Writing for Players Using Video Game Documentation to Explore the Role of Audience Agency in Technical Writing

Matthew Kelly

The University of Texas at Tyler (mkelly@uttyler.edu)

Abstract

This article describes a technical writing assignment that requires students to use Minecraft to design and document interactive learning environments. In this project, students balance a critical awareness of this game's technical features with a rhetorical understanding of how those features impact the audience's experiences and actions. This article demonstrates how video game-based writing projects can help students understand the role of an audience's agency in technical communication.

Introduction: Technical Writing and Critical Game Studies

Contemporary writing scholars have emphasized the rhetorical dimensions of technical communication insofar as real-world technical documentation often attempts to elicit deliberate action from its audience (Markel, 2015). In doing so, these researchers push back against the characterization of technical writing as a set of decontextualized skills that convey information from a neutral perspective (Surma, 2005). For instance, Johnson-Eilola and Selber (2013) explore the role of audience agency in technical communication. By "audience agency," they mean writing scenarios in which an audience's reactions towards or interactions with a given piece of technology are directly impacted by the composing practices of an author. From instruction sets that familiarize novices with complex equipment to workflow charts that detail member responsibilities within an organization, technical writing attempts to channel an audience's actions within specific situations. Acknowledging the presence of audience agency reveals how writers are challenged with "interpreting use situations [of new technologies] and weighing possible responses" (Johnson-Eilola & Selber, 2013, p. 3) of an active readership. This means that technical writers must simultaneously coordinate the design of new technologies and empathize with the perspective of their intended audience in order to effectively communicate how users can deploy these technologies in particular scenarios. Consequently, technical writers operate at the intersection between design-based understandings of technological development and rhetorical understandings of how users might interpret and apply new technologies in unique ways.

As rhetorical approaches to technical writing emerged, scholars within critical game studies explored how video games are uniquely suited for exploring the role of user agency in real-world technical communication (deWinter & Moeller, 2014; Greene & Palmer, 2011; Mason, 2013; Rice, 2012). Eyman (2008) argues that video games are fundamentally premised upon user agency insofar as digital games rely on player participation in order to function. However, agency is not a one-way street between a player and a game because virtual gamespaces "feature both users and system agency (including non-player characters, the environments in which actions take place, and rules that govern in-game interactions)" (Eyman, 2008, p. 246). A game's mechanics

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© 2021 The Author(s). This work is licensed under a Creative Commons Attribution- NonCommercial 4.0 International License. and dynamic environments govern player actions, but these structural features can respond to user input to offer players more possibilities for undertaking impactful activities. Hence, video games call attention to the idea that "agency" denotes the on-going, reciprocal exchanges between users and a given technology, as opposed to locating agency solely within a user or given piece of technology. This means that documentation which facilitates video game development must consider the interrelation between the structural features of a virtual gamespace and possible player responses. This is much like how Johnson-Eilola and Selber (2013) argue that technical writers design use-scenarios for new technologies while also speculating about how users will respond to these scenarios.

While these authors have been influential in reinforcing the critical value of technical writing and video games, scholarship that discusses real-world applications of game-based projects in technical communication classes is still in its early stages. In order to further explore the connection between technical writing and critical game studies, this essay will discuss my experiences designing a collaborative writing project around Minecraft for several college-level technical writing seminars. In doing so, I demonstrate how documenting interactive games can help students re-envision technical writing as a composing process that engages with the experiences and agency of an active audience.

Context and Rationale: Selecting Minecraft

as a Learning Tool

From 2014 through 2016, I taught four upper-division technical writing seminars. The goal of these courses was to familiarize students with effective composing strategies used in real-world technical documentation. I wanted to structure my seminars around video games in order to emphasize the dynamic, but occasionally overlooked, elements of technical communication as described by Eyman (2008) as well as Johnson-Eilola and Selber (2013). My hope was that having video games and game documentation operate as the primary focus of class assignments could help students avoid overly abstract discussions regarding the rhetorical dimensions of technical writing. This approach offered students concrete examples of how technical writing practices impact an audience's interaction with complex processes.

