Chapter 20. PARSing out the Course: User-centered Design through HyperDocs in Online Writing Instruction

Kathleen Turner Ledgerwood LINCOLN UNIVERSITY

Abstract: HyperDocs is a term coined by Highfill et al. who developed a system for using the Google Suite in K-12 education classrooms. Although the idea of HyperDocs was originally created with the use of Google products, since that time Microsoft 365 and Box now provide many of the same tools for collaboration and sharing that Google does. Additionally, this concept may have originated in lower levels of education, but I find that it is very applicable to OWI and meets all four of the PARS standards for effective OWI. As Highfill et al. conceive of HyperDocs, they are more than just a document with links. Instead, HyperDocs offer a system for strong lesson design that walks students through a process of learning, with students as the focus of the document's design, a focus on UCD. HyperDocs allow teachers to focus on the UX in a unique way that highlights UCD. At the same time, the use of HyperDocs in either individual lessons or in whole units is at once personal, accessible, responsive, and strategic. This chapter will outline the ways that using HyperDocs in OWI helps students by meeting PARS criteria and using multimodal composition practices, and it will provide multiple ideas for using HyperDocs in online writing classes.

Keywords: HyperDocs, Google Docs, collaboration tools, lesson design

All of the discussion of user-centered design (UCD) aligns well with the idea of using Borgman and McArdle's (2019) PARS (Personal, Accessible, Responsive, Strategic) approach in designing online writing instruction (OWI).¹ Due to my experience with after school technology seminars and my research on HyperDocs, I've been using them in my online courses because they are very applicable to OWI, utilize all four or the PARS elements, and meet the standards for effective OWI. Although the idea of HyperDocs was originally created with the use of Google products, since that time Microsoft 365, Drop Box (dropbox.com), and Box (box.com) now provide many of the same tools for collaboration, commenting, and sharing.

^{1.} For access to multiple resources discussed in this chapter and more, please visit this Google Drive folder <u>https://bit.ly/2PiKYWc</u>

Additionally, this concept may have originated in K-12 education, but I find that it is very applicable to OWI and meets all four of the PARS standards for effective OWI. This chapter will outline the ways that using HyperDocs in OWI helps students use multimodal composition practices, and it will provide ideas for using HyperDocs in OWI. This chapter will also illustrate how the use of HyperDocs allows instructors to use all four elements of the PARS approach.

HyperDocs is a term trademarked in 2016 by Highfill et al. who developed a system for using the Google Suite in K-12 education classrooms (Hilton, 2020). Their goal was to use the Google Suite to move beyond simple documents with hyperlinks in them to documents that create interactive lessons to help build learning and critical thinking. HyperDocs is a system of using the collaborative tools within Google's features in order to create engaging lessons. (See further definitions and examples at hyperdocs.co). HyperDocs grew out of a desire by teachers to focus on usability and creation by the students, and therefore they place the focus on student choice and student voice. As a writing teacher, these concepts and goals immediately resonated with me as a way to help guide students through digital literacy and content creation. In Multiliteracies for a Digital Age, Stuart Selber (2004) argued for "three subject positions connected to the literacy landscape: students as users of technology, students as questioners of technology, and students as producers of technology" (p. 25). Selber essentially claims that students need functional, critical, and rhetorical literacy. Selber's call for helping students become digitally literate in these three areas aligns well with HyperDocs and the idea that this system is "making it possible for us to flip our role and the role of our students, from consumers to creators" (Hilton, 2020). Thus, HyperDocs is a call to place the end user, their learning process, and the online environment itself front and center in our lessons using a collaborative model for teaching.

What are HyperDocs?

As Highfill et al. (2016) conceive of HyperDocs, they are more than just a document with links; instead, Hilton (2020) defines HyperDocs as "An interactive Google Doc that replaces the worksheet/lecture method of delivering instruction" (<u>hyperdocs.co/courses/62</u>). Instead, HyperDocs offer a system for strong lesson design that walks students through a process of learning with a focus on UCD. Highfill et al. (2016) state,

> The reason HyperDocs work is because each one begins with a strong lesson design, curates quality instructional content, and packages learning in a way that engages learners. A Hyper-Doc shifts the focus from teacher-led lectures to student-driven, inquiry-based learning, allowing students to actually learn through exploration. (p. 7)

HyperDocs invite students to write together and collaborate with one another in the same document, allowing for a non-linear conversation in which they can comment on and add to each other's work. HyperDocs allow a lot of choice and curation of digital content to package either an individual lesson or an entire unit in OWI. HyperDocs promote learner-centered design (LCD) using a seven-step process.

