



Outcome Assessment of Learning: Content Analysis of an Asynchronous Online Discussion

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Introduction and Learning Objectives

- Please share:
 - Have you used asynchronous on-line discussion tools in your courses?
 - Do you think you have effectively measured learning outcomes associated with these tools?
- Workshop Learning Objectives:
 - Identify challenges associated with outcome assessment of online discussion assignments.
 - Identify strategies for content analysis of students' post on a discussion board learning assignment. Practice construction of rubric dimensions and evaluation criteria.
 - Explore relevance of this method to participants' own teaching and outcome assessment of students learning.

Pedagogical Use of LMS

- Use of learning management systems (LMS) has become prevalent across the continuum of education formats.
- Specific asynchronous tools such as the discussion board have been shown to be effective tools for:
 - Student-instructor as well as student- student communication. (Calderon, Ginsberg and Ciabocchi, 2013; Jorczak & Dupuis, 2014; Ke, 2013)
 - Constructivist learning (Ke, 2013; Lane , 2014).
 - Critical thinking skills development (Williams & Lahman, 2011).

Challenges in Designing & Assessing Online Discussion Assignments

- A lack of systematic comprehensive analysis of online discussion assignments for the purpose of identifying dimensions that can be objectively evaluated.
- Current work in this area includes:
 - Instrumental dimensions such as length of communication instances (Brooks & Bippus, 2012).
 - Analysis of students' reaction to the assignment (Mathews & La Tronica-Herb 2013).
 - Analysis of instructors' perceptions of students' skills development in course (Klisc, McGill & Hobbs 2009).
 - A priori parameters of critical thinking skills(Lai, 2012)

The Current Study

- Utilized a post priori analysis of students' responses to an online discussion board assignment to identify organically emerging indicators of learning for the purpose of creating an evaluation rubric for such assignments.
 - What are the organically emerging patterns in content and structure of discussion board posts that can indicate quality of learning?

Participants

- MSW students at a large private university in NYS.
 - Psychopathology Across the Lifespan
 - Spring semesters 2012, 2013, 2014.

Semester	# Females	# Males	#Responses
Spring 2012	15	2	21
Spring 2013	11	1	37
Spring 2014	19	1	25
Total	45	4	83

The Assignment (1)

- Case study group discussion
- Students in all 3 cohorts were required to read a case study (identical to all three cohorts) and respond to a prompt by instructor regarding the proper diagnosis and treatment plan /or next steps in addressing the issues presented in the case study.

The Case Study*

Francis is a M.W.M. and presents with extraordinary concern about the safety of his wife and young daughter. He rarely leaves them alone when away (e.g., at work) he telephones home every hour. He has lost one job because of this, and his wife has threatened to leave him if he does not seek psychiatric help. Six months ago, the symptoms, which have been present for years, became worse after his wife had a serious automobile accident.

Francis describes recurrent, unbidden thoughts in which dangerous events befall his family and he is not there to save them. He knows the thoughts are "silly" and they come from his own mind rather than any real danger, but he cannot resist contacting his wife or daughter in some way to be certain they are safe. His wife has arranged to lift the telephone receiver briefly, then hang up, which is usually sufficient to allay his fears for an hour or so.

There is no history of significant medical illness or Substance Abuse. The client completed 2 years of college and has a responsible job. He performs well, and is not particularly perfectionistic, overly conscientious (except with regard to his family's safety), rigid, or preoccupied with details.

* Adapted from Morrison, 1994

The Assignment (2)

- The Prompt:
- Dear Group 1 students,
- Please read the case study “Francis” (now available in the case studies folder in your blackboard dashboard). Please reflect on the following: What is the most appropriate diagnosis for Francis? What will be an appropriate treatment plan for Francis? Explain your answer. Please remember to respond by Wed, April ..., at noon. As always, I am looking forward to reading your posts!
- Note; the prompt in 2014 also included explicit instructions to respond to each other's posts.

