BRAIN-BASED LEARNING + HEUTAGOGY = TRANSFORMATIONAL LEARNING

TRANSFORMING LEARNING THROUGH INNOVATIVE COURSE DESIGN

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Question to ponder...

As compared to traditional pedagogy, does innovative online course design increase students’ ability to transform their thinking?
Think about an assignment or course ...
How did we get here?
What are we supposed to do?
Where are we going?
How do we get there?
Think Differently
1. Explore possibilities
2. Decide what to do

Divergent thinking  Convergent thinking
Cotter question.....

What factors will assure failure in your online course/assignment?

(Technique developed by Maury Cotter-University of Wisconsin)
Barriers to Student Success

- **Dependent-learner role** (Allen, 2010)
- **Levels of self-efficacy** (Allen, 2010)
- **Online education** (Cox-Davenport, 2014; Patterson, Krouse, & Roy, 2012; Plante & Asselin, 2009; Robina & Anderson, 2010; Sword, 2012)
- **Technology related issues** (Kruger-Ross & Waters, 2013).
Faculty Role

- Purpose of coursework
- Transformation to online
- Gap-expectations in the workplace and current education (Benner, Sutphen, Leonard, & Day, 2010)
- Traditional learning models fall short (Allen, 2010; Bhoyrub, Hurley, Neilson, Ramsey, & Smith, 2010)
- Current pedagogies - oppressive learning (Allen, 2010)
Community of Inquiry

(Garrison, Cleveland-Innes, & Vaughan, n.d.)
**Heutagogy**: Study of self-determined learning and encompasses provision of the environment appropriate for self-directed learning by engaging the complexity of the adult learning experience in the realm of the information age explosion (Hase & Kenyon, 2001).
Heutagogy

■ Traditional pedagogy lacks transferability to online teaching  (Allen, 2010; Bhoyrub et al., 2010; Hase & Kenyon, 2001)

■ Better fit for online learning  (Bhoyrub et al., 2010; Hase & Kenyon, 2001)

■ Application of the concept of the self-determined learner  (Canter, 2012; Hase & Kenyon, 2001)

■ Shift in the role of the educator  (Hase & Kenyon, 2001)
Level 1: Pedagogy (Engagement) - Learner maturity and autonomy required (−)

Level 2: Andragogy (Cultivation) - Learner maturity and autonomy required (+)

Level 3: Heutagogy (Realization) - Instructor control and course structuring required (−)

Instructor control and course structuring required (+)
Brain-based Learning

- Learning based on the physiology of the brain (Caine & Caine 1990)

- Critical Factors
  - Spatial learning-instant memory of experiences
  - Isolated facts or skills- structured differently in the brain (Caine & Caine, 1990; Freeman & Wash, 2013)
  - Meaning is rooted in experience.
  - Experiential learning - invokes spatial memory (Caine & Caine, 1990; Freeman & Wash, 2013)

- Brain-based learning at the university level
  - Determined 10 methods (Freeman & Wash, 2013)
Brain-based Learning Methods

- Brain-based learning-university level
  - *Ten methods* (Freeman & Wash, 2013)
Transformational Theory of Learning (TTL)

- Disorienting dilemma
- Critical reflection
- Changed meaning

(Mezirow, 2000)
“Education is not the learning of facts, but the training of the mind to think.” ~Albert Einstein
Conclusions and Gaps

- Limited applicability of traditional pedagogies
- Faculty-facilitator of learning
- Social connection, self-efficacy, & safety
- Students - support & technology know-how
- Variable learning styles/approaches
- Scant application of brain-based learning at the university level
- Heutagogy - emerging concept
- Learning is complex-faculty and student role
Project Aims

■ Incorporate heutagogy and brain-based learning in course design to promote TLT
■ Assess the students’ perception of meaning - qualitative evaluation
■ Transformation of thought to institute change in practice
Project Implementation

- Deliberate design of learning experiences
- Unique discussion board design
- Variation of assignments - choice
- Active learning
- Pre and post survey-open ended questions
- Qualitative review
  - Presence of Transformational Learning
  - Impact on practice
Sample

- Concepts of Population Based Care (N451) - Fall Semester of 2015
- Seven respondents ($n = 32$) 21.8% **
- All female
- Five full-time nurses-One part-time nurse
- Five years or less experience ($n = 3$)
- Seven to twenty years of experience ($n = 3$)
- Area of practice
  - *Outpatient* ($n = 2$)
  - *Inpatient acute care* ($n = 2$)
  - *Community* ($n = 2$)

**Demographic questions were completed by six of the seven students.**
Disorienting Dilemma

What challenged your thinking as you applied the concepts from the course in practice?

Themes

- Making an impact on population health through practice
- Application of population health in acute care
- Thinking about health in broader terms/beyond individuals
What does the concept "population health" mean to you?

Themes

- Overall health of the population community
- Culture of health
- Actions to promote health
- Focus beyond individual health
- Determinants of health
Reflection

What does the concept "population health" mean to your nursing practice?

Themes

- Educating patients: 6
- Coordinating of services: 3
- Empowering patients: 3

Frequency of themes
Reflection

How do you see population health principles influence care delivery at your facility?
Changed Meaning

How has the meaning of your view of "population health" changed through the completion of coursework?
Implications

- Further study
- Need for faculty feedback
- Recommendations for deliberate course design
REAL Course Design

Blackboard
Real Tools for Course Design

- Student-led Discussions/Modules
- Windshield Surveys
- Interviews
- TED Talks
- Mandalas
- Data Analysis
- Discussion Board
- Change Plans
- Virtual Field Trips
Real Tools for Course Design

- Service-based Learning
- Teaching Projects
- Journals-Reflective thinking
- Assignments-Framework to allow customization
- Devising personal definitions of concepts
- Draft/review process
- Teach back method
- DB
  - *Video DB posts*
  - *Options*
  - *Assignments*
  - *Web resource exploration-virtual field trips*
Reverberating “R’s”

- Real
- Relevant
- Reflective
- Rationale
User-friendly Tools

Populr
Build a webpage [https://populr.me/](https://populr.me/)

Screencast-O-Matic
Announcements, Assignment Overviews, Feedback on Assignments etc. [http://screencast-o-matic.com/home](http://screencast-o-matic.com/home)

Remind
Text reminders for students [https://www.remind.com/](https://www.remind.com/)
Mid-Course Check-in
“At the beginning of this course, I probably did not think about epidemiology or how it impacted what I do every day or how what I do overlaps epidemiology. Today I can tell a very different story....I read research articles differently, and even watch the news differently. This class has made me think, learn, and grow.”

“This was the most organized and well planned course that I believe I have ever taken. Dr. Albers did a phenomenal job assembling the course content and assuring that all assignments facilitate achieving course objectives. I thoroughly enjoyed this course and am grateful for Dr. Albers’ time, effort, and teaching expertise. I look forward to having courses with her in the future.”
Think  Pair  Share
The world becomes the classroom

- Broadening learning and thinking skills
- Building reflective thought
- Expanding perspectives
- Engaging the ‘whole’ person in learning
- Promoting connections for adult learners
"Tell me and I forget. Teach me and I remember. Involve me and I learn."

-- Benjamin Franklin
Thank you
References


References (continued)


*Informatics, 82,* 553-564.


Sword, T. S. (2012). The transition to online teaching as experienced by nurse educators. *Nursing Education Perspectives, 33*(4), 269-271