The Basic HyperDoc Lesson Plan Template² (see Figure 20.1) explains the seven-step process created by the HyperDocs team and has boxes that anyone can fill in.



© HyperDocs

Figure 20.1. Basic HyperDoc lesson plan template.

^{2.} Visit <u>https://docs.google.com/document/d/1FF848DW78iE-Ht9MoJVDypoN5N-</u> 3jN9UuXssl_qTb1fo/edit

When I first started using HyperDocs, I thought it was a great way to outline a road map for students for an essay project from beginning to end. I created a road map with links to all of the resources for writing. I used a road map template that is in an open Google folder for teaching writing and reading. The template, originally designed by Genevieve Pacada, created a HyperDoc road map for an informative essay assignment. I took this template and idea and created an Argument Essay Road Map (see Figure 20.2).



Figure 20.2. Argument essay road map (View the road map at https://docs.google.com/document/d/iiJojZIEFH 3ujNleape83tt2FrS4TTueokdb_nqleMW4/edit)

HyperDocs Aligns with PARS Personal Elements and HyperDocs

HyperDocs focus on using collaborative digital tools and in so doing, this approach to designing elements for a course lend themselves to a very personal experience for the student. As Borgman and McArdle (2019) note, making OWI personal means that we do not have students engaging in passive learning, instead we build a social sense of community, paying attention to the entire experience of the students and being certain to engage all of their senses. The use of HyperDocs helps create "robust, sensory rich environments and engaging activities that bring students into contact with one another" (Ruefman, 2016, p. 8). HyperDocs focus on having students weave collaboration into the process of learning. This focus on collaboration means that through using a HyperDoc approach, teachers can engage the community of the class and reflect on their learning as they proceed through a lesson or unit.

HyperDocs also allow us to curate or create content in order to provide directions in multiple formats, including written directions and audio/video overview. HyperDocs can be useful in an OWI class because students can write comments and questions on the instructions or prompts, and the questions and answers can be seen by any student. The conversations can occur in the exact space that the ideas are formed. Students can also collaborate with each other, ask each other questions, offer resources or ideas, and discuss options right in the document itself. HyperDocs also allow the opportunity to reinforce content (have multiple formats to make content accessible). And we can build in multiple moments for constructive feedback within the HyperDoc, including using digital tools that might allow for screen capture, audio, and video feedback. HyperDocs allow us to package learning that engages users. HyperDocs shift the focus away from the teacher and toward the student by opening the assignment itself to questions and comments that students make. As Borgman and McArdle (2019) state, we want to make our instruction personal and engaging in order to move students "into a more dynamic and collaborative learning space" (p. 22). Using HyperDocs facilitates this kind of LCD and moves students into working together in collaborative spaces. This is one way we can invite "students to engage in a more developed learning community and to help reduce the teacher student power dynamics" (Borgman & McArdle, 2019, p. 22). Using these kinds of collaborative writing spaces helps students see their learning as more personal and helps them develop more personal connection to each other and to the instructor. For example, when I teach about peer review, I use a HyperDoc to get students to think through and research peer review strategies, then the class works together to come up with a list of guidelines and ideas that they want to keep in mind as they peer review each other's work (see Figure 20.11). Students created the guidelines together through comments and revisions that they began when I first introduced

the idea of peer review. After each peer review, we revisited and revised the chart, adding more about what the students wanted out of their peer reviews. This kind of a living document can easily be made using collaborative software, like Google Docs, and the comment feature proves valuable to revision and discussion on the document itself. Another example of collaborative writing from a professional development seminar where teachers collaborated on bringing their knowledge of HyperDocs together (see Figure 20.3). In their book on HyperDocs, Highfill, Hilton, and Landis (2016) offer a link to a list of different online collaborative tools one might assign to students in a HyperDoc (p. 48).