I reflected upon my own gaming habits when selecting a game to use in my classes. As a graduate student who moved across the country for my PhD program, I kept in contact with friends by playing games online. Minecraft was a popular choice among my cohort. Minecraft is an open-world game wherein players use simple blocks to build elaborate structures. The game also includes more complex features, such as blocks that transmit "redstone power," which can be used to activate simple on/off switches and create elaborate networks of chain reactions. While there is a survival mode that tasks players with salvaging resources and warding off enemies, the game has a creative mode which removes the threat of enemy attacks or environmental hazards and provides players with infinite building materials.

My personal experiences led me to investigate the critical and social dimensions of Minecraft, both of which influenced the decision to incorporate this game into my classes. In terms of criticism, there is a wide breadth of scholarship that examines how different subjects can be taught using Minecraft (Abrams, 2017; Bos et al., 2014; Dezuanni et al., 2015; Overby & Jones, 2015; Short, 2012). While much of this scholarship discusses precollegiate education rather than college-level instruction, these researchers analyze effective teaching strategies and common obstacles that emerge when integrating video games into traditional classroom settings. My technical writing seminars were my first time including video games in a college course, so I wanted to use a game that had scholarship dedicated to its pedagogical applications.

From a social perspective, the Minecraft player community exemplifies the interconnection between audience agency and technical documentation. Minecraft players have a reputation for creating ornate projects such as functional binary calculators or logic gates that simulate the operation of computer processors. When building these projects, players have composed highly detailed documents in the form of collaborative Wikis ("Minecraft Wiki," n.d.) and building guides ("Minecraft Community," n.d.). These resources not only describe the technical processes underlying specific projects, they also explain how readers might apply these processes to their own gaming sessions. Thus, player-generated documents exhibit the same awareness of audience agency described by both technical writing researchers and critical game scholars. By extension, using Minecraft in my classes meant I could show students real-world technical documentation and demonstrate how that documentation shapes the gameplay experiences of others.

Assignment: Creating Interactive Learning Environments with Minecraft

In my classes, students produced documents detailing Minecraft's features and affordances. Smaller assignments during the semester's first half asked students to compose technical descriptions of game mechanics and an instruction set that introduced new players to effective gameplay strategies. These earlier projects served two purposes. First, they familiarized students with Minecraft's functionality and allowed them to experiment with the game in a semi-structured manner. Second, these projects highlighted the rhetorical underpinnings of technical communication in the sense that students were encouraged to draw from their own gameplay experiences while composing their assignments; reflecting upon uncertainties or obstacles they encountered first-hand helped students anticipate the difficulties that a novice might face. Envisioning the circumstances of their intended audience encouraged students to reconsider how they might communicate gameplay mechanics in such a way that motivated readers to apply said mechanics to personal gaming sessions.

For the second half of the semester, students were organized into four- or five-person groups based on similar majors. Each group was tasked with documenting and constructing an interactive learning environment in Minecraft. The goal of this learning environment was to teach their audience about a procedure or policy that is used by professional communities. It is possible for this project to succeed if group members have different majors, but I thought that organizing students based on common research interests would make it easier for groups to select a procedure/policy which all members were familiar with.

This project had a written and digital component. For the written component, groups composed a "Design Portfolio" using a typical word processor. This multi-section document mimicked the genres and formats used in actual game development. For instance, game design documentation often discusses the context and relevance of the main themes for a proposed game. Additionally, game documentation explains how specific interactive experiences can help players further explore the concepts underlying a game's narrative and/or mechanics. In real-world scenarios, these types of writing practices not only persuade members within a company to provide resources for moving ahead with development but also help designers envision the types of player (re)actions they want to cultivate.

Students would undertake the same composing practices used by game designers in their Design Portfolios. Each Portfolio identified the concept students wanted to communicate to prospective players, explained how this concept functions in professional or academic settings, and described gameplay scenarios that would allow players to learn about this concept via interactive experiences. This document also examined the context surrounding each group's learning environment, meaning that students considered how their projects might benefit specific parties or organizations which are impacted by the ideas represented in their Minecraft realms. For example, one group of students were all engineering majors and wanted to discuss spatial reasoning (i.e., the ability to negotiate and manipulate objects in three dimensions in order to solve problems, all while negotiating material constraints or limitations). Their rationale was that they felt as though traditional math and physics classes emphasized decontextualized theoretical formulas without offering students the ability to see how these formulas are used in real-world situations. In their Design Portfolio, they defined spatial reasoning, explained why it was important for engineering projects, and narrated the types of interactive experiences (which will be further discussed in the following section) that would help players foster critical spatial reasoning skills.

