



2023

Student Self-Diagnostics: Engaging Students as Co-Respondents to Their Own Writing

Robert M. Rowan

Case Western Reserve University

Follow this and additional works at: <https://scholarsarchive.byu.edu/journalrw>



Part of the [Arts and Humanities Commons](#), and the [Education Commons](#)

Recommended Citation

Rowan, Robert M. (2023) "Student Self-Diagnostics: Engaging Students as Co-Respondents to Their Own Writing," *Journal of Response to Writing*: Vol. 9: Iss. 2, Article 2.

Available at: <https://scholarsarchive.byu.edu/journalrw/vol9/iss2/2>

This Teaching Article is brought to you for free and open access by the Journals at BYU ScholarsArchive. It has been accepted for inclusion in *Journal of Response to Writing* by an authorized editor of BYU ScholarsArchive. For more information, please contact ellen_amatangelo@byu.edu.



Student Self-Diagnostics: Engaging Students as Co-Respondents to Their Own Writing

Robert M. Rowan

Case Western Reserve University

Opportunities for student self-analysis and reflection are far less common in the classroom than they should be. Advances in the neuroscience of adult learning have demonstrated that reflection or similar metacognitive labor is crucial to long-term retention and integration of new material. The benefits of such reflection apply to writing instruction as well as most other areas of learning.

Renowned neuroscientist James Zull (2006) described four pillars of adult learning: gathering data, reflecting, creating, and testing. He emphasized that “educators cannot give their ideas to adult learners like birthday presents” (p. 8). Instead, he continued, teachers can give their students new experiences. But the tricky part about offering new experiences is that students are sometimes so focused on the end reward (the grade) that they rush through the assignment without pausing to savor the lessons writing instructors have carefully crafted.

Imagine if writing instructors created a tool or method for the writing classroom that helps focus each student’s mind on the experience by inviting students to slow down so they can explain, critique, and analyze their work before it is reviewed by their instructors. When the instructors respond, they can have a more fully engaged conversation about the total production of the document instead of simply

dictating edits and corrections. This method can also preserve a record of the student's gradually changing perception of their own writing and research.

In this article, I will explain the instrument I designed to encourage students to focus their reflection on specific learning outcomes or writing and research skills. Next, I will review the theories that contributed to this instrument's development, examine its compatibility with other pedagogical tools, and offer advice for creating and integrating your own version. I will conclude with a consideration of benefits, advanced options, and a parting reminder of the motivation with which the instrument is best used.

The Self-Diagnostic Instrument

Some years ago, at Illinois State University (ISU), I developed a tool that I call the Genre Understanding Sheet, or GUS. The name was chosen solely because it made a nice acronym, but you can name yours as you like. The GUS is a self-reflection and assessment tool that students fill out alongside their regular written assignments. They answer a series of interconnected questions to explain to me (and, just as importantly, to *themselves*) how they went about performing the work of the assignment. The questions are tied to our learning outcomes and the specific skills I'm asking them to practice or transfer from past classes to new purposes.

The response process also reinforces all four of the pillars Zull (2006) described: gathering data (research in many forms); reflecting on various aspects of their work process or products; creating (which we must remember includes bricolage, mashups, and all sorts of repurposing); and testing out their knowledge. I've recently learned from my colleague Joyce Walker that ISU's Writing Program still maintains the GUS as a "best practice" example for instructors and graduate teaching assistants (GTAs) in the program and that descendants of the original document are

currently in use. See Appendix A for a full, annotated sample copy of the GUS from a 2016 class.

Sites of Use

I have used the GUS in dozens of classes and with hundreds of students with great success. Students often provide thoughtful responses that demonstrate how they're revising or integrating new and old knowledge; how they test or challenge what they've learned; where they ran into problems and how they solved them (or didn't); and how they chose and vetted sources. Between semesters, I would typically review the overall quality of responses I had received and adjust the questions if student responses had too frequently been unclear or lackluster. Adjustments included rewording questions, reordering them, and sometimes replacing them with (hopefully) better questions.