How are you already using Hyperdocs in your classroom/school?	What do you need to know more about to get started with HyperDocs?	What concerns do you still have regarding HyperDocs?	
I'm not using it yet. My students do all of their 'explorations' in google slides - they are hyperlinked to online resources, have videos in the slides, etc - but ALL of their work is on their slides, not collaborative with other students. I think creating a Hyperdoc would be every better.	I need the steps - I know there are different 'stages' to a HyperDoc-I need to learn how to think through those and tie them into my content.	Just making it work. I've seen them as full units worth of learning or just one day - I wonder which is better? I work in slides a lot, but I never seem to find great resources for high school social sudies.	Megan Gretzinger Oct 15, 2018 Lave Found Docs work better with HS.
I've only used one Hyperdoc during my current SS unit on government.	I need tools that will help elementary students use Hyperdocs with better ease.	Keeping elementary students on task and not getting hung up on commenting on other people's posts.	Check out https://padlet.com/edtechnut/socialstu dies
I created	How do I put a hyperlink into a doc?		From imported document
I haven't used it in school, but I did use it in college and in my student teaching.	I'd like to know how to present it to the teachers at my school, since I am the media specialist.	Math. Getting math to work with hyperdocs. I think the math teachers would like it, but the programs they use to create formulas may not be compatible.	Stephani Durant Oct 15, 2018 I wonder why I do like being able to embed into slides so much easier. My students are pretty good with slides
I have never used it before, but see this as a great tool.		When using someone else's hyperdoc, what if a link doesn't work or isn't available at your school? Can you edit it?	now. From Imported document Stephani Durant Oct 15, 2018 Thanks for the linkl From Imported document
I have used three hyperdocs this year. Looking to add many more. I love the idea of taking everything that I use and putting it in one place.	How to take it to the next level the difference between and ok HyperDoc and a great one!?	GRADING?? Seems like I can not simplify grading all the different parts.	

Figure 20.3. HyperDocs collaborative writing.

Accessible Elements and HyperDocs

When you begin to use this HyperDoc system, there are many ways in which you can adapt lessons and units for accessibility. Beginning with an accessible design is key to making sure to reach all OWI students. Additionally, in the case of OWI, as Borgman and McArdle (2019) state, "You must find a way to utilize the environment in which the course resides" (p. 39). HyperDocs are an excellent way to utilize the online environment and engage learners. If your university subscribes to Google products and every student has an account, like mine do, then it is easy to incorporate this environment from their university accounts. However, I've also taught at universities where they give everyone Box accounts (www.box. com/home) and my current university is in the process of switching to Office 365

products, and currently now faculty have Office 365, but students have Google. So, when I create materials for teaching faculty and professional development, I use Office 365 products, but I use my personal Google account to build materials for my students. I find all the same tools are available in almost all of the university cloud systems.

While it is important to remember that "each user interacts with multimodality differently" (Oswal & Melonçon, 2017, p. 70), we also must remember that students come to us with different levels of knowledge and at different places in their growth as writers. For example, I work at an open-enrollment HBCU which purposefully draws students from lower SES and from schools where many of my students have not written an essay of more than one-page in length. In order to reach a variety of backgrounds and knowledge in my first-year writing classes, I know that I must be able to cater to different skills. I'm able to build that into the HyperDocs, leaving students room to begin where they are comfortable and can call upon their apriori knowledge. One example of how I build in what I like to call a "choose your own adventure" in HyperDocs is in my Peer Review Hyper-Doc³ (see Figure 20.4).

Experiences with Peer Review Follow one in the chart below				
I've never done Peer Review before	Watch <u>this brief video</u> about what peer review is and how it helps writers			
I've done peer review, but haven't had the best experiences	Watch the first video at Writing Commons here			
l'm a pro at peer review; l love it!	Read this brief article or watch the video about improving peer review here			

Figure 20.4. Peer review experiences choices.

This document asks students to begin with different introductory material depending on their experience with peer review. Some of my students have never participated in a peer review, so they start with a more basic video. Many of my students have completed peer reviews, but didn't feel that it was a useful exercise, so they have a different video they can watch about the benefits of peer review.

^{3.} Visit <u>https://docs.google.com/document/d/1NkgXdBmyz3MlUWawOk5NyPYyD-</u>pvdTlvWVAoEXNsWoBw/edit

And the last box allows students who enjoy peer review to read or watch some tips for improving peer review. An example I used recently in a professional development session with high school teachers was a HyperDoc I created about using HyperDocs (<u>bit.ly/2UJIYL4</u>). Early in this HyperDoc I had a slide in which the teachers could go to resources depending on their familiarity with the concept of HyperDocs (see Figure 20.5). Each of the images on this slide is a link to more information about HyperDocs. This is another way in which we can bring accessibility to students and offer additional support to their learning journey.



Figure 20.5. HyperDocs.

One benefit of HyperDocs is that it is an easy way to invite students into dynamic learning spaces and to get them to become content-creators. For example, the last item on one of my HyperDocs introducing the idea of linguistic justice asks students to find sources related to what we've been discussing online and curate content for each other (see Figure 20.6 for a picture of the HyperDoc directions and Figure 20.7 for the linked document that students add content to).⁴ The collaborative nature of HyperDocs allows my students to ask questions and directly comment on my assignment and on the work of their peers; through the use of the collaborative nature of the HyperDocs, they enable students to be resources for each other in building their digital and multimodal repertoires. As Greer and Harris (2018) state, "If students see themselves as collaborators in the course design process, they are more likely to remain engaged and to begin to grasp the complexity of the tasks and processes they need to complete in order to learn and grow as writers" (p. 17). HyperDocs allows us to invite students into

^{4.} View SAE and Code Meshing at <u>https://docs.google.com/document/d/1s36spoQo_</u>repA7rz9dHy2yAypVoAhHH1g5kvlXLJkoo/edit

spaces to create materials for the class to use. An example of this is when I have students begin a persuasive essay: I start by having them brainstorm all their topics together in one Google Doc, Google Slides, or on a Google JamBoard. This way they can comment on each other's ideas, ask questions, and discuss all in one space. I also go in and add to the document, asking questions, helping to narrow topics, offering resources and ideas. We have a giant class collaboration space to write with each other about our ideas, thoughts, opinions, and knowledge. Students really love being able to interact together like this. And one beauty of it is we can do this asynchronously, checking in on the document, and figuring out how one broad topic might break down into many essay topics.

Apply	Your Task
Find and read something else online about Code Switching (Code Meshing) or Black Language. This can be a video, podcast, article, infographic, or any online source that extends and adds to our conversation.	Post a link to what you found here and fill in the chart for your sourc <mark>e</mark> .

Figure 20.6. Directions from Linguistic Justice HyperDoc.

After finding your own source, fill in your information and ideas in the chart below.				
Title and link to what you found about this broader topic (you might look up code switching, Black language, code meshing)	What are your thoughts on this issue of language and whose language is used in writing and education			
	Title and link to what you found about this broader topic (you might look up code switching, Black language, code			

Figure 20.7. Whole class Doc for student collaboration and sharing.

Responsive Elements and HyperDocs

Borgman and McArdle (2019) suggest that one thing you can do if you are tech savvy is to have a Google Document for your whole course that you can update as needed. That you can "give them a learning hub to navigate your class and mitigate confusion" (p. 46). You could strategically build a system of HyperDocs that lead students through the course. One aspect I really like about using HyperDocs in the writing classroom is that I can add and make changes to an assignment as we go through it. So as students ask questions, I can use the HyperDocs to place answers and extra help so that the whole class can see it, rather than just using one-to-one communication channels, like email. I often enable comments on my HyperDocs for students, so they can type questions right into it and I can answer any questions that they may have for the whole class. (See Figure 20.8 for an image of an assignment with sample student questions and my responses to their questions.)



Figure 20.8. Assignment with student questions and instructor responses.

This is one way in which we can think about the amount of time we spend responding to students and how we can be more effective. McArdle explained that after being flooded with student emails, "He started to choose quality over immediacy" (Borgman & McArdle, 2019, p. 54). Using Google Docs or Slides and giving students the ability to comment on the document can be an effective way to think about how we respond to students as a whole class, rather than responding to the same question through individual emails.

I also find that using HyperDocs is helpful in OWI because I can help students know when and how I will be interacting and commenting on their work. In both the instructions and a collaborative Google Doc, I'll often include information about how and when I will be looking at what they add. I want them to know exactly how I will interact with their work and when, so that they can go back and look through the comments, questions, and suggestions I add to their work. This methodology also helps to establish "yourself as an audience for your students," which is "actually a design issue" (Borgman & McArdle, 2019, p. 56). Also, having students use more collaborative environments opens them up to considering their audience to be more than their instructor, which builds a more authentic writing situation into the course. Instructors can design places where students create and write content that they know will be seen by many writers. Often this encourages a different kind of community of learners, where students collaborate and help each other on more than just their peer review assignments.

Strategic Elements and HyperDocs

Because of the nature of building HyperDocs, they force instructors to be strategic in creating content and plan lessons for student learning. In order to build a HyperDoc, I have to know the learning outcome and use backward design (Bowen, 2017) to walk through steps to teach a concept or skill. (See Figures 20.9, 20.10, 20.11, and 20.12 for a model of how to use strategic backward design through Hyperdocs.) The package of the HyperDoc forces me to be strategic as I think through that seven-step process. This helps instructors begin to think about designing for the learners in the classroom. Using HyperDocs allows me to plan an entire semester in one schedule on a Google Doc, I can organize modules linked off of this schedule, thus creating a central hub for my students. Students report preferring this because they can set their Google Drive to access files offline, conserving data plans and maintaining access when WiFi is unreliable. Additionally, students report this as easier to navigate than the LMS because their instructors often take such different approaches to organizing it.

Processes

Students should be able to

 Practice writing as a recursive process, that is, an ongoing process that allows writers to later invent and rethink as they receive feedback and revise their work



Figure 20.9. Learning outcome statement.

Figure 20.10. Peer review HyperDoc.



Figure 20.11. Collaborative Google Document.



Figure 20.12. Revision plan (following peer review).

Ever since I created my first HyperDoc to put all of the resources for a single essay assignment, I use HyperDocs to be strategic for all sorts of little lessons or big thoughts we return to throughout class, as well as for whole units. I often allow students to choose topics or readings that are different to give them some choice in what they discover. Then they turn around and create content for students who read something different from what they did. In OWI, options allow students to have choice that makes the lesson more personal, it makes them take control of teaching one another, and they become collaborators in the teaching and learning process. The collaborative nature of HyperDocs fits so well in the context of a OWI because "Both instruction and learning to write are a collaborative process, a team effort of give and take" (Borgman & McArdle, 2019, p. 10). We can strategically design more collaboration in OWI.

PARS & HyperDocs

In OWI, keeping the PARS approach in mind as you start to try new tools and approaches can be very helpful. HyperDocs add to this framework by allowing students the ability to explore, and we need to keep the learning process in mind as we create and curate content for students. Highfill et al. (2016) emphasize that HyperDocs "create learning experiences that highlight how students learn rather than simply emphasize what students learn" (pp. 12-13). My students report that designed documents with short and easy directions or bulleted points are more appealing to them, which aligns well with UCD information design to "chunk" information to reduce cognitive load. I always make sure to ask students for feedback on the documents they are using, which helps me adjust my assignments, lessons, and units to better assist students.

HyperDocs, like the OWI Community (<u>owicommunity.org</u>) offers an online community and a wealth of resources to help generate ideas, get started, and use templates from other teachers. So far most of the HyperDoc lessons and units are made for K-12 students, but there is great potential for more discussion and research in higher education around OWI and course design. Hyperdoc templates have been helpful in getting me started, but as my confidence expands, and my use of PARS expands, I can see how I can improve the docs and my teaching by making each doc more personal, accessible, responsive, and strategic.

Training students on HyperDocs

When I first use a HyperDoc in a class, I have found that the first introduction is best used as a training tool. I adapt a Google Slide presentation that was initially created by Nicole Beardsley.⁵ This walks students through what to expect and do

^{5.} View How to Hyperdoc at <u>https://docs.google.com/presentation/d/1BW_DTi4PSn-</u>Mu5ReJruhXUiGt4m_zpA-1Q9_qtEzh8eY/edit#slide=id.g35f391192_00.

with a HyperDoc. It's always important to keep in mind that students will come to documents with a variety of skills and comfort levels, so I always try to provide an introduction to the design of the document before I assign the first one. This one that Nicole Beardsley created can be copied and changed to suit the teacher's personality and the students or university where you're teaching. Emili Sabourin and I presented a bit of a different version of this original Slides presentation at the MOREnet conference in 2018.⁶ This works well if you want to introduce the idea to your faculty or talk through how your writing program might use HyperDocs. (See Figure 20.13 for a screenshot of a slide from the presentation.)⁷



Figure 20.13. Rules for a whole-class HyperDoc.

I think it's important to show students how HyperDocs might look and to help them understand that they will need to click to read, watch, and create as they work through a HyperDoc. In OWI, I create videos that accompany the HyperDoc and walk students through what they should see, what they can comment on, and how the HyperDoc works. Not all of my students need to watch the video as they work through the HyperDocs, but some have reported that they really appreciate having the video to accompany the work. I like to do this as a screensharing video with my face still in a little video box to make sure that I reach that personal side of communicating with students.