The Assignment (3)

- The instructor read all posts on the due date and provided feedback to each group, respectively.
 - Dear Group 3 students,
I see that you have reached a consensus pretty easily in this case in terms of the primary diagnosis. I hate to be the gadfly here, but you are not quite there yet... Your reasoning regarding OCD is fine, until we consider Francis behaviors... read the diagnostic criteria again and reflect on whether his behaviors qualify as compulsions... More on this tomorrow in class.
 - **Good job, Group 2. The debate between separation anxiety and OCD is especially interesting and can also be somewhat informed by which edition of the DSM the clinician is using. This is a great example of how real life situations do not always fit well with “the book”. More about all that tomorrow in class.**

Data analysis

- All posts were de-identified and numerically coded.
- Content of students' posts was analyzed using inductive constant comparison method, identifying units of meaning, grouping into categories and generating themes.
- The primary investigator and the RA conducted an initial joint analysis of sample responses, followed by independent analyses.

Examples of Content Analysis by Categories (1)

- **Response**

- Axis I Obsessive Compulsive Disorder (300.3)
- Axis II No Diagnosis (V71.09)
- Axis III None
- Axis IV Constant worry about leaving his family home, obsessive calling to keep in touch, lost one job, marriage shaky
- Axis V GAF 60-70

- **Category- diagnostic impression**

- **Response**

- The diagnosis is Generalized Anxiety Disorder (Provisional) due to the lack of information available. It is expected that Francis has GAD based upon his excessive worry and other symptoms indicated above; however, it is not known if he has the associated symptoms needed to confirm the diagnosis (restlessness, easily fatigued, difficulty concentrating or mind going blank, irritability, muscle tension, sleep disturbance). Although it is not known, based upon the amount of worry and anxiety that Francis and his family are describing, it is assumed that upon gathering additional information, these symptoms may be present and confirmed.

GAF of 51 was chosen because he has lost a job because of these symptoms and his wife is threatening to leave him. It is assumed that his children are also experiencing negative consequences of his mental health symptoms.

- **Category- rationale for diagnostic impression**

Examples of Content Analysis by Categories (2)

- **Response**
 - Interesting! I thought this was one of the hardest case studies so far....
- **Category- reflection of the process of learning**
- **Response**
 - I think we need more information on his previous actions. Did he always have these compulsions or did they start after a traumatic experience .
- **Category-reflection on the quality of the material**
- **Response**
 - I agree with your diagnosis and the justification. However, the information you put in Axis III should go in Axis IV (Psychosocial and Environmental Problems). Axis III is reserved for medical conditions related to the Axis I diagnosis.
- **Category- peer-to peer constructive feedback**
- **Response**
 - I'm looking forward to learning more about the anxiety disorders this week; as they are very relevant to where I work as well as at my internship.
- **Category- professional development**

Grouping Categories Into Themes

- Contextual communication
 - Diagnostic impressions; rationale for diagnostic impression; tx plan; re-cap of case study details
- Interpersonal (peer-to-peer) communication
 - Agreement; constructive criticism; invitation to peers to comment
- Reflective communication
 - Reflection on the process; reflection on the material
- Indicators of effort and motivation
 - Timely posting; # of posts in a thread; professional development

Inter-Rater Reliability

- Overall number of responses- 83
- Number of disagreements- 23
 - 70% inter-rater agreement.
- Type of disagreement
 - Possible additional categories
 - **Re-cap of case study material**
 - Differentiating between categories:
 - **Reflection on the process or on the material?**
 - I initially thought that it was GAD but read over the criteria for both disorders to be which one was a best fit for Francis
 - **Reflection on process or expression of motivation?**
 - Hey everyone- I am going to throw this out there and be a little different. Totally unsure about this one..
 - **Treatment plan or re-cap of case study content?**
 - From a social work competency perspective, Francis is in general good health; he is married with a daughter; he has a job and performs well. Although he worries incessantly over the safety of his family and phones home constantly, his wife supports him by picking and hanging up the phone to assure Francis that his family is fine.