At ISU, I used multiple generations of the GUS in Composition as Critical Inquiry, Writing for Business and Professional Organizations, and Technical and Professional Writing I and II. At Case Western Reserve University, I have used it in Professional Communication for Engineers (rebranded as the Assignment eXplainer or AX—see Appendix B). Each class had its own set of assigned genres for students to choose from, including a healthy cross-section of academic and workplace writing types. Some questions showed up across all classes, such as asking students to talk about genre, content, and audience. Other questions would be added or swapped in to address the course materials, learning goals, or themes.

Thus, the GUS is a living and adaptive document rather than a fixed or one-size-fits-all instrument. I don't believe that there's a singular, perfect set of questions waiting to be discovered, so I recommend that instructors treat the construction of their own GUS as a thoughtful but flexible (and maybe even deliberately messy) experiment.

Why the GUS Works

Particularly for essay-based composition classes, writing courses can seem very teacher-focused: Make the teacher happy, and do things that the teacher deems valuable. It is unfortunate but true that many students don't enjoy writing and only do it because teachers make them (Clarke, Best, and Picton, 2021). Those who teach English need to keep in mind that what's enjoyable for the teacher is often a duty or drudge for students. Recent study results by the UK's National Literacy Trust on writing among children and young people show there are only a few specific genres that were considered enjoyable for writing in their free time (none of these were essays), and, importantly, one aspect of writing that did consistently give them pleasure was receiving feedback. The GUS provides a guided opportunity for students to generate their writing responses as a subset of the total feedback to be given (along with the teacher's). In more practical terms, it also encourages students to think more deeply about the mechanics of their writing, research, and analysis. While this may not lead to a lifelong love of writing, it at least supports a worthwhile discussion about taking control of one's writing.

The theories and work that underpin the GUS—and the ways I use it—are somewhat diverse. To streamline the remainder of this document, I will provide a brief overview of my primary sources of inspiration.

Rationale and Citation Stacks

The ideal neurological state for learning is known as neuroplasticity, or neural plasticity, where the brain is ready to create new pathways and connections effectively. A positive and alert mental state *physically readies the brain* to receive and integrate new information. Teachers can't control all of the conditions that lead to neuroplasticity; however, they can create a supportive environment and engage learners in ways that break them out of the ruts they may find themselves in,

which is valuable for classes or material, such as writing and research, that don't easily command the students' attention. Of critical importance here is the fact that instructors want (and students need) the transfer of skills from one writing type to others, but that frequently does not happen without direct and sustained guidance. The GUS questions can be that guidance—or at least part of it—reinforcing the transfer of skills by asking students to think deliberately about their own habits and mental processes as they research, write, and revise. (See Ambrose et al., 2010; Caine & Caine, 2006; Clore & Palmer, 2009; Cozolino & Sprokay, 2006; Salomon & Perkins, 1989; Sheckley & Bell, 2006; Taylor, 2006; P. Wolfe, 2006; Zull, 2006.)

Reflection and analysis of one's thinking and learning processes are key activities promoted by the GUS. Kathleen Blake Yancey (2016) has long championed the role and power of reflection in the writing classroom and other writing contexts. Two of her recent books gather a host of scholars to explore and explain the ways reflective work can serve instructors and their students (Yancey, 2016; Yancey, Robertson, & Taczak, 2014). Among the currents flowing through these books are the paired roles of reflection and metacognition in skills transfer (from one writing type or situation to another). *Rhetoric of Reflection* is an edited collection of scholarship on reflection in a variety of contexts and genres, including the traditional essay, social media and other digital spaces, classrooms of other disciplines, and the teacher's process of pedagogy construction. In *Writing Across Contexts*, Yancey, Robertson, and Taczak (2014) presented their "inquiry into the transfer question, an inquiry focused on the role a curriculum integrating composition content, systematic reflection, and the theory/practice relationship could play in assisting students with the transfer of writing knowledge and practice" based on direct research in their writing classes (p. 4).

