 2.4. This may explain why his pulse was 101. The mean cell volume of 100.6 could be the result of dehydration since the fluid content is low.
- EN workshop most interesting: While calculating the water need for the pt, I was concerned about the amount of H2O I calculated, *i.e., that he needs 231 mL/hour.* This seemed high to me at first. Then I realized that 231 mL is about 1 cup. One cup per hour seems far more doable.

Evidence of making connections across course content

- The most interesting thing about this [malnutrition] case was seeing how the module 1 material on anemia came into play here. It's nice to see that what we are learning is actually applied throughout the work in this course. In some courses there is no need to retain the material beyond the quiz or test. *I enjoyed the cumulative aspect* of this case.
- I had a true "ah-ha" moment when I observed the low body temperature and malnutrition in this pt and recognized findings from the MN semi-starvation experiment.
- I made connections between this unit [CI] and the malnutrition unit. Specifically, c-reactive protein being a marker of inflammation and this pt having a high c-reactive protein.

Even better – Making connections to content in another course ③

 I experienced a learning breakthrough when I put together the info I'm learning in Biochem with this class! It was really cool to work through this case when we just finished lipid synthesis in Biochem. I loved knowing the biochem pathways behind liver disease/metabolism of alcohol while working on a real case.

Unconsciously Incompetent

Did any learning happen here?

Syracuse University Nutrition Science & Dietetics Programs

NSD 682 MNT 1 Lab-Case Study Learning Reflection

NameGrace Pezzi	menti	
Topic of this case:	PEG	

Pre-assignment

Before working on this case, what did you already know about applying the nutrition care process to this medical diagnosis?

From past class I knew how to apply NCP to this case.

Post-assignment

1. From working on this case, I learned:

Improving my skills

2. The most challenging aspect of this case for me was:

I had to miss a class due to family issues, so I felt behind but I caught up fast.

- I experienced the following learning breakthrough/s or realization/s while working on this case: Improving my skills and knowledge about how each patient is different and how to adjust for each case.
- The greatest struggle or uncertainty for me while working on this case was: I didn't struggle with this case
- 5. The most interesting thing about this case is:
 - I like to see how each patient can help me understand the role I would have to do in my future career.
- 6. The most boring thing about this case is: nothing

Meta-cognition – Some students expressed plans for future learning

- <u>Prepare better</u>: I lost a lot of time on this case because I did not finish watching the CI & TBI mini-lecture videos before class.
- <u>Problem-solving strategy:</u> *I learned I need to take notes when reading through the health record.*
- [Prob-solving #2]: I broke this into a 5-step process for myself to copy the way you showed us in class and it works very nicely.
- <u>Future approach</u>: I made a pattern on how I read the medical chart and check for information. I start with the H & P, then move to Vitals, followed by the Progress Notes and any other notes. I realized this is the most efficient way for me. This is the pattern I am going to use every time.

Evidence of synthesis

• The most interesting thing to me was the reality of this assignment and this whole class in general. I always feel like I am a clinical dietitian when I am in EHRGO. I like to use critical thinking and practice using very amateur clinical judgement even though I am not there yet.

Bonus learning – not in my objectives

- Seeing how nutrition & lifestyle really affect health in either a positive or negative way. I know way too many college boys who drink like this patient does & it's really a population that should be targeted more for education on conditions like this.
- I really enjoyed this case... a definite "anti-drinking" advertisement and made me think critically about alcohol consumption among young people, adults, and myself.
- Alcoholism runs in my family. I have noticed signs & symptoms of chronic alcohol abuse within family members and it really scares me. Furthermore, I occasionally overindulge with alcohol in social settings. I do not want to end up with serious alcohol-related health issues, which are common among veterans. This is a major reason why I want to work as an RD in a VA hospital. I feel I can relate to the veterans on multiple levels.



Reflective learning has been very useful as a formative assessment strategy in these courses

Kay Stearns Bruening ksbrueni@syr.edu