The Emergence of Jamboard as a Technical Communication Tool In a Covid-19 Zoom Classroom

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Abstract. This article will address pedagogical approaches to Jamboard usage, effective outcomes via zoom amongst student participation, and how effective this tool is beyond just the classroom.

Keywords: design thinking, Jamboard, Zoom, Technology, Pedagogical Approaches

Prior to the COVID-19 global pandemic, technical and professional communication (TPC) classes relied heavily on whiteboards, chalkboards and in-class peer reviews. Due to social distancing requirements, classrooms were pushed online with limitations for collaborative work, making it difficult for students in my courses. As effective collaboration in Zoom classes suffered, I turned to Google Jamboard as an educational tool for communication, as well as a way for students to share their points of view and different design ideas. Jamboard has numerous means for visualizing, all of which are user friendly. The opportunity to draw images as part of our online class meetings enabled us to use design to incorporate ideas from all students, even those that would have been typically silenced by an online setting. As one student posted their idea to

Jamboard, other students felt more encouraged to participate, the drawing or sketch acting as a springboard for collaborative discussion. Adding to the scholarship of eLearning tools, some of which also address the usefulness of Jamboard, this FOCUS article aims to show how Jamboard can be leveraged to create engaging online educational experiences grounded in experiential and social learning (Sweeney et al, 2021).

Scholarly Context and Aims

The quick switch to online learning during the COVID-19 pandemic created a work environment in which teachers had to quickly try new learning tools and methods for conducting classes. Yet, with accreditation and curricular constraints, many instructors needed to redesign their courses with the same main assignments as if they were still in the classroom on campus. Other researchers such as Sweeney, have already shown how Jamboard creates opportunities in the classroom for students to express their thoughts through collaborative technical communication design. But would such a tool work in a fully online setting to help bridge the digital divide?

That is a daunting question, and traditionally, instructors are reluctant to try unfamiliar tools in unfamiliar settings because of the possibility of failure. However, as Jason Tham notes, "[students] must be encouraged, supported, and even joined by their instructors in failed first efforts" (n.p., 2016, as cited in Tham, 2021). Even when instructors feel apprehensive about trying a new tool, they must be willing to fail in order to find success for their students. Previous experience and scholarship show that Jamboard is effective in a traditional classroom, and I hypothesized that it would be successful in a synchronous online class using Zoom.

The remainder of this paper will address how Jamboard can be an effective tool in online TPC courses. Although some may worry that Jamboard would be daunting or difficult to manage within Zoom, I found that the tool more than made up for any frustration because it encouraged so much participation. Although the use of the tool does not allow you to see your peers face-to-face, it did transform my online class, giving it a design-centered atmosphere. I will admit that issues like the lack of face-to-face camera access while using the Jamboard interface needs to be further addressed.

The objectives of this study are to present current research on how design thinking can help both teachers and students reach TPC objectives, as well as how TPC programs can benefit from the use of design-based pedagogy in the classroom, and to demonstrate the

efficacy of Jamboard in online TPC classrooms, especially with the on-going COVID-19 pandemic. Current research suggests that no device can truly replicate a face-to-face classroom experience, but Jamboard offers a new technological tool that can make sudden shifts from the traditional classroom to online distance education a little more humane and less stressful (Drauker, 2021).

Design Thinking's Pedagogical Impact

The design thinking mindset emphasizes user-centered design, and technical communicators use it as a tool for user-centered problem-solving both within academia and industry (Tham, 2021, p. 20). In our modern era, there is no greater set of problems we face than those wrought by the global pandemic, and design thinking's user-centered approach to problem solving can be leveraged by TPC programs to help us figure out how to address these problems.

With the quick switch to online based distance education during the pandemic, many of us wondered how to retain a sense of community in our classroom, as well as the academic value of our exercises in a remote setting (Venton & Pompano, 2021). Many of us were limited to meeting-type setups in Zoom as our only online teaching tool as classes were switched into online modalities, a drastic shift that had negative consequences for learning (Crawford & Huling, 2023). Our students were glued to a computer all day while trying to both learn material in an unconventional way and navigate the complexity of isolation and lockdown. Students began to disengage and fail at a much higher rate (Mizani et al., 2022). We needed solutions that centered on the needs of our students, our users. Although design thinking has long served different purposes in TPC subfields such as document design and grant writing, it can also be used as a pedagogical tool to help find solutions to our pressing educational problems.

Kathleen Crawford and Heather Huling (2023) argue that, although early on in the pandemic online learning was a struggle, there are positive pedagogical impacts and digital interactive options that are becoming part of the "norm," allowing us to see that time of struggle as a period of experimentation and success rather than a total disaster. Jamboard as now become a part of my norm. As we look to the future, there will inevitably be more disasters, and Weinburgh points out how we can look at what we learned during the pandemic as highly valuable as more widespread emergencies crop up (Weinburgh, 2022). Thus, we must keep our minds facing to the future, always keeping our users in the center of our efforts as teachers.

Because design thinking centers on the needs of users, it is a pow-

erful user-centered approach for solving pedagogical problems like the ones experienced by instructors during the pandemic. As I began to think about the needs of my students, my users, I came back to a need for visualization within the classroom to help both build community and intellectually engage them with the materials. Jamboard seemed like a great way to combine both tool and thinking (Owen, 2007). Leaning on Tham's outlook on design and failure, I implemented Jamboard in my online classes. And while I will discuss that implementation more in the next section, I have to say that it was a great success.

Visual Thinking via Jamboard

Through the Jamboard interface, you're able to collaborate, design, and visually incorporate your ideas, allowing them to be shared and edited amongst other users. This emphasis on the visual allowed me to help exercise vital visual thinking skills for my students. Catherine McLoughlin and Krzysztof Krakowski (2001) emphasize the fundamental importance of visual thinking by pointing out that in "everyday life, visualization is essential to problem-solving and spatial reasoning as it enables people to use concrete means to grapple with abstract images" (p. 127). When looking at the TPC classroom specifically, the kind of broad visual thinking described by McLoughlin and Krakowski can truly help engage students and solidify learning in a fully online learning environment.
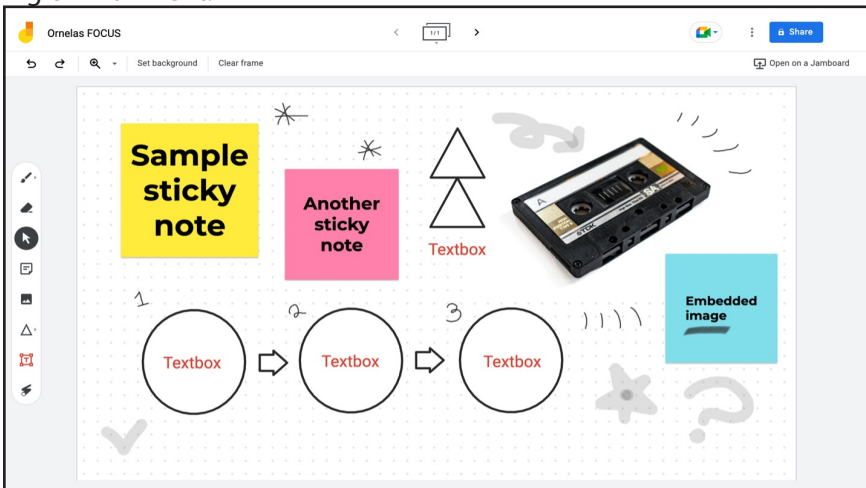

Figure 1. The Google Jamboard interface.

In my online courses, I used the visual thinking space offered by Jamboard as a way for my students to engage in collaborative thinking via the tool's heavy emphasis on visualization, allowing students

to use the Jamboard space to discuss their thoughts and the thoughts of their peers. Within Jamboard's interface, I specifically utilized sticky notes and drawn images as a way to generate interactive discussion. Shifting from the meeting style of Zoom, which utilizes very little visual thinking, to a highly visual interaction through Jamboard engaged the students in a way that I had not seen previously. This correlation of increased learning and the use of visual thinking should not have surprised me as encouraging students "to use multiple modes of representation when learning with technologies" is a topic that has been explored. (McLoughlin & Krakowski, 2001, p. 128). However, it was truly exciting to see how student comprehension increased as they were invited to exercise their design mindset by crafting a visualization of their thinking.

Using Jamboard in this way also helped me give a voice to students who likely would have been silenced by an online learning setting. While the pandemic necessitated that face-to-face classes move to an online modality without much preparation for the change, truly successful online courses must be developed and constructed from the ground up to account for the characteristics of the course modality (Islam et al., 2023). Before I had experience in teaching online, I focused a lot on how to have students work collaboratively in an in person setting, and I spent significant time developing those strategies. The rhetorical distance created by online learning, combined with the obstacle of distraction and loneliness brought by the pandemic, meant I had a lot of obstacles to overcome in my online teaching. Specifically, I did not initially know how to ensure all my students had a voice in the online class setting like I did in my traditional classes. By integrating Jamboard into my writing course, which focused mainly on rhetorical understandings of technical communication, I was able to offer a chance for those voices in my class, which were more likely to be silenced, to be heard, despite not being in person and on campus. It offered an alternative to the traditional forms of interaction that allowed their ideas to shine through for all of us to see.

Final Thoughts

Engagement in online learning was a sudden obstacle for both students and instructors who grappled with limited options in an online pandemic era classroom. Now that we find ourselves distanced from those days, we can see that using online learning tools like Jamboard is crucial as they're a part of how we get students to engage. And "when students become engaged with something new in class, they pay more attention, listen more closely, ask questions—in short they

display all the positive actions we hope that motivated learners will demonstrate" (Dunn et al., 2021, p. 25). Instructors can turn to tools like Jamboard in online TPC classrooms to offer a visual modality for students to effectively use design to communicate their ideas. Instead of looking at online classrooms as a negative, as I once did, instructors of both conventional and technical and professional communication classes can strive to incorporate visual forms of representation, which are important not just as heuristic but as legitimate aspects of reasoning and learning (McLoughlin & Krakowski, 2001, p. 128). Technologies like Jamboard offer visual experiences which foster higher-order cognition, and thus increase learning.

Before the COVID-19 pandemic, instructors may have started to use online platforms like Zoom to occasionally conduct meetings or classes. This was a hidden positive as it inadvertently prepared them mentally for the kind of "virtual education" that we were forced to take on. When the pandemic started, instructors like me were trying to find tools that had a pedagogical impact and improved student engagement. I found myself trying to teach with other tools like Google Slides, but they simply didn't compare to a collaborative tool like Jamboard. When we use design thinking as a user-centered mindset to think about TPC pedagogy, we can more clearly see the need for a teaching tool that strengthens student engagement and thus increases usability and high-order cognition. I urge instructors, especially in TPC classes, to embrace collaborative tools, like Jamboard, as a way to leverage the power of visual thinking to teach students how to iteratively design their communications with peers. Attempting to use new tools can be nerve-wracking, but if we embrace the potential benefits that come with the possibility of failure, as Tham suggests, then we can truly use a design thinking mindset to find a great tool for our student users.

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