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Assignments & Activities Archive

“Getting a Peek Behind the Wizard’s Curtain”:
Teaching Students How to Read Academic Articles
with Haas’ ‘Learning to Read Biology’

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“Getting a Peek Behind the Wizard’s Curtain”: Teaching Students How to Read Academic Articles with Haas’ ‘Learning to Read Biology’

Kevin E. DePew

Overview

As instructors across the disciplines know, most incoming college students struggle to read academic texts. While there is an array of reasons that students might not be reading their assigned texts—from limited time to neurodivergent challenges to failure to see the assigned reading’s relevance—this series of activities is designed to familiarize students with the genres of academic articles and the process of reading rhetorically, or learning the text’s place within its conversation (e.g., author, institution, time of publication, the debates in the field, influencing ideologies). This series of activities can become a focused assignment that culminates in each student more extensively examining the scholarly discourse of their respective field of study (see final activity). Since this series of activities is designed to be completed over 10 class sessions, the entire series of activities might take three to eight weeks. While this can be a large portion of the semester/quarter, the series of activities is designed to deliberately slow down the process of teaching students how to read academic texts to help them develop confidence about achieved outcomes before moving on. If this series of activities does not meet a writing program’s or institution’s local student learning outcomes for writing, instructors are encouraged to supplement this reading instruction with writing instruction about students’ major disciplines or career goals.

Using Christina Haas’ longitudinal case study of Eliza’s four-year literacy journey in “Learning to Read Biology: One Student’s Rhetorical Development in College” (1994) instructors can 1) use the

content to highlight a single student's experiences becoming enculturated through academic and disciplinary prose, and 2) use their students' process of working to understand the text to illustrate Haas' argument about the importance of learning to read rhetorically. Putting these goals together, I describe this series of activities as "a peek behind the wizard's curtain" because it seeks to demystify the production of scholarship and how to access the knowledge within.

Time Commitment

10 class sessions

Materials

- *Written Communication's* pdf of Christina Haas' "Learning to Read Biology"
- Access to the Internet (e.g., computer lab, student owned device)
- Google Slides (or another online slide composing program that allows the class to share a slide deck)
- Google Documents (or another online document composing program that allows the class to share a slide deck)
- Campus' Learning Management System (LMS)
- Canva (or another program that affords the composition of an infographic)

Series of Activities Process

- Students will, in class, demonstrate their current understanding of the major concepts in Haas' article by defining *rhetoric* (or *rhetorical*) and *autonomous*. They are

encouraged to draw on their previous experience with the terms since the purpose is to gauge the knowledge they will bring to their reading rather than the accuracy of their knowledge. Students can, however, use the internet to define these terms if they do not feel they have a toehold to define them. After defining the terms students will answer the following questions: 1) In what ways do you see these two terms being opposites of each other? 2) In what ways do you see these terms used to describe the activity of reading? The instructor and the students will discuss what they learned. The instructor will praise educated guesses even if they are not accurate

- To continue to create a foundation for reading Haas' article, students will be placed in one of three groups based upon the Internet research and reporting of the following concepts.

Christina Haas (e.g., Who is she? Where did she get her degree? What topics has she written on? Read some of the abstracts and descriptions for her publications. What else would you want to know about her?)

IMRAD Essay (e.g., What is an IMRAD Essay? What purpose does it serve for communicating a research study to its audience? Who is often the intended audience? What purpose does the *research question* serve for an IMRAD Essay? What else do you want to know about IMRAD Essays?)

Longitudinal Study (e.g., What is a longitudinal study? What purpose do they serve for understanding a topic that is being researched? What are some advantages of them? What are some limitations of them? What else do you want to know about longitudinal studies?)