For the digital component of this project, students created working prototypes of their learning environments and conducted end-of-semester presentations that discussed the goals and functionality of these gamespaces. I told students that I did not expect professional-grade prototypes. Rather, creating usable prototypes allowed students to see how the design of their learning environments would invite user participation in deliberate ways. In terms of scaffolding assignments, I began the design process by asking students to diagram a "user roadmap" that explained what they wanted players to do first, second, and so on while navigating their interactive gamespaces. I also asked students to note moments where their users may be able to take different "paths" in their roadmap, by which I mean moments where users had a choice to undertake actions in whichever order they prefer. Students then used these roadmaps as an outline for the literal design of their Minecraft environments. That is to say, students designed their virtual gamespaces in response to the sequence of actions they wanted their users to undertake. For example, one group wanted to discuss the impact of sustainable agricultural initiatives in rural areas. Their roadmap diagramed a sequence wherein players would build an irrigation system in a step-by-step fashion. When translating this roadmap into the actual design of their learning environment, these students decided to have users enter their Minecraft realm in a desert. Then, in-game signs would guide users towards streams where they would begin digging and managing an irrigation system. The contrast between the desert environment and water systems would focus players' attention on the structure and functionality of irrigation networks.

The goal of these user roadmaps was to encourage students to consider the perspective of their audience and begin thinking about how they could channel users' actions towards specific goals. Put differently, I wanted students to avoid overemphasizing the abstract ideas they wanted to explore via their learning environments and, instead, design their environments with the experiences and actions of their intended audience in mind. To reiterate Johnson-Eilola and Selber's (2013) argument, technical writers operate at the intersection between design-based understandings of technological functionality and rhetorical understandings of how users interact with said functionality. In much the same way, emphasizing user experiences as the point of access into the design and creation of an interactive Minecraft environment would encourage students to combine design-focused and rhetorically focused perspectives in their writing and planning processes.

Once students had created the basic foundation of their Minecraft environments, I dedicated a week of class to prototype testing. On these days, students came to class with working prototypes of their Minecraft environments on their laptops. I asked students to experiment with each other's projects and respond to a reflection worksheet. This worksheet asked students to narrate moments of difficultly or uncertainty along with moments of curiosity, interest, and even surprise while testing out their peers' projects. These reflections functioned as usability reports insofar as they represented both productive and unproductive user experiences. Student groups then read the reflections of their peers and revised the structure of their Minecraft environments to account for the gameplay experiences of others. This, in turn, allowed students to refine the intended user experiences outlined in their user roadmaps and Design Portfolio.

Reflection: Shifting Impressions of Technical Writing

I would like to discuss several experiences that illustrate how Minecraft helped students rethink their assumptions about technical writing. At the onset of the semester, I asked students to define "successful" technical writing. Common responses included terms such as "clear" and "objective." Several weeks later, I asked students to define a "successful" user experience while they were planning their Minecraft projects. In contrast to previous responses, students described dynamic interactions between users and their learning environments. One student was building a binary calculator and said she wanted users to initially feel "confused" but then "enlightened" about this complex machine. Another student was recreating our city's downtown area with historical information about major landmarks. He wanted users to feel "confident" in their ability to navigate this area in real life and excited to explore other neighborhoods afterwards.

I find it fascinating that students initially characterized technical writing as a neutral form of communication in which an audience does not (or cannot) exert any interpretive energy when reading a text. Conversely, students approached their Minecraft projects by emphasizing the agency of their audience and speculating the reactions or experiences of users within an interactive gamespace. This emphasis on audience agency was further reinforced when students began constructing their learning environments. For example, the aforementioned group of engineering students wanted to teach their players about the importance of spatial reasoning in large-scale engineering projects. They created a gamespace where players would construct transportation networks between several villages while negotiating geographical obstacles and managing limited resources. When reviewing an early draft of their Design Portfolio, I asked how users would know what actions they needed to undertake. These students decided to build a library populated with books describing different transportation mechanisms along with the benefits and drawbacks of each option. Interestingly, these books also included backstories that contextualized each village's circumstances. For example, an underground village had an "ancient burial ground" that players could not build upon, while a mountaintop castle had more construction materials due to a strong mining economy.

