TOOLS FOR TEACHING CRITICAL THINKING TO CSD GRADUATE STUDENTS

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WICHITA STATE UNIVERSITY
DISCLOSURES

❖ THIS PRESENTATION IS DISCUSSING A PROGRAM AT WICHITA STATE UNIVERSITY, AT WHICH ALL FOUR PRESENTERS ARE EMPLOYEES.

❖ THE PRESENTERS HAVE NO OTHER FINANCIAL OR NONFINANCIAL RELATIONSHIPS TO DISCLOSE

“Don’t believe everything you read on the Internet just because there’s a picture with a quote next to it.”

—Abraham Lincoln
PURPOSE OF THIS PRESENTATION

- Define critical thinking and describe its importance in the education and training of speech-language pathologists.
- Describe a set of specific methods and procedures that can be used to effectively develop critical thinking skills and dispositions in SLP graduate students.
- Describe a set of specific formative and summative tools and procedures that can be used to assess student progress in developing critical thinking skills and dispositions.
DEFINITION OF CRITICAL THINKING

Wade, Tavris, & Garry (2014)

CRITICAL THINKING IS:
- The ability and willingness to assess claims and make objective judgments on the basis of well-supported reasons and evidence rather than emotion or anecdote.

CRITICAL THINKERS:
- Are able to look for flaws in arguments.
- Resist claims that have no support.
- Realize that criticizing an argument is not the same as criticizing the person making it.
- Are willing to engage in vigorous debate about the validity of an idea.
CRITICAL THINKING IN HIGHER EDUCATION

- CRITICAL THINKING CAN BE TAUGHT (E.G., HALPERN, 2003)

- IT DOES NOT SIMPLY EMERGE FROM BEING ENGAGED IN HIGHER EDUCATION (ARUM & ROKSA, 2010)
CRITICAL THINKING IN HIGHER EDUCATION

HALPERN (2003): FOUR-PART MODEL FOR TEACHING CRITICAL THINKING:

I. EXPLICIT CRITICAL THINKING SKILLS INSTRUCTION
II. ENCOURAGING STUDENTS’ DISPOSITION OR ATTITUDE TOWARD EFFORTFUL THINKING AND LEARNING
III. DIRECTING LEARNING ACTIVITIES IN WAYS THAT INCREASE THE PROBABILITY OF TRANS-CONTEXTUAL TRANSFER
IV. MAKING METACOGNITIVE MONITORING EXPLICIT AND OVERT
INCORPORATING CRITICAL THINKING INTO A SLP GRADUATE PROGRAM
INCORPORATING CRITICAL THINKING INTO A SLP GRADUATE PROGRAM

AT WICHITA STATE UNIVERSITY: A SERIES OF 3 COURSES OVER THE FIRST THREE SEMESTER OF THE MASTERS SLP PROGRAM:

1ST SEMESTER: CSD 832A CRITICAL THINKING IN CLINICAL PRACTICE I
   - INTRODUCTION TO CRITICAL THINKING

2ND SEMESTER: CSD 832B CRITICAL THINKING IN CLINICAL PRACTICE II
   - GUIDED APPLICATION OF CRITICAL THINKING

3RD SEMESTER: CSD 832C CRITICAL THINKING IN CLINICAL PRACTICE III
   - ADVANCED APPLICATION OF CRITICAL THINKING
WSU COURSES IN CRITICAL THINKING

- CLASSES ARE 4 CREDIT HOURS EACH
- INTERACTIVE AND DISCUSSION-BASED
- TEAM-TAUGHT, WITH BOTH ACADEMIC FACULTY AND CLINICAL EDUCATORS PRESENT (USUALLY 3-4 FACULTY/CES IN EACH CLASS)
1st Semester: CSD 832A Critical Thinking in Clinical Practice I

- CONCURRENT COURSES:
  - LANGUAGE/LITERACY FOR YOUNG CHILDREN
  - FLUENCY DISORDERS
  - APPLIED PHONOLOGY

- FACULTY AND CLINICAL EDUCATORS WHO TEACH/SUPERVISE IN THESE AREAS ALL CO-TEACH THE COURSE (4-5 FACULTY/CES PRESENT EACH WEEK)
  - FACILITATES CRITICAL THINKING ACROSS THE CURRICULUM (INCLUDING CLINIC)
2nd Semester: CSD 832B Critical Thinking in Clinical Practice II

❖ CONCURRENT COURSES:

❖ LANGUAGE/LITERACY FOR SCHOOL-AGE AND ADOLESCENTS
❖ AUTISM SPECTRUM DISORDERS
❖ AUGMENTATIVE AND ALTERNATIVE COMMUNICATION
❖ COUNSELING IN COMMUNICATION DISORDERS