A deliberate and systematic review of a course's theoretical underpinnings in a tool such as the GUS can help students slow down

and take in the details rather than rushing from one assignment to the next. This can be especially useful if one's writing pedagogy asks them to work in new or unfamiliar ways. From 2010 on, I've used a nice schmear of genre theory, writing research, and activity theory in my approach to the writing classroom. Students learn *how to learn* about each genre of communication they encounter, as well as how to replicate or modify that genre themselves. Genre theory researchers have "revolutionized the way we think of genre, challenging the idea that genres are simple categorizations of text types and offering instead an understanding of genre that connects kinds of texts to kinds of social actions" (Bawarshi & Reiff, 2010, p. 3). The result is that genre is no longer viewed just as a classification tool for types of writing, but as a way of describing "a powerful, ideologically active, and historically changing shaper of texts, meanings, and social actions" (p. 4). This modern approach to composition has been applied across a spectrum of disciplines, languages, and ages in schools around the world (pp. 126–131). It's a departure from the traditional essay-based approach, so it can benefit considerably from a side-narrative (in the GUS, in classroom discussions, or by other means) about how this approach changes students' understanding of what it is to write.

The activity theory component is particularly useful in business, professional, and technical writing courses, where I regularly reinforce the fact that the student's job in their future workplace will be a major shift from school. Instead of everyone else (teachers, teaching assistants, staff) helping the student get things done, it will soon be the student's job *to help other people get things done* within a complex set of activity systems.

Bawarshi and Reiff (2010) and numerous other scholars have generated a wealth of successful outcomes across a variety of use cases. A genre and writing research approach is rooted in fertile and productive ground. I've found it to be a powerful and flexible toolset for teaching lifelong writing skills; it also invites direct critique of the

genre(s) being used, which essay-based composition doesn't always allow for. The GUS can support this pedagogical approach and augment its strengths of context analysis and practical application. Your questions can invite students to think forward in time, beyond school, to envision how writing will still play a critical role in their lives. (See also Artemeva & Fox, 2010; Kain & Wardle, 2005; Reiff & Bawarshi, 2011; Rounsaville, Goldberg, & Bawarshi, 2008; Spinuzzi & Jakobs, 2013; Wolff, 2013; Yu, 2008.)

Pairing With Other Pedagogical Tools

Most of these pedagogical tools are meant to *empower the student* in some way. I hope teachers will use the GUS in the same spirit. In each case below, the GUS questions and structure can be modified to elicit specific responses and to help students make particular mental connections.

Learning or Grading Contract

The GUS gives students a place to describe how they achieved the requirements of the assignment beyond the evidence provided by the work itself. If the learning contract is designed to grant students the space to occasionally stumble and recover, the GUS can help students document their efforts—successful or not—for a given assignment. This can be immensely valuable for the student, and it is useful as a prompt for discussion afterward. Danielewicz and Elbow (2009) wrote the first article I read on contract grading. There's a growing body of scholarship on benefits and implementation methods (not always in agreement with one another) for grading or learning contracts. Medina and Walker (2018) observed that grading contracts could be useful for critically interrogating the student-teacher relationship and any or all of its attendant expectations as matters of social justice, including the grading system that is usually read-only for students: "In practice what this means is that grading contracts can

potentially serve as a site to facilitate a [social justice oriented] conversation about the values students and teachers should be held to and how we might use the teacher/student dynamic to faithfully represent these values throughout the course of a semester” (p. 48). You can capture part of these robust conversations in the GUS.

Flipped Classrooms, Active Learning, or Sticky Learning

The GUS should be used as a place where students can discuss their work process, their peer collaboration process, and how they engaged with course material differently than they normally would have because of the flipped nature of the class. Students can also provide real-time feedback on instructional material as they use it. (See Bentley Davies, 2021; King, 1992; Opitz & Ford, 2014, and many others.)

Genre and Writing Research/Activity System Pedagogy

The questions in the GUS can guide students along as they perform new and different types of genre analysis or writing research. It acts as a soft set of handrails to support students as they cross boundaries between the types of writing they’ve done in the past and the writing they’re learning to do now. This also promotes skills transfer from one writing type to another more effectively than traditional essay-focused writing typically does.

Team Charters

In a group project, documenting or critiquing task handling and workflow in the GUS can provide both the students and the teacher with useful insight into what’s working and what’s not in a particular team’s practices. Joanna Wolfe’s (2010) book *Team Writing: A Guide to Working in Groups* is an excellent resource for any class or job site that does much group work, and it includes guidance on collaboratively drafting a workable charter for the team.