Students explained that these books were designed to inform users of in-game objectives while also encouraging experimentation with different strategies when connecting villages, thereby illustrating the notion that there is no single, definitive method for creating transportation networks. However, the inclusion of fictional backstories reveals the generative potential of highlighting audience agency in technical writing. On the one hand, these books communicated highly technical details of engineering procedures. On the other hand, these books framed engineering procedures through elaborate histories regarding the socio-material variables that influence infrastructure development. Hence, these backstories conveyed the idea that engineers must navigate cultural limitations while applying highly specialized processes in construction projects. Furthermore, it was the consideration of audience agency (i.e., wanting to contextualize and communicate potential user actions) which expanded this gamespace's initial focus on spatial reasoning to include the implicit social elements of engineering projects.

Challenges: Adapting Minecraft to New Contexts

To echo an earlier sentiment, agency denotes the reciprocal exchanges between users and technology. While students did not explicitly use the term "agency" when composing their documents, I structured class activities and assignment feedback to direct students' attention towards the interrelation between the mechanics of their learning environments and potential reactions of their audience. In both the aforementioned engineering project and descriptions of ideal player experiences, students balanced a technically minded understanding of their gamespaces with a rhetorical awareness of how said gamespaces might channel user actions in deliberate ways. In doing so, student writing became the medium through which interactive experiences were actively created as opposed to student writing operating as a neutral vehicle for disseminating information.

Using video games to reapproach technical writing as a creative process requires instructors to reframe their assessment methods. Colby (2014) argues that game-based writing projects should include opportunities for students to clarify the logic used when creating interactive experiences for others. Emphasizing the rationale underlying key design choices can endow students with critical thinking skills that will help them feel more confident in their ability to effectively use different technologies in the future (Shipka, 2011). In my classes, I made a distinction between "front-end" writing that would be circulated to an intended audience, such as the Design Portfolio, and self-reflective "back-end" writing which explained design decisions to myself and fellow classmates. I evaluated "front-end" writing based on technical documentation conventions (e.g. precise definitions of gameplay mechanics, effective formatting techniques, etc.). Conversely, I evaluated "back-end" writing on a complete/incomplete basis, focusing on students' explanations of how/why intended user experiences would help their audience comprehend an abstract concept.

If instructors adapt this Minecraft project for other classes, I suggest creating exercises that allow students to reflect upon the types of interactive experiences they want to cultivate for others. Providing students an opportunity to articulate personal goals when designing interactive projects can further clarify the higher-order writing skills fostered by game-based assignments, which, in turn, may quell potential concerns about using games in the classroom. In my classes, several students expressed hesitation towards the professional relevance of our Minecraft projects. I told my classes to think of Minecraft as a metaphor, so to speak, for how digital media technologies lend themselves to new forms of engagement between authors and audiences. This means that creating virtual gamespaces supports the same rhetorically sensitive composing practices that can be used when crafting digitally mediated user experiences in different professional scenarios. Treating Minecraft as representative of larger trends surrounding digitally mediated user experiences made it easier for students to understand the benefits of using games in a class that did not typically have a digital emphasis.

Conclusion

Documenting and constructing interactive gamespaces underscored the role of user agency in technical writing insofar as students needed to consider how their design decisions would elicit actions from intended users. This is not to say that video games are the only outlet for reenvisioning audience agency within technical writing. Rather, video games are one medium that can help students reconsider the impact their composing practices can have on others. I hope that my teaching experiences and course materials can help instructors continue exploring the affordances of using game-based projects in traditional classroom environments.

ASSIGNMENT Designing and Documenting an Interactive Learning Environment

Project Overview

As we have discussed throughout the semester, technical writing is a rhetorical negotiation between authors and audiences insofar as technical writers often try to elicit specific actions on the part of an intended readership. In other words, to be a rhetorically aware technical writer means that you are able to anticipate the perspectives of your audience and acknowledge how your writing can influence the ways in which your readership engages with a given piece of technology.