Students will compose their findings on three or more slides in a Google Slide Deck shared among the entire class. They

are encouraged to use hashtags, images, gifs, memes, and/or short videos that will help them and their peers remember what they are teaching about their assigned topic. After 30 minutes, students will present their findings

- Students will begin to read Haas’s article by starting with the abstract on page 43 (i.e., the text at the top in italics). Based upon the title, abstract, and what is discussed in the previous activities, students will free write about what they think Haas’ article will be about? The instructor and students will discuss their hypotheses with educated guesses being praised.
- Before the students start reading the first few sections of the article, the instructor will respectively teach them the genre expectations for an Introduction and Literature Review section. Slides or the lecture can be based upon the following material:

Introduction—Establishes the topic of the work and sets expectations for how the author(s) will approach the topic

Five-paragraph essay—“Say what you are going to say.” In often one-paragraph, it introduces the topic, provides the thesis, and outlines the claims (or supporting points) that the author(s) will use to prove their thesis.

IMRAD essay—Stands for Introduction, Methods, Results, and Discussion. Introduces the topic, identifies a problem, proves that problem is a problem, and maybe forecasts various features of the rest of the essay. Somewhere in the Introduction, Literature Review, or Methods, the writer will present their research questions.

IMRAD essay research questions vs. Five-paragraph essay thesis—Like a thesis, research questions help to focus the data collection and the writing of the essay. Unlike a thesis statement, because the research question is a question and not a statement, the data collection process is *an act of discovery* and not a process of proving one’s point. Therefore, the essay’s argument reflects what you *learn* from your data collection whether or not it agrees with what you *believe*.

Literature (from Merriam-Webster)—(a) “writings in prose or verse, especially writings having excellence of form or expression and expressing ideas of permanent or universal interest.” (b) “*the body of writings on a particular subject*”

Literature Review—an early section of the essay that describes the body of writings—often scholarship—on the particular subject of the essay; not just any writing on the topic, but on the specific aspect of that topic (e.g., for the topic of *antiracist pedagogy* one might choose to be mostly focused on *linguistic justice*). This is often *extensive*, but not *exhaustive*. Primarily serves two purposes: 1) establishes the conversation that the data and analysis of that data are going to be compared to, and 2) establishes the precedent of how previous treatments of this topic arrived at its conclusions (e.g., the methods used to collect data). Unlike a five-paragraph essay, the literature cited in these sections is not (and SHOULD NOT be) just literature that just supports your perspective about the problem.

Ask students to skim pages 43-50 (i.e., “Introduction” (first section, unnamed), “Learning About Literate Activity in the Sciences,” and “Rhetorical Reading”) paying attention to the presentation of the introduction and literature review. In

your LMS, have students write 150–250-word responses to one or both of the following questions:

- How do you specifically see Haas meeting the expectations of an IMRAD essay in these sections? Cite specific examples from the text and explain how those examples demonstrate Haas meeting the expectations.
- What problems are you experiencing reading and understanding these first eight pages of Haas' article? Point to specific passages or words? What specific work are you going to do to help yourself understand the article (feel free to create a checklist for yourself)? What specific work do you need me to do, as an instructor, to help you understand this article? I am giving you this opportunity to explain your frustrations with this article, so that I can help you.

The instructor and students will discuss their experiences skimming this text.

- After reading pages 43-50 for homework, students will be placed in small groups in which they are assigned (or choose) a few scholars cited in those eight pages. Using the reference list, students will search for texts Haas cites, read the abstracts, introductions, and/or summaries of these texts. They will also do an Internet search of the author(s).
- Working from the same Google Slides slide deck, students will compose two slides in which they 1) explain who the author(s) is and the topics they write about, 2) briefly summarize the abstract/introduction/summary

of that author's text in your own words, 3) explain the connection between this text and Haas' text; essentially you are explaining why you think Haas referenced this text (i.e., how is it part of the same conversation?)

- Before reading the methodology section of Haas' article, the instructor teaches them the genre expectations for an Methods and Methodology section. Slides or the lecture can be based upon the following material:

Methodology—A description of the steps the researchers use to collect and analyze the data that will answer their research questions with an explanation for why they chose the steps that they did.

Quantitative Data—Often associated with data that can be counted (or quantified). In the social sciences, it is often collected through surveys. With large numbers of respondents, quantitative data is often used to generalize about larger populations.

Qualitative Data—Often associated with descriptive data. In the social sciences, it is often collected through interviews, focus groups, and/or observations. With smaller numbers of participants, the researcher cannot generalize about larger populations but get a more detailed understanding of the issue.