Specialized Pedagogical Components

As an example, in my Intro to Technical Communication course, we talked a great deal about the act of teaching as it relates to technical and professional communication. More specifically, I assert that technical communication is a form of teaching, so examining teaching techniques can be very productive. Our study of teaching included readings, surveys on students' past experiences as both learners and teachers, and in-class discussions. The GUS for that course included a question connecting technical communication and teaching to help me and the students gauge how well the teaching component was working for them. In that same class, I also used a technique I picked up in a Future Professors workshop (hosted by ISU's Center for Teaching, Learning, and Technology), which was the creation of a "Big Question" that encapsulated the overall theme or arc of the course. In my case, the Big Question for technical communicators was, "How do we successfully explain complex things to others?"

Key Ingredients to Make the GUS Work Well

Specific, Focused Questions

"Tell me about your writing" is too open-ended, especially for students who haven't had to analyze themselves in this way before. Questions should generally elicit responses of 1–5 sentences or so. See Appendices A and B for a small subset of possible questions, but don't let them constrain you! Likewise, the survey questions in Appendix D of Yancey, Robertson, and Taczak's (2014) *Writing Across Contexts* are worth reviewing as you construct your own GUS. To encourage students to deeply interrogate their document or writing process, the assignment, or any other components of the class, teachers could also invite students to pose and respond to their own thought-provoking question at the end of the document.

Interconnected Questions

The instructor's questions should guide students around and through the assignment so that they will focus on important aspects of the work to answer the GUS questions well. Too many non-sequiturs, or changing the questions too often during the semester, will make it hard for students to see how the GUS and the assignment are working as a team.

Limit the Number of Questions

This was always challenging for me; there was so much I wanted my students to think about while they were writing. I experimented with GUSs of various lengths, and the longer ones tended to wear students out. Too many questions, even if they seem fascinating, will have diminishing returns. Too few questions, and the instructor won't get much information. In my experience, the sweet spot seems to be six to twelve questions. Some assignments *won't* need this tool: short assignments, in-class exercises, or work that's already reflective (such as surveys or a research journal) may benefit less from a GUS.

Exceptions

This past semester (Spring 2023), I introduced an optional set of four questions at the end of the AX for my engineering students. The first of these was, "How are you doing?" That's pretty open-ended, and often students would ignore it or write something like "Fine." Occasionally, however, students responded with details about their busy lives or stresses, and a few times, I reached out to the student or mentioned to their advisor that they could use a check-in. If a teacher is comfortable inviting their students to open up a bit, and they're willing to follow up with them if needed, showing a bit of care and concern can make a big difference for someone who may need it. Sometimes, an open-ended question can give a student room (or permission if they think of it that way) to vent or muse or ask for help.

Integrating the GUS Into Your Coursework

Introduce the GUS at the start of the semester and use it regularly. It will not work as a one-time exercise, just like one set of arm curls won't give you amazing biceps. Repeated opportunities will lead to improved performance for most students. The GUS is mentioned throughout my course materials for the classes that use it, and it's always included in our digital files on Canvas or Google Drive. I usually introduce the GUS briefly on the second or third day of class, and we examine it in more detail alongside the first assignment that's eligible for it. For best results, teachers should help students see each assignment and its GUS as a team rather than "work" and "afterthought."

Students need to be incentivized to take on this new and unfamiliar form of work. Most students have little to no experience writing reflectively or analytically about their writing process, so they may resist at first. Incorporate the GUS into the course grade in a meaningful but not punitive way. In my courses with a learning contract, a completed GUS was required for most assignments to receive credit. The trade-off or incentive was that a thoughtful set of responses on the GUS could offset weak performance on the main assignment document and allow them to earn a good grade even when the assignment didn't go as planned.

Students' Response Process

Ask students to fill out the GUS as they work on the main assignment instead of leaving it until the end but accept that some of them will do it this way and some won't. In my view, it's preferable but not critical to fill it out alongside the main work as long as their responses are reasonably thoughtful. There's not much one can do to change this behavior except to ask. Some students may never fully warm to the GUS, and that's okay, too.

Be Patient

It is important not to worry about grammar or mechanics here. This is thought work, and that's the wavelength the teacher should respond on. Many students won't do well on their first try. Their answers will be short, shallow, hesitant, or otherwise lackluster at first. This is normal. Writing about one's writing process can be challenging, even for experienced writers. Because this is a new genre for most students, the "essay survival" techniques they've built up will usually not be in play, and their responses will be more unfiltered and honest—that's what is wanted. As the teacher, give positive feedback whenever possible, and as ideas begin to bloom, invite students to expand on the idea in their next GUS, if applicable, or bring it up in class for discussion. Most students should show substantial improvement by the middle of the semester and a surprising depth of thought (at least from some of them) by the end. If the course design allows rewrites, instructors can ask the students to respond specifically to their notes so students feel like there's something more they can contribute to the GUS in a revision.

Benefits of the GUS

Responding to student writing can seem like guesswork as instructors try to understand the choices the students made, whether they misread, misremembered, or misunderstood the assignment, or (on the flip side) whether they're being smarter or more insightful than their teachers are giving them credit for. The GUS makes student writing more transparent by providing a side narrative or rationale for their choices in researching, writing, organizing, or any other attributes teachers care to have them focus on. This can be immensely helpful when trying to track down the source of a student's omissions or misperceptions about the work they're doing, and it can be used to audit the effectiveness of the course design or the delivery of the assignment.

The four pillars of adult learning previously described by Zull (2006) can each be touched upon with a well-designed GUS: gathering data, reflecting, creating, and testing. Instructors can design questions to dive more deeply into any of these areas. Students learn best in a supportive environment, and a document like the GUS allows students to do more than just perform for the teacher—it allows them to be *seen*. To share their struggles. To demonstrate their efforts off-screen (or off the main assignment page) in candid ways that may be surprising.

The GUS questions can be changed before each new semester as instructors start to build up a picture of how their students respond to them. As the semester progresses, teachers may develop a larger pool of questions, including some with increasing complexity that can be added strategically (one or two is plenty). If they are particularly ambitious, instructors might even set up a tracking database to record responses to each question for later analysis.

Two topics I'm interested in but haven't yet tested are gamification and uses for (with or against) generative artificial intelligence such as ChatGPT. Gamification involves turning classroom activities into games or competitions as a means of encouraging creative solutions and collaboration. I believe the GUS or some variant could be compatible with a gamification approach to genre and writing research, but I haven't experimented with this yet. Likewise, ChatGPT is a tool on a lot of teachers' minds lately (and remember that it is only a tool, no matter how impressive or dystopian the various claims about its potential might sound). Rather than issuing a blanket prohibition on its use in the writing classroom, students could be allowed to experiment with ChatGPT and document their work in the GUS. This could include questions about their process, edits they made to the generated material, strengths and weaknesses of ChatGPT for different types of writing, and so on.

I've added one such question to the AX for the upcoming semester (see Appendix B, Section III, Question 4), so I don't have any results to report yet. Like the "web text" question in the 2016 GUS, this question is meant to give the students room to honestly discuss any borrowing they may have done without fear of punishment for plagiarism or cheating. I mention these two topics here as a nudge to the adventurous reader to try the GUS under novel conditions and report back.

Parting Thoughts

Years ago, while working on my doctoral dissertation, which also made use of student responses and other feedback, my director relayed a conversation he'd had with another of my committee members. The other member expressed some surprise at the depth and quality of responses I was getting from my students and wondered how I did it. My director replied, "He *asks* them."

As I said in the intro, instructors don't ask students what they think about their own work or progress nearly enough. The GUS can elicit honest and thoughtful feedback from students, but it mustn't be treated as a gimmick or busywork. As long as the students trust their teacher, they'll most likely trust that the GUS is a meaningful part of the work. However, the deployment of the GUS should be transparent, just like the transparency instructors ask of students. It's a request that they set aside the pantomime of "student performing for the teacher" and reveal themselves more fully as people grappling with the challenging work of learning to communicate and using the imperfect tool of language to do it.