❖ FACULTY AND CLINICAL EDUCATORS WHO TEACH/SUPERVISE IN THESE AREAS ALL CO-TEACH THE COURSE (5-6 FACULTY/CES PRESENT EACH WEEK)
3rd Semester: CSD 832C Critical Thinking in Clinical Practice III

- CONCURRENT COURSES:
  - MOTOR SPEECH DISORDERS
  - DYSPHAGIA
  - APHASIA
  - COGNITIVE-COMMUNICATION DISORDERS

- FACULTY AND CLINICAL EDUCATORS WHO TEACH/SUPERVISE IN THESE AREAS ALL CO-TEACH THE COURSE (3-5 FACULTY/CES PRESENT EACH WEEK)
HALPERN’S MODEL FOR TEACHING CRITICAL THINKING

HALPERN (2003): FOUR-PART MODEL FOR TEACHING CRITICAL THINKING:

I. EXPLICIT CRITICAL THINKING SKILLS INSTRUCTION

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III. DIRECTING LEARNING ACTIVITIES IN WAYS THAT INCREASE THE PROBABILITY OF TRANS-CONTEXTUAL TRANSFER

IV. MAKING METACOGNITIVE MONITORING EXPLICIT AND OVERT
# Basic Critical Thinking Knowledge and Skills

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<th>Tools</th>
<th>Halpern Model</th>
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<td>I – Explicit critical thinking skills instruction</td>
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<tr>
<td>Journal Club – Published articles</td>
<td>I – Explicit critical thinking skills instruction</td>
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<td>II – Encouraging critical thinking disposition</td>
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<td>III – Transcontextual transfer</td>
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<td>IV – Explicit metacognitive monitoring</td>
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<td>Reading Notes</td>
<td>I – Explicit critical thinking skills instruction</td>
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<td>Reflections</td>
<td>III – Transcontextual transfer</td>
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<td>IV – Explicit metacognitive monitoring</td>
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<td>Tool</td>
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<td>Team Teaching</td>
<td>III – Transcontextual transfer</td>
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<td>Cases and Simulations</td>
<td>II – Encouraging critical thinking disposition</td>
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<td>Instructor Fishbowl</td>
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<td>Oral Final Exams</td>
<td>II – Encouraging critical thinking disposition</td>
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CHOOSING A TEXTBOOK

- Easy to read
- Includes many examples
- Discusses barriers to critical thinking
- Provides guides for engaging in critical thinking in various contexts
JOURNAL CLUB

BROWNE & KEELEY (2010): CLUES FOR EVALUATING RESEARCH STUDIES (CH. 9, P.111)

- WHAT IS THE QUALITY OF THE SOURCE OF THE REPORT?
- OTHER THAN THE QUALITY OF THE SOURCE, ARE THERE OTHER CLUES INCLUDED IN THE COMMUNICATION SUGGESTING THE RESEARCH WAS WELL DONE?
- HOW RECENTLY WAS THE RESEARCH CONDUCTED, AND ARE THERE ANY REASONS TO BELIEVE THAT THE FINDINGS MIGHT HAVE CHANGED OVER TIME?
- HAVE THE STUDY’S FINDINGS BEEN REPLICAED BY OTHER STUDIES?
- HOW SELECTIVE HAS THE COMMUNICATOR BEEN IN CHOOSING STUDIES?
- IS THERE ANY EVIDENCE OF STRONG-SENSE CRITICAL THINKING?
- IS THERE ANY REASON FOR SOMEONE TO HAVE DISTORTED THE RESEARCH?
- ARE CONDITIONS IN THE RESEARCH ARTIFICIAL AND THEREFORE DISTORTED?
- HOW FAR CAN WE GENERALIZE, GIVEN THE RESEARCH SAMPLE?
- ARE THERE ANY BIASES OR DISTORTIONS IN THE SURVEYS, QUESTIONNAIRES, RATINGS, OR OTHER MEASUREMENTS THAT THE RESEARCHER USES?
Week: 7  Chapter/Reading: Textbook Ch. 7, 8, & 9

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<th>My reflections on the questions</th>
<th>My notes from class/group discussions</th>
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<td>Q1. Find 2 social media posts that include fallacies. Identify the type of fallacy and describe how you recognized it as such.</td>
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| Q2. Now find a web page, article, or post that you previously agreed with but now see a fallacy in the reasoning.  
   1. How has this changed your views on the topic?  
   2. How did you feel when you realized that you had accepted a false argument?  
   3. If you still agree with the argument, how could it be better expressed without the false reasoning?  
   4. |
| Q3. What do you think about using intuition as evidence to support clinical practices? |
| Q4. How are "case examples" and "testimonials" different from the case studies you might read about in a journal? |
| Q5. What would you do if something you read contradicts what your professor has told you? |