For this group project, you and 3-4 of your classmates will design and document an interactive learning environment using Minecraft. The goal of this learning environment will be to teach your audience about a procedure, process, or policy that is actively used by professionals in real-world scenarios. Undertaking this project will test your ability to compose rhetorically aware technical documentation by creating interactive scenarios that allow your audience to actively participate in or experiment with a complex concept.

This assignment will have a written and digital component. Each group will compose a single Design Portfolio, which will be a multi-section document that explains the specific mechanics of your Minecraft learning environment and outlines the types of interactive experiences you want to create for your audience. The Design Portfolio will also examine the larger context(s) surrounding the development and potential deployment of this learning environment. Additionally, each group will create a working prototype of their learning environment and offer a brief end-of-semester presentation that demonstrates the basic functionality of your proposed Minecraft realm.

To clarify, this project will not be graded based on the overall polish or entertainment value of your Minecraft learning environment. Rather, this project will be evaluated based on your ability to clearly articulate the interactive experiences you want to design for your audience and rationalize how/why these interactive experiences can grant your audience a better understanding of the ideas being simulated in your Minecraft realm. Hence, actively building a prototype of your Minecraft realm will help you get a better sense of how other users might navigate or respond to your virtual gamespace, which will allow you to refine the types of designed experiences that are explained in the Design Portfolio.

Rationale and Purpose

This project has two main learning outcomes. First, this assignment will give you an opportunity to refine the writing skills you have cultivated throughout our class. The Design Portfolio is meant to mimic the types of technical documentation that facilitates the development of video games and other types of digital media technologies. However, "technical documentation" is not a single genre but, instead, is an umbrella term for the numerous formats, scenarios, and writing strategies used throughout different professional contexts. Consequently, each section of the Design Portfolio is designed to test out a writing strategy that can be applied to different professional communication scenarios.

For instance, one section of the Design Portfolio asks you to explain the concept or process you want your audience to learn about. In offering this explanation, you can apply the same writing strategies you used in the Technical Description project from earlier in the semester. In another section, you will need to describe the types of interactive experiences or actions you want your audience to undertake. Narrating intended user experiences will test many of the same skills you used when creating your Instruction Set. In short, it might be useful to think of the Design Portfolio as a "toolbox" of different writing strategies that are used in real-world technical communication scenarios.

In terms of the second main learning outcome, this project will help you further comprehend the rhetorical dimensions of technical communication. Throughout the semester, we have discussed how technical documentation simultaneously coordinates the design of new technologies while also attempting to elicit specific types of actions on the part of an intended audience. In a similar fashion, your Design Portfolio will explain how key design decisions can lend themselves to intended experiences and reactions on the part of your audience. That is to say, designing an interactive gamespace will require you to produce documentation that balances a technical understanding of the features/affordances of a given technology (i.e., the unique mechanics of your Minecraft realm) with a rhetorical understanding of how users might respond to said features/affordances.

Structure and Criteria

Your group's Design Portfolio will include the following sections, each of which will need to respond to a list of specific questions. Please note that you do not need to answer these questions in a linear, step-by-step fashion. Instead, these questions are meant to represent the goals/aims and criteria that are associated with project proposals in real-world professional scenarios.

Introduction (200-300 words)

- What is the general structure and purpose of your Minecraft project?
- What will your audience learn from navigating this learning environment?
- What are the potential benefits of your Minecraft project and the types of learning experiences that occur therein?

Context and Motivation (500-600 words)

- What specific process, procedure, practice, or policy do you want to simulate? When answering this question, you will need to clearly define the main focus of your learning environment in such a way that someone with little-to-no background knowledge can understand it.
- How does your chosen topic actually function in real-world professional scenarios? In other words, what is the real-world importance or value of your chosen topic?
- Who is your intended audience and why would they benefit from learning about your chosen topic via interactive experiences in Minecraft?
- Are there other parties, organizations, or types of individuals who would directly or indirectly benefit from your learning environment? For example, how can teaching your intended audience about a specific topic help organizations who are equally invested in this topic (or invested in the success of your intended audience)?

Project Summary and Intended Outcomes (500-600 words)

- How will you translate the topic you mentioned in the Context and Motivation section into Minecraft? What specific mechanics or features of this game will be used to familiarize your audience with your chosen topic?
- What types of experiences and actions do you want your audience to undertake? In other words, how will your audience actually interact with your learning

environment? In answering these questions, it would be helpful to provide at least one example of an interactive experience that uses specific gameplay mechanics or scenarios to elicit certain types of actions/reactions on the part of your audience.