Respect the fact that they're *not* obligated to reveal themselves in this way. Every student everywhere has at least some frustrating, or even trust-breaking, experiences with teachers in their past, so it must be made very clear that this new and unfamiliar tool will never be used as a "gotcha" document as long as it's completed in good faith.

Maintaining this trust also reinforces the idea among students that the classroom is a safe and supportive place for learning to happen.

References

- Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works: 7 research-based principles for smart teaching*. San Francisco: Wiley.
- Artemeva, N., & Fox, J. (2010). Awareness versus production: Probing students' antecedent genre knowledge. *Journal of Business and Technical Communication*, 24, 476–515. <http://dx.doi.org/10.1177/1050651910371302>
- Bawarshi, A. S., & Reiff, M. J. (2010). *Genre: An introduction to history, theory, research, and pedagogy*. West Lafayette, IN: Parlor Press.
- Bentley Davies, C. (2021). *Sticky teaching and learning: How to make your students remember what you teach them*. United Kingdom: Crown House Publishing.
- Caine, G., & Caine, R. N. (2006). Meaningful learning and the executive functions of the brain. *New directions in adult and continuing education: The neuroscience of adult learning*, 110, 53–62. <http://dx.doi.org/10.1002/ace.219>
- Clark, C., Best, E., & Picton, I. (2021). *Children and young people's writing in 2021 and their reflections on writing during the Covid-19 pandemic in 2020*. London: National Literacy Trust. Retrieved from https://cdn.literacytrust.org.uk/media/documents/Children_and_young_peoples_writing_in_2021.pdf
- Clore, G. L., & Palmer, J. E. (2009). Affective guidance of intelligent agents: How emotion controls cognition. *Cognitive Systems Research*, 10, 21–30. <http://dx.doi.org/10.1016/j.cogsys.2008.03.002>
- Cozolino, L., & Sprokay, S. (2006). Neuroscience and adult learning. *New directions in adult and continuing education: The neuroscience of adult learning*, 110, 11–20. <http://dx.doi.org/10.1002/ace.214>
- Danielewicz, J., & Elbow, P. (2009). A unilateral grading contract to
- Rowan, R. M. (2023). Student Self-Diagnostics: Engaging Students as Co-Respondents to Their Own Writing. *Journal of Response to Writing*, 9(2), 40–64.

- improve learning and teaching. *College Composition and Communication*, 61, 244–268.
- Kain, D., & Wardle, E. (2005). Building context: Using activity theory to teach about genre in multi-major professional communication courses. *Technical Communication Quarterly*, 14, 113–139. http://dx.doi.org/10.1207/s15427625tcq1402_1
- King, A. (1993). From sage on the stage to guide on the side. *College Teaching*, 41, 30–35.
- Medina, C., & Walker, K. (2018). Validating the consequences of a social justice pedagogy: Explicit values in course-based grading contracts. In Haas A. & Eble M. (Eds.), *Key theoretical frameworks: Teaching technical communication in the twenty-first century* (pp. 46–67). Louisville, Colorado: University Press of Colorado
- Opitz, M. F., & Ford, M. P. (2014, May 8). Engage students (and entertain them a little too!) *Reading today online*. Retrieved from <http://www.reading.org/reading-today/classroom/post/engage/2014/05/08/engage-students-and-entertain-them-a-little-too>
- Reiff, M. J., & Bawarshi, A. (2011). Tracing discursive resources: How students use prior genre knowledge to negotiate new writing contexts in first-year composition. *Written Communication*, 28, 312–337. <http://dx.doi.org/10.1177/0741088311410183>
- Rounsaville, A., Goldberg, R., & Bawarshi, A. (2008). From incomes to outcomes: FYW students' prior genre knowledge, meta-cognition, and the question of transfer. *WPA: Writing Program Administration*, 32, 97–112.
- Salomon, G., & Perkins, D. (1989). Rocky roads to transfer: Rethinking mechanisms of a neglected phenomenon. *Educational Psychologist*, 24, 113–124.
- Sheckley, B. G., & Bell, S. (2006). Experience, consciousness, and learn-
- Rowan, R. M. (2023). Student Self-Diagnostics: Engaging Students as Co-Respondents to Their Own Writing. *Journal of Response to Writing*, 9(2), 40–64.