Findings (1)

- On average, students posted 1.7 times per assignment, with the 2013 cohort responding most frequently with an average of 2.5 posts per student.
- *Themes and Categories Emerging from the Data*

Themes	Contextual Learning	Inter-personal Communication	Meta-learning
Categories	Re-cap of case study details	Positive feedback/encouragement	Reflection on the material
	Diagnostic impressions	Constructive criticism	Reflection on the process of learning
	Rationale for diagnostic impressions	Engaging peers in conversation	Reflection on Professional development
	Treatment plan		

Findings (2)

- Learning Dimensions unique to the online environment:
- **Inter-personal Communication**
 - **Positive feedback/encouragement**
 - **Constructive criticism**
 - **Engaging peers in conversation**
- **Meta-learning**
 - Reflection on the material
 - **Reflection on the process of learning**
 - **Reflection on Professional development**

Findings (3)

- A continuum of learning within each dimension

Themes	Contextual Learning	Inter-personal Communication	Meta-learning
Categories/ continuum of learning	Re-cap of case study details Factual learning	Positive feedback/encouragement Factual communication Maintain the status quo	Reflection on the material concrete content
	Diagnostic impressions Factual and conceptual learning	Constructive criticism Advanced communication Conceptual communication Suggest change	Reflection on the process of learning Self- awareness/knowledge
	Rationale for diagnostic impressions Conceptual learning	Engaging peers in conversation Leadership role Initiate change/lead	Reflection on Professional development Growth
	Treatment plan applied learning		

A Continuum of Learning

- Increasingly sophisticated learning processes

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Contextual Learning

Re-cap of case study details

Factual learning

Diagnostic impressions

Factual and conceptual learning

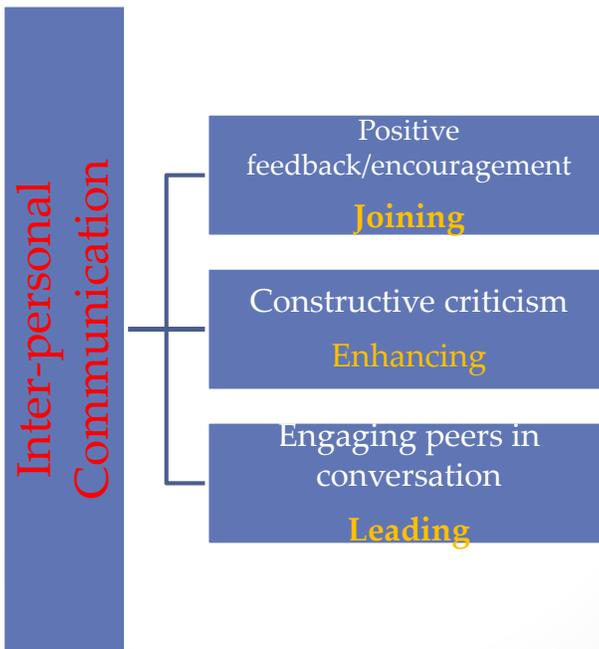
Rationale for diagnostic impressions

Conceptual learning

Treatment plan

Applied learning

A Continuum of Interpersonal Communication



A Continuum of Reflection Focus

Meta-learning

Reflection on the material

Provided content

Reflection on the process of learning

Self-awareness

Reflection on Professional development

Growth

The Rubric

Learning dimension/Proficiency of learning	Below expected level of learning	At basic level of learning	At expected level of learning;	At Advanced level of learning level
Contextual learning	Does not demonstrate basic level of factual learning: material comprehension as evident by not providing the minimum details required to respond to the prompt	Demonstrates factual learning: comprehension of the material by addressing /summarizing the content presented in the assignment.	Demonstrates conceptual learning: advanced ability to categorize and synthesize the content of the assignment.	Demonstrates applied learning as evident by ability to make inferences based on the material.
Inter-personal communication	Does not join in peer-to-peer communication within the thread.	Demonstrates Joining in peer-to-peer communication such as providing basic positive feedback and encouragement to peers.	Demonstrates enhancing of peer-to-peer communication through offering constructive criticism.	Demonstrates leadership in peer-to-peer communication as evident by engaging peers in conversation.
Meta-learning	Does not demonstrate a capacity to reflect on the learning experience as evident by lack of content about the nature of the assignment or about own' s learning process.	Demonstrates a basic ability to reflect on the provided content as evident by response content about the complexity of the material, clarity etc.	Demonstrates self-awareness as evident by content that addresses the thought process behind the response to the assignment.	Demonstrates growth and ability to reflect on own' s professional and/or personal development as evident by response content that links the assignment to experiences beyond the class setting.

Questions? Comments?

Thank
You



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