- What in-game goals/objectives will your audience achieve? How will your learning environment communicate these goals/objectives?
- How can undertaking certain actions and achieving in-game goals/objective help your audience understand the complexities and intricacies of your given topic?

Project Planning (300-400 words)

- How will you begin approaching this project? What steps will you take first, second, etc?
- What implementation issues or challenges do you foresee arising as you conduct this project?
- What outside technologies and/or resources will you utilize when designing, documenting, and creating your interactive learning environment?
- How will you split up the work within your group? What tasks will be handled by individuals and what tasks will be handled as an entire group?

Conclusion (250-350 words)

- If given the proper support, how might your project continue to grow in the future? What new features or applications might be possible?
- How might your project be incorporated into institutional or commercial organizations?

Evaluation

Your Design Portfolio will be evaluated based on how well each section responds to the respective questions outlined above. Additionally, this project will be evaluated based on the standards and best practices associated with effective communication strategies used in professional scenarios. Hence, structural issues such as typos, grammatical errors, and late submissions of rough/final drafts will result in grade penalties.

Preparation

Student groups will be organized into groups based on similar majors or overlapping research fields. This does not mean that each group will consist of members from the exact same major. In fact, most groups will have some diversity in regards to each students' discipline. Having a diversity of perspectives can enhance the impact of your virtual learning environments in the sense that each group member can contribute their own expertise when selecting a topic and designing interactive scenarios for your audience. This, in turn, can lend itself to more nuanced and complex learning environments.

For example, your group may include students from electrical engineering and architecture. In this case, your group could create a learning environment that demonstrates how multiple disciplines must work together when designing and creating buildings or public projects. This means that your Minecraft project would help users understand how building infrastructure must abide by multiple disciplinary-specific codes, regulations, and conventions. In creating this project, each member would be able to discuss how their own discipline approaches infrastructure projects and the entire group would decide on how to communicate the intersection between multiple disciplines to an intended audience via interactive gameplay scenarios.

Assignment Sequence

The following is a tentative schedule for the remainder of the semester. Abiding by this schedule will allow enough time to coordinate a feasible workflow with your group members, allow me to provide feedback on rough drafts of your Design Portfolio, conduct peer-review sessions with your peers, and create/modify the working prototype of your Minecraft learning environment.

Week One

- Decide on a specific process, procedure, practice, or policy you want to design your project around
- Locate at least two scholarly sources that discuss the importance of your chosen topic for a specific professional community
- Locate at least one current event/example that demonstrates how your chosen topic functions in real-world professional scenarios

Week Two

- Brainstorm possible user experiences that will help your audience learn about your chosen topic
- Identify 2-3 specific Minecraft mechanics that can be to facilitate/foster the possible user experiences you brainstormed
- Begin drafting "Context and Motivation" section
- Begin drafting "Project Summary and Intended Outcomes" section
- Begin drafting "Project Planning" section

Week Three

- Set up multiplayer Minecraft server or purchase a subscription to "Minecraft Realms"
- Finalize rough draft of "Context and Motivation" section
- Finalize rough draft of "Project Summary and Intended Outcomes" section
- Finalize rough draft of "Project Planning" section

Week Four

- Begin creating Minecraft learning environment
- Complete First Progress Report

Week Five

- Review comments on rough draft of Design Portfolio sections and compose a 100word cover letter that explains how you plan to revise each section in conjunction with my comments (please note: there needs to be a cover letter for EACH section of the Design Portfolio)
- Continue creating Minecraft learning environment
- Complete Second Progress Report

Week Six

- Bring functional prototype of your Minecraft project to class so classmates can test out your learning environment
- Complete worksheet for prototype testing

Week Seven

- Revise and submit final draft of Design Portfolio based on class workshops and my feedback
- Finalize and conduct end-of-semester presentation for your Minecraft learning environment

Supplementary Material

For supplementary material accompanying this paper, including a PDF facsimile of the assignment description formatted as the author(s) presented it to students, please visit https://doi.org/10.31719/pjaw.v5i2.60.

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