Additional notes:

Burning Questions:
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<td><strong>Q1.</strong> Find 2 social media posts that include fallacies. Identify the type of fallacy and describe how you recognized it as such.</td>
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<td>• An article was posted on Facebook talking about why you should not vote for Donald Trump to be the Republican candidate. Their reasoning was, essentially, because he was racist and misogynistic. This is an <strong>ad hominem</strong> fallacy because it focused on Donald Trump’s character rather than his policies or ability to lead.</td>
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<td>• Another fallacy I found was also on Facebook, claiming that letting your children follow Kylie Jenner on Instagram will lead them to be promiscuous, dress scantily, and mature too quickly. This is a <strong>slippery slope</strong> fallacy. This article assumes that teens will view Kylie as a role model, and thus begin acting like her. This is a slippery slope fallacy because it assumes that a chain of unlikely events will occur even if procedures (such as good parenting and acting as a positive role model) exist to prevent a negative situation.</td>
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<tr>
<td>• Can find a fallacy in most opinion posts.</td>
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<td>• E.g., you should not shop at Walmart because of the family’s wealth and not distributing it.</td>
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Now What?
I feel like the readings have been planned to follow the exact issues that I need addressed. I felt like I read a section and thought “yes! That’s exactly how I feel!” For example, the part where it talked about the client/clinician relationship really hit me. Early on in my notes I talked about how I felt some anger because I was put in the uncomfortable situation of practicing being disfluent. After reading about client/clinician relationships I realized I was throwing a silent fit of resistance towards the assignment given in our fluency class. I then put myself in the place of the clinician (or in this instance Dr. DiLollo) and it made me think that if I encountered that with my own client I know I may need to readjust to their zone of proximal development. I began thinking, how do I want things done differently in my own case?
Moving on to my sob story, I found other helpful clinical applications with leadership in a clinical setting. With my first client (that I shared with another undergrad student) I was not only trampling over my partner, but also trampling through the therapy session. I was not adequately not a facilitator – I was not along the lines of a dictator! I would go through the tasks making sure I had sufficient and thorough data. I would also make sure I tackled every goal I planned, even if my client was showing she was not interested. Everything paperwork wise looked great, my lesson plans were solid, my activities were accomplished, my soap notes were very thorough, and with all that I completely missed the mark! How did I expect any of that to transfer over to my client’s life outside of the clinic? She certainly wasn’t going to go home and think wow I really enjoyed that activity and I can see the implications of each thought out plan. So what I took away from this part of the reading is to not dominate the client but to engage with the client in order to facilitate, even when that means “going with the flow” (words I dread as a beginning clinician).
Guidelines for the *Reflection on Reflections* assignment

These are *guidelines* designed to help you to formulate your reflection. Please note that these are NOT questions that you must answer (in fact, if you simply answer the questions, you will NOT get full credit for the assignment!). Your reflection should be a narrative of approximately 1-2 pages (double spaced, 1” margins, 12 point font). *You should read through all of your weekly reflections prior to writing your paper.*

Considering the following questions might help you to formulate your reflection:

1. What was your overall reaction to this (a class about critical thinking as you begin graduate studies) class?
2. What was the most important thing that you learned in this class?
3. What was the most challenging thing about the class for you?
4. What aspects of this class (i.e., activities, assignments, discussions, etc.) facilitated your successful learning?
5. What aspects contributed least to your learning?
6. How is your thinking different now as opposed to the beginning of the semester?
7. How have your attitudes and beliefs about speech-language pathology changed as a result of your participation in this class?
8. How have your attitudes and beliefs about yourself changed as a result of your participation in this class?

Papers will be graded according to how well you demonstrate critical thinking in your reflection and use of APA formatting with no spelling, punctuation, or grammatical errors.
REFLECTION ON REFLECTIONS

- Although many of us seemed to believe at the beginning of this semester that this course would not provide us with information that will benefit us, this was definitely not the case. Personally, I have learned the importance of not being afraid to ask questions and I am more confident that I am asking the right questions.

- The discussion questions have really helped me see why this class is critical and is necessary to be an effective clinician. I can already see how this class has helped me in clinic with my young client. I have questioned why I am doing the things I am doing and what I need to change to make it better for the next session. For that, I am thankful for this class and what it has taught me so far. For the past few classes, I have felt that it has been pretty repetitive but I get why that is - we need to have the foundation to critically think and when you practice it weekly you can get that experience. When I came into this class, I was thinking how useless this class was going to be, but now I am starting to see the bigger picture of it all!
TEAM TEACHING

• DEMONSTRATES VALUE OF CT IN ACADEMIC AND CLINICAL APPLICATION

• TEAM MEMBERS LEARN FROM EACH OTHER—HOW CRITICAL THINKING “LOOKS” IN CLASS

• ALLOWS OTHER TEAM MEMBERS TO OBSERVE AND ASK STUDENTS TO REFLECT ON PROCESS (BALCONY)
INSTRUCTOR FISHBOWL

• DEMONSTRATION OF TEAM MEMBERS “THINKING ALOUD”
  • STUDENTS SEE HOW OUR APPROACHES MAY BE FOCUSED ON OUR AREAS OF EXPERTISE
  • HOW IT LOOKS WHEN TEAM MEMBERS DISAGREE
    • CASE HISTORIES
    • JOURNAL CLUB
CLINIC BRAINSTORMING

• GROUPS OF 3-5 FIRST-YEAR SLP STUDENTS
• GROUPS LED BY 2 SECOND-YEAR SLP STUDENTS
• SET OF QUESTIONS
  • WHAT VALUE CONFLICTS MIGHT THIS CLIENT FACE IN THERAPY?
  • WHAT BIASES AND ASSUMPTIONS PLAYED A ROLE IN YOUR CHOICE OF TREATMENT APPROACHES?
• GROUP DISCUSSIONS INCLUDED BRAINSTORMING ABOUT HOW TO WORK WITH CLIENTS AND HOW TO PROBLEM-SOLVE ISSUES THAT HAD COME UP DURING THE SEMESTER
CASES AND SIMULATIONS

• OPPORTUNITY TO UTILIZE CT VOCABULARY, E.G. VALUE ASSUMPTIONS, FACILITIES IN REASONING (YOU CAN ADD DIFFERENT EXAMPLES)

• VALIDATES BLENDING OF CT AND CONTENT KNOWLEDGE

• DEMONSTRATION OF THE VALUE OF REFLECTING

• PRACTICE IN HOW TO ASK QUESTIONS
ORAL FINAL EXAM

• STUDENTS ASSIGNED TO ONE INSTRUCTOR AND GIVEN A 30-MINUTE TIME SLOT
• STUDENT IS GIVEN A SCENARIO TO READ AND THEN IS ASKED 4 QUESTIONS THAT REQUIRE CRITICAL THINKING
• REPEATED WITH A SECOND SCENARIO
• SCENARIOS ARE RELATED TO THE FLUENCY AND CHILD LANGUAGE COURSES THAT THE STUDENTS HAVE BEEN IN THROUGHOUT THE SEMESTER
• QUESTIONS FOCUS ON CRITICAL THINKING RATHER THAN CONTENT KNOWLEDGE – ALTHOUGH SOME CONTENT KNOWLEDGE IS ASSUMED
• INSTRUCTORS SCORE STUDENT RESPONSES USING A RUBRIC
CSD 832A
Final Exam

Questions for the SpeechEasy scenario:

1. What *value assumptions* are being made in this case and by whom?

2. What *value conflicts* could arise as part of this scenario?

3. How good is the evidence for the SpeechEasy device based on their website (identify *ambiguities* and *fallacies* in the reasoning)?

4. Given your critical appraisal of the material supplied, how would you respond to Jared’s mother?
<table>
<thead>
<tr>
<th>Fluency Scenario:</th>
<th>10/9 Excellent</th>
<th>8/7 Adequate</th>
<th>6/5 Fair</th>
<th>Minimal</th>
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<tr>
<td><strong>Question 1</strong></td>
<td>Identified 3+ value assumptions; clearly understood the meaning of value assumption and no difficulty applying it to the scenario</td>
<td>Identified at least 2 value assumptions; appeared to understand the meaning of value assumption but some difficulty applying it to the scenario</td>
<td>Could only identify 1 value assumption; appeared to have weak understanding of the meaning of value assumption and difficulty applying it to the scenario</td>
<td>Did not know the meaning of value assumption</td>
</tr>
<tr>
<td><strong>Score:</strong></td>
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<td><strong>Question 2</strong></td>
<td>Identified 3+ value conflicts; clearly understood the meaning of value conflict and no difficulty applying it to the scenario</td>
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SUMMARY

• START WITH APPLYING CRITICAL THINKING IN NON-CLINICAL/SLP CONTEXTS
• HAVE STUDENTS GET INVOLVED IN FINDING EXAMPLES FROM THEIR OWN LIFE
• DISCUSSIONS AND REFLECTIONS ENHANCE LEARNING
• INTRODUCE PREVIOUSLY LEARNED CONCEPTS TO CLINICAL/SLP CONTEXTS – STARTING WITH THE STUDENTS OWN CLIENTS
ASK
QUESTIONS
Please