- ing: Implications for instruction. *New directions in adult and continuing education: The neuroscience of adult learning*, 110, 43–52. <http://dx.doi.org/10.1002/ace.218>
- Spinuzzi, C., & Jakobs, E. (2013). Integrated writers, integrated writing, and the integration of distributed work. *Connexions*, 1, 119–124.
- Taylor, K. (2006). Brain function and adult learning: Implications for practice. *New directions in adult and continuing education: The neuroscience of adult learning*, 110, 71–86. <http://dx.doi.org/10.1002/ace.221>
- Wolfe, J. (2010). *Team writing: A guide to working in groups*. Bedford/St. Martin's.
- Wolfe, P. (2006). The role of meaning and emotion in learning. *New directions in adult and continuing education: The neuroscience of adult learning*, 110, 35–42. <http://dx.doi.org/10.1002/ace.217>
- Wolff, W. (2013). Interactivity and the invisible: What counts as writing in the age of Web 2.0. *Computers and Composition*, 30, 211–225. <http://dx.doi.org/10.1016/j.compcom.2013.06.001>
- Yancey, K. B., Robertson, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing*. University Press of Colorado. <https://doi.org/10.2307/j.ctt6wrr95>
- Yancey, K. B. (Ed.). (2016). *A rhetoric of reflection*. University Press of Colorado. <http://www.jstor.org/stable/j.ctt1djmhfq>
- Yu, H. (2008). Contextualize technical writing assessment to better prepare students for workplace writing: Student-centered assessment instruments. *Journal of Technical Writing and Communication*, 38, 265–284. <http://dx.doi.org/10.2190/TW.38.3.e>
- Zull, J. E. (2006). Key aspects of how the brain learns. *New directions in adult and continuing education: The neuroscience of adult learning*, 110, 3–10. <http://dx.doi.org/10.1002/ace.213>
- Rowan, R. M. (2023). Student Self-Diagnostics: Engaging Students as Co-Respondents to Their Own Writing. *Journal of Response to Writing*, 9(2), 40–64.

Appendix A

Genre Understanding Sheet (GUS)

The GUS is a tool to help you actively think about what you're learning while you work on the assignment (not just at the end). Be specific and detailed in your explanations below, and describe how you arrived at each answer. In other words, answer the follow-up question, "How do you know this?" for each item. Avoid vague, over-used terms such as "professional" or "formal." Save your answers in a separate document with your name and the assignment name.

This version of the GUS was designed for an Intro to Technical Communication class.

1. **Genre Name or Description.** Remember that many genres are hybrids without a formal name.

Note. This is a baseline calibration to make sure students can identify what they're working on; it is more significant for classes where multiple genres are in play.

2. **Writing Purpose.** What is the business task you're trying to accomplish with this document?

Note. "Business task" could be swapped out with "communication task" or something similar.

3. **Audience Needs.** Who are your primary audiences? What do your audiences want or need from this document? How will this document be used by your audiences? What kind(s) of persuasion are you using with each audience to encourage them to accept your message or to trust you as a reliable source of information?

Note. If the sole intended audience is the teacher, as with an essay, this question could be modified to query what

the student thinks the teacher needs in order to effectively assess the work.

4. **Content.** What is your content (the facts, figures, images, and details)? Is this genre suitable for the task you're working on? Is it a good fit for the content you're trying to deliver and the audience you're trying to reach? If you're deliberately breaking a genre's conventions or expectations, explain why and describe the results you want to achieve.

Note. Even in an essay-based course, this can help reveal how students perceive the subject matter they're working with.

5. **Research.** Describe and document (i.e., list sources) the research and other knowledge work you performed for the assignment. "I Googled it" is not sufficient—be more thorough.
 - a. List and describe your **genre** research below. Copy headings and repeat for each source.
 - i. Author(s)
 - ii. Title or description
 - iii. Useful because
 - iv. Reliable source because
 - v. Link
 - b. List and describe your **content** research below (including images).
 - i. Author(s)
 - ii. Title or description
 - iii. Useful because
 - iv. Reliable source because
 - v. Link

- c. List and describe your **audience** research below.
 - i. Author(s)
 - ii. Title or description
 - iii. Useful because
 - iv. Reliable source because
 - v. Link

Note. Earlier versions of the GUS didn't include sections i–v (above), but students' responses to their research were sometimes vague, so I decided to be more explicit. The distinctions between genre, content, and audience research may or may not be useful for your purposes. As an alternative, you could have students use the CRAAP test on their sources and summarize the results here.

6. **Trajectories.** When producing this type of document, what tools, knowledge, and other genres are usually involved? Where will it go (and how will it travel) once it leaves your hands? How does this trajectory analysis affect your design of the document?

Note. This is partly a question about rhetorical velocity and partly about tools used; it could be broken into multiple, separate questions.

7. **Ethics.** What ethical, legal, or cultural considerations did you take into account when working on this assignment? “None” is the wrong answer. Ethical issues are often subtle and easy to overlook (our assumptions can blind us here), but that doesn't make the issues less important.

Note. This can be a challenging question for students, especially at first. It's best to use this if your class includes a discussion about how ethics might affect both the writing process and the target audiences' use of the

document (or any of the other infinite ways of discussing ethics).

8. **Web Text.** If you copied text from another source into your document (web text), explain what the copied text means and why it's a better choice than something you could say yourself.

Note. This is a plagiarism release valve; for my classes, students would sometimes mimic material they had found on the web, so this is a way of checking that they understood their material.

9. **Teaching.** What teaching skills or activities did you use while working in this genre? Does thinking about it from a teacher's perspective help you produce better work? Why or why not?

Note. This question is specific to my Intro to Technical Communication class.

10. **The Big Question.** How did you successfully explain complex things to others? Break this question down as it relates to this particular assignment and address it as best as you can.

Note. This question is specific to my Intro to Technical Communication class.

11. **Self-Analysis.** What made this genre easy or challenging for you to work with? What would you do differently next time? What discoveries did you make? How could you connect this work to writing or other activities you've done before, in school or elsewhere?

Note. This is often a site of deep and thoughtful reflection. It could be split into multiple questions.

12. **Group Contributions.** If this was a group assignment, describe the content and research provided by each group member.

Note. If your groups set up robust team charters at the start of the semester, this can be used as a way for them to document the expected vs. actual performance of each member.

Appendix B
**2023 Assignment eXplainer (AX) Questions Only, Professional
Communication for Engineers**

Part I: Basics

1. Tell me your name (first & last) and the assignment name.

Part II: Genre, Content, and Audience

1. Name or describe the genre(s) you created for this assignment.
2. What parts of the genre(s) are rigid, and what parts are more flexible? How so?
 - a. Rigid: consistent and specific formatting, info, or something else is expected or required
 - b. Flexible: a wider variety of formatting, info, or something else is allowed or encouraged
3. Where did your content (information) come from? Be thorough here.
4. How do you think the document(s) you created here would help someone get things done?

Part III: Writing and Research Processes

1. How did you decide to group or organize your information the way you did?
2. What information (if any) did you deliberately choose to leave out and why?
3. Describe one or two potential sources that you found, analyzed, and rejected (if you had sources for the assignment).
4. Did you use any generative AI tools (such as ChatGPT) to help you? If so, describe what the tool(s) produced

and how you modified it to meet the needs of the assignment.

Part IV: Skills Transfer and Integration of Learning

1. How are you making sense of our material so far, in this assignment or in general?
2. What was challenging, frustrating, or difficult about this assignment, the related readings, or class discussions? What, if anything, would you do differently next time?
3. How can you connect this assignment (any part of it) to other things you've learned or done?
4. How did you collaborate on this assignment? Remember that collaboration can happen on individual assignments, too, and it could include helping someone else with *their* assignment.

Part V: Optional Questions

1. How are you doing?
2. Is there anything you need from me that would help you understand our material better?
3. Create a question you wish I had asked here, and then write your response to that question.
4. Are you willing to let me share your anonymized responses to this AX with other students?

Note: I will assume “No” unless you specifically say “Yes.”