Students will be placed into small groups and asked to read Haas' research questions on page 50. Then they will discuss 1) Do you think Haas is collecting qualitative or quantitative data to answer her research questions and why? 2) If you also wanted

to learn about college students' autonomous and rhetorical reading habits, what questions would your group ask? 3) How would you collect that data and why? The instructor and students will discuss their responses to these questions. Depending on the students' responses, the instructor will work with students to compose survey or interview questions for their hypothetical studies.

- After reading pages 50-59, students will “FreeTweet,” or compose a 280 character response to the question “What, in your opinion, is the value of studying just one student in depth?” in a shared Google Document. As you compose this “tweet,” imagine that you are writing it as a review/response to Haas’ article. Students may use hashtags, images, gifs, memes, and/or short videos—where relevant. After all students compose their tweet, they need to read through their peers’ “tweets” and respond, still in the genre of a tweet, to two peers by typing underneath the peers’ post. The instructor and students will discuss the students’ “tweets” in light of the previous conversation about methodology and explore why Haas chose to do a longitudinal study.
- After the students read pages 59-68, the instructor will explain the Results sections of an article.

Results—The researcher provides the raw data, often without interpretation. This can be in the form of prose, tables, figures, or narratives. The researcher is expected to interpret the results to answer their research questions.

Students will be given one slide in a shared Google Slide

deck in which they will individually represent their college reading experiences. Since Google Slides affords multimedia content, students can choose to represent their experiences with words or use images, gifs, memes, sound, and/or videos. After 15-20 minutes, each student will present their slide. If they chose to communicate through multimedia, they need to explain the metaphorical value of these features. The instructor will then lead a discussion comparing their experiences to Eliza's.

- After the students read pages 68-80, the instructor will explain the Discussion sections of an article.

Discussion—The researcher interprets the data with a focus on answering their research questions. They also compare the results of this study to the results of similar studies, emphasizing the similarities and trying to explain differences. Often ends with new questions raised by the data and suggestions for future research.

Students will be briefly taught the genre of an infographic. Then they will be placed in small groups in which they will use Canva (or Google Slides) to compose an infographic in which they use the Results and Discussions of Haas' article to teach incoming first-year students the literacy expectations of college and how to successfully navigate those expectations. After 30 minutes, students will present their infographics.

- Finally, the instructor will review the steps the students took to understand Haas' article. These steps include the following:
 - Researching the author and the context
 - Skimming the article for repeated terms and looking up

those terms

- Reading the abstract or introduction and making a hypothesis about the text's content and purpose
- Understanding and reviewing the purpose of each section of the essay
- Imagine that you are equal partners with the author(s) and the conversation you would have about the text
- Asking the instructor for assistance understanding parts of the text you are still struggling with

Students will look at the assigned readings from any class that is not this writing course. Students will choose one reading; (this can be a textbook) and write a short report that includes the following:

- The course you are reading for.
- The name of the text.
- The author(s) of the text.
- The specific work from the reading steps above that you did while reading; list a few specific reading strategies you followed helping me understand what part of the text for which you were using each one.
- The ways in which the reading steps above helped you understand that text better; for each item in the list you created in the previous bullet point, explain how the strategy you used helped you understand the text. In other words, tell me what you learned in that part of the text.

- If relevant, what questions do you still have about the text and how will you answer them?

Learning Outcomes

Students engaging in this series of activities will:

- Learn strategies for effectively reading academic articles, specifically how to read them rhetorically
- Learn the conversational nature of academic scholarship
- Understand that reading academic articles is an involved process that requires recursive work rather than a single action
- Learn the genre of an IMRAD essay and how it narrates the process of creating disciplinary knowledge

Learning Accommodations

- Students will be taught about digital resources like Speechify and Listening that can read pdf documents
- Students may choose to work with hard copy materials depending upon campus resources, individual resources, and experiences with digital technology
- Group activities can be done individually to accommodate learning differences.

Works Cited

Haas, Christina. "Learning to read biology: One student's rhetorical development in college." *Written Communication*, vol. 11, no.1, 1994, pp. 43-84.