Conclusion

In order to truly prepare effective materials, we need to focus our pedagogy on

^{6.} View How to Hyperdoc MOREnet at https://docs.google.com/presentation/d/1qb-Vi9z2l7BPm5YV5i6e_K1vgctGFL8HZhFpcXsbB9eI/edit#slide=id.p1.

^{7.} Like all the other HyperDocs, we made these available for public access for any teacher to copy and use.

students and student learning outcomes. The September 2018 special issue of Computers and Composition was dedicated to thinking about what it means to have a "usability" and "user-designed" pedagogy when we consider computers and writing (Bartolotta et al., 2018). Indeed, UCD and UX have an important role to play in teaching rhetoric and composition. Just as we ask students to consider their audience in writing assignments, we too need to consider and put students as users and audience at the forefront of our design and pedagogy. This becomes even more important when we talk about design for OWI as Borgman and McArdle (2019) point out with PARS. The PARS approach and HyperDocs allow OWI teachers to consider our students in terms of thinking about how we design our classes and learning for students. Both offer instructors a framework grounded in best practices for OWI and for pedagogy in general, which can only help instructors be more strategic in their teaching. In The HyperDoc Handbook: Digital Lesson Design Using Google Apps Highfill et al. (2016) quote a high school senior student (Jordan Moldenhauer) at the beginning of the book who says,

I want to be given facts that can help me think for myself. And when I form an opinion, I want my teachers to have the courage to hear me out, not tell me I am wrong . . . The real world is a test. And we are all taking it. (p. 5)

What this student is clearly articulating is that LCD must be taken into consideration in designing all pedagogical materials and that she wants a PARS approach in her education.

As technology moves toward collaborative platforms, OWI should include collaborative spaces for students to write together about topics or to generate ideas. As Highfill et al. note, "When you package the latest collaboration tools in a HyperDoc, you give all of your students the opportunity to have conversations, listen, respond appropriately, discuss topics, build on ideas or comments, ask questions, and work together toward a shared goal" (p. 48). Ultimately, collaborative tools will also help prepare students for their futures in an increasingly technologically-based society. HyperDocs is one way to engage students in collaborative writing and discussion in online platforms that they will use after OWI.

Final Thoughts and Application

HyperDocs can provide engaging and meaningful writing and critical thinking for students. If you think you might be ready to foray into HyperDocs, you might start small with just one activity or a simple lesson. It can be helpful to think about HyperDocs as a design package for material you want to teach in a writing class. Alternately, you might try making one document that links everything for a paper or unit, adding more resources as students ask questions. I often have one central HyperDoc for general writing-related resources: some explanations of writing concepts, ideas to get students started on an essay, or help for someone who gets stuck on just one part of writing. My students report that they appreciate these documents to go back to and find all the links to all of the writing aids. They might just need a reminder on introducing quotations or effective transitions. You also might just consider incorporating just some elements of HyperDocs to start, for example letting students write comments and questions directly on an assignment as a way to save time on answering questions.

References

- Bartolotta, J., Bourelle, T., & Newmark, J. (2018) Co-Editors' welcome to the special issue on usability and user-centered design. *Computers and Composition, 49*, 1-3. https://doi.org/10.1016/j.compcom.2018.09.001
- Borgman, J., & McArdle, C. (2019) *Personal, accessible, responsive, strategic: Resources and strategies for online writing instructors.* The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PRA-B.2019.0322
- Bowen, R. S., (2017). Understanding by design. Vanderbilt University Center for Teaching. https://cft.vanderbilt.edu/understanding-by-design/
- Greer, M., & Harris, H. (2018). User-centered design as a foundation for effective online writing instruction. *Computers & Composition, 49*, 18-24.
- Highfill, L., Hilton, K., & Landis, S. (2016) *The HyperDoc handbook: Digital lesson design using Google Apps.* Elevate Books.
- Hilton, K. (2020). What is a HyperDoc? HyperDocs. https://hyperdocs.co/courses/62

Opel, D. S., & Rhodes, J. (2018). Beyond student as user: Rhetoric, multimodality, and user-centered design" *Computers and Composition*, 49, 71-81. https://doi.org/10.1016/j.compcom.2018.05.008

- Ruefman, D. (2016). Return to your source: Aesthetic experience in online writing instruction. In D. Ruefman & A. Scheg (Eds.), *Applied pedaogies: Strategies for online writing instruction* (pp. 151-181) Utah State University Press.
- Selber, S. (2004). Multiliteracies for a digital age. Southern Illinois University Press.