



Minnesota State University, Mankato Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato

Technical Communication Capstone Course

Technical Communication

2018

Inclusive Writing in Video Game Documentation: A Technical Communication Approach

Samantha N. Sousa Minnesota State University, Mankato

Follow this and additional works at: https://cornerstone.lib.mnsu.edu/eng_tech_comm_capstone_course

Part of the Gender, Race, Sexuality, and Ethnicity in Communication Commons, and the Technical and Professional Writing Commons

Recommended Citation

Sousa, Samantha N., "Inclusive Writing in Video Game Documentation: A Technical Communication Approach" (2018). Technical Communication Capstone Course. 20.

https://cornerstone.lib.mnsu.edu/eng_tech_comm_capstone_course/20

This Capstone Paper is brought to you for free and open access by the Technical Communication at Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato. It has been accepted for inclusion in Technical Communication Capstone Course by an authorized administrator of Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato.

Inclusive Writing in Video Game Documentation:

A Technical Communication Approach

Samantha N. Sousa

Minnesota State University, Mankato

Abstract

This article examines the current conversation of inclusive writing in the technical communication field. Historically, the field of technical writing has been considered a straightforward and unbiased form of communication but I look to identify the pitfalls associated with these characteristics, specifically in the study of inclusive writing. By examining technical documentation through a traditionally gender-biased field of video game development, I present issues and suggest ways to implement inclusive writing through documentation. By envisioning and creating inclusive content in video games, we can expand these solutions to other areas of technical communication and strengthen the influence we have in our respective communities, ultimately benefitting the market, consumers, and communicators.

Keywords: Technical Writing, Video Games, Inclusive Writing, Gender Bias, Documentation

Introduction

Inclusive writing in technical communication is one example of a behavior that has become a valuable skill to learn in today's market (Hundleby, Allen, & Sides, 2010; Whiteside, 2003). Inclusive writing has been discussed in technical communication papers, usually focused around writing to an audience with mental or physical disabilities as well as their use of new technology like websites and software (Browning & Cagle, 2017; Meloncon, 2013; Youngblood, 2013) and most often labeled as accessibility writing. But inclusive writing can be applied to technical communication in a broader sense by ensuring no group of people is excluded by barriers presented in technical works.

Inclusive language can expand the field of technical writing and strengthen the sphere of influence writers have in their respective community. Technical communication is no longer a profession confined to writing printed pamphlets with detailed instructions, policies, and procedures. The profession has expanded into new media forms through the development of personal computers and the Internet, giving technical writers more creative options of production when entering the field. The expansion of new media also requires the expansion of diverse behaviors to communicate with the global audience (Henning & Bemer, 2016).

A progressive area of technical communication in new media is centered around video game development in the form of documentation and marketing. By using the gaming community to illustrate the lack of inclusive writing and the impact this has on the market, we can then draw parallels to other areas of technical communication to

showcase how inclusivity can benefit businesses, customers, and technical communicators. I will be looking at inclusive writing through a gender lens specifically, in order to point out exclusionary writing examples in video game documentation and propose solutions that can be applied across technical communication areas.

Current Conversation: Inclusion and Technical Communication

What was once looked at as a straightforward and unbiased form of communication, technical communication now more than ever needs to be aware of the audience and the contributions, emotions, and overall effects the writing has on society. The discussion of technical communication historically emphasizes the perception of technical communicators as being unbiased, dry, and succinct in order to relay information to an audience quickly and efficiently (Jones, Moore, & Walton, 2016).

Earlier methods of technical writing placed little to no emphasis on the audience, but with the emergence of technology and the fast-paced turnover of information, writing can impact hundreds of thousands of people in an instant. The effect we have as a writer on society can be felt tremendously, so the emphasis on a social justice approach is necessary. This is where inclusive language comes in. By focusing on inclusive language in technical communication, we can further the field by excluding less and employing more.

Jones, Moore, & Walton (2016) argue that inclusion and diversity in technical communication is sparse. While work is being done by scholars to discuss this new approach to technical writing, there is little evidence that can back up the discussions as having an effect on communicators today. The *antenarrative* that Jones speaks of,

revolves around the dominant and traditional perception of technical communication as apolitical and acultural. While technical communication can be seen in this manner harmlessly, ignoring the audience in the real world is hardly the approach needed to solve large issues. Technical communicators should be active and not passive, speaking to their audience and ensuring inclusionary techniques. Jones also argues that this field needs more focused studies on the way inclusivity has emerged specifically in technical communication and the strategies and approaches that can usefully extend this pursuit.

When we consider our work as having immense power and social impact, approaching our work with an audience in mind, we then realize the power we hold. Acknowledging the social impacts of communication legitimizes us as a field that fully understands, appreciates, and addresses the social contexts in which it operates.

The existing framework of developing and marketing video games is excluding a large market share of consumers (Marchand & Hennig-Thurau, 2013; Williams, Martins, Consalvo, & Ivory, 2009). I argue that the most common design and communication techniques being used in video game development are framing the space as masculine, dominating the conversation, and leading to pitfalls and exclusions that hinders participation, enjoyment, and skill of those that do not fit into the masculine audience that communicators are targeting in the market. By exploring areas in which exclusion occurs in video game development, we can explore theories and applications that can rectify these issues and be applied to other areas of technical communication.

Video Game Development: Looking at Documentation

The initial step in focusing on inclusive writing in video games is first illustrating how game design fits in as a sector in technical communication, to then identify strategies technical communicators can implement. Video game development can be seen as an area of concentration for computer science or art professionals (Nystrom, 2014; Schell, 2014), but technical communication also plays a major role in the development of video games and often gets overlooked. For example, most games have a game design document (GDD) which expresses the vision for the game. It is developed in the early design processes and describes every aspect of the game like technical specifications, major plot points, character designs, project goals and other elements that control and lead all designers decisions while working on the game and throughout the development process, a living document (Levy & Novak, 2009). The team involved in creating video games falls back on this document to refer to design elements in order to stay consistent and on a specific timeline.

While the person developing the GDD may not be explicitly called a technical writer by title, the aspects of their job are that of a technical communicator, requiring a writing style that is both clear and concise, and requires them to be a subject-matter expert in all facets of video game creation (Whiteside, 2003).

Other examples of technical writing in video games come in the form of in-game text and design such as tutorials, instructions, and user interface. Post-production marketing of video games also employs technical writers to develop instructions, forums, patch notes, websites, and marketing material for the game.

While many senior professionals currently working in the field of game design are self-taught (Ray, 2004), the requirements and acceptable background of those looking to enter the field is muddled, considering game design is a new field that arose in the mid 1980's. Leading textbooks in game design present the craft as either art or programming (DeAnda and Kocurek, 2016). The idea that a person creating a video game is either and artist or a programmer is a common misconception to those not in the field because art and programming are the most tangible products presented to the public as a game is released. While art and programming are large pieces to the puzzle, technical communicators are the ones that bind the game together with the area of expertise needed to bring a game to fruition such as project management, problemsolving skills and technical knowledge (Whiteside 2003) even though their official title may not involve technical communication normally in the video game sector. Many of the fundamental processes of game design are also shared technical practices such as iterative design, prototyping, testing, and structured rule systems (DeAnda and Kocurek, 2016). With this, it seems only natural that game design fits perfectly into a subgenre of the technical communication world.

An Emphasis on Masculine Framework

Right now, in certain industries, like technology, professionals are finding it hard to break the traditional molds of gender because the masculine or feminine roles are heavily woven into the basics of their communication structures (Grau & Zotos, 2016). Video game development is dominated by traditionally masculine framework and therefore an exclusionary space.

Throughout this article, genders will be referenced as male and female because these are the traditional lenses that are familiar to us. But in the current day, people under 40, both men and women are bending the traditional gender norms and settle somewhere in the middle of the spectrum (Kafai, Heeter, Denner, & Sun, 2008). This is why the focus on inclusion is necessary, to accommodate the entire gender spectrum moving forward.

So why does our culture still associate technical career fields like programming, engineering, and science as masculine areas as well? A majority of the businesses are perceived to be led by men (Terjesen, Sealy, & Singh, 2009), especially in the video game industry, in which we begin to see an inequality of gender represented as designers, developers, writers, and members of the community (Ray, 2004). We also see marketing bias towards males that doesn't appear nearly as skewed in other entertainment mediums like television or movies (Kafai, Heeter, Denner, & Sun, 2008). It's fairly easy to see why inclusive writing might not be on the forefront of their minds when designing games if the market has become an echo chamber of men developing and marketing games for other men to enjoy with no compelling economic or social repercussions. This problem persists in other fields as well, any field dominated by masculinity because of lingering social constructs.

As Judy Wajcman states in her book, "Many of the most popular games are simply programmed versions of traditionally male non-computer games, involving shooting, blowing up, speeding or zapping in some way or another. They often have militaristic titles...highlighting their themes of adventure and violence." (1991, p. 87).

This can be seen in the highly publicized game titles like Call of Duty, Doom, and Grand Theft Auto franchises where players are using traditionally masculine tactics of shooting, hunting, fighting, and using their male physique to conquer enemies.

Wajcman also explores the idea that technology can reinforce the gender divides in society, men's monopoly in technology creating chasms and barriers for women to overcome.

The dominating perception in the video game industry is that the majority of "gamers" are males but studies show that the ratio of females and males playing games is hard to capture and the number of women playing can sometimes be counted more than men in some areas (Kafai, Heeter, Denner, & Sun, 2008; Paaßen, Morgenroth, & Stratemeyer, 2017; Williams, Yee, & Caplan, 2008).

With the patriarchal market, games advertised to women include the "casual" game genre ("IAB Research," n.d.; Laszlo & Committee, 2009) which are mostly mobile/smartphone games like Candy Crush or Cooking Mama. In reality, the label "casual" can coincide with "female" genre because game companies are insistent that women are casual gamers, especially when compared side-to-side with men. Women seem to prefer "casual" games because the only other choice of game are those considered for "serious" gamers, which are almost always marketed towards males (Lynch, Tompkins, van Driel, & Fritz, 2016; Near, 2013).

There is a large problem with female harassment in video games, as well, that has been widely studied but is just outside the scope of this paper. While gender bias in video game documentation allows these hostile environments to form, I am looking to

find the root of the issue, in exclusionary design, rather than discuss the *symptoms* of gender-biased documentation like female harassment and discrimination.

Overall, the video game space is not friendly nor inviting to a female consumer, and could be considered hostile to women and anyone outside of the stereotypical "gamer" role (Cote, 2017; Kuznekoff & Rose, 2013). I believe technical writing could be contributing to these issues on a larger scale than we may perceive, starting with the GDD and structures of play.

Understanding Gender Differences

One of the more notable names in the discussion of gender and video games is Sheri Graner Ray, who explores new territory in the early 2000's with her book titled *Gender Inclusive Game Design: Expanding the Market* which presents a revolutionary approach to solving the issues of traditional game markets by explaining the differences in gender play styles, stimulus responses, relationships with computers and more. By analyzing her approach to inclusive game design through a developer's role, we can apply her suggestions to practical applications in a broader technical communicator lens. This allows us as technical communicators to better understand a concept that is too often seen only as a theory and in turn, visualize a tangible product that offers inclusion. By exploring her suggestions of gender differences, I identify the differences writers face when approaching an audience, so that I may be able to suggest changes to documentation in order to be inclusive.

Ray suggests initially that somewhere there is a disconnect occurring in video games, considering the statistics during the writing of her book show women are in fact

playing games, but they are staying away from the traditional and mainstream market.

By exploring that disconnect, we can be led to the source of the problem, most likely buried in the first page of the GDD where development begins.

One approach to finding the source of the disconnect is by first studying the way males and females approach the machine in which the media will be consumed (personal computer, gaming console, handheld device, etc.) The question has been asked in studies regarding technology fields and gender (Gill & Grint, 1995) whether computers are inherently masculine by design, considering men have dominated the technical space. But arguing if an inanimate object is inherently masculine is irrelevant if we consider first how computers have been presented differently to men and women over time.

By placing computers in traditionally male departments like the math and science buildings, by encouraging boys to use computers to play games but encouraging girls to use computers as a way to increase productivity, Ray suggests that culturally, a computer is presented and reinforced as a male object at a very early age.

Even if we believe now that society has grown towards equal opportunity in regards to computer access for males and females, the way software and games are presented to males and females is then becoming the hindrance. Ray argues that traditionally women are offered software related to productivity and self-improvement, for example, a popular title Mavis Beacon Teaches Typing. Men are usually presented with software related to pure entertainment (Ray, 2004). There is a lack of

entertainment titles for women in the technology space, therefore women see computers as a tool for productivity, and not as an entertainment piece.

This impression is slowly evolving with the adaptation of handheld smartphones, in which this new piece of technology paired with a traditionally "female" object like a telephone, and then presented to the market as asexual. The presentation of the smartphone as an entertainment piece for both men and women can be seen in the amount of women playing mobile games in comparison to traditionally masculine-presented technology like PC or console games (Marchand & Hennig-Thurau, 2013).

Ray suggests that this denial of entertainment technology is also the reason women are lacking in numbers when it comes to careers in technology. Being exposed to technology is a gateway into these careers, and having fun with technology is a key component to interest and learning in the field (Hamari, Koivisto, & Sarsa, 2014). Women can excel in technology as well, but only if encouraged to have fun with technology rather than pushing self-improvement and productivity mediums only. We are seeing more research in regards to women in technology and the positive implications of inclusion (Fisher & Jenson, 2017) since the publishing of Ray's text.

The next step in understanding the gender divide in video games is examining how men and women approach technology pieces like computers or consoles. I discussed that it's being presented to genders differently, but the way people use technology like the computer is important to understand for this discussion. This is also important to the technical communication field specifically, as computers have made their way into the world almost as a necessity in everyday work. As Ray explains from

her findings within psychology research she quotes in her book, women approach a machine like a friend, companion, and a useful tool. They prefer to work with a machine which differs greatly when compared to men. Men see the piece of technology as something to dominate, overcome, and master.

Now whether this is a result of socialization or other reasons, it remains to be studied, but knowing these gender tendencies can also help us close the divide in technology documentation.

These generalizations, while specific in their categories of female/male interactions and preferences, should be looked at in how they illustrate the differences in people and the wide spectrum of audience differences when approaching technology rather than just a binary sense. If technical communicators are aware of these various approaches to technology rather than focusing on the "traditional" approach (for instance, aggressive writing rather than passive) then the inclusionary bridge can be formed.

The last element to understanding the gender divide is through the different ways stimulation occurs. Ray presents psychology and evolutionary research that evaluates men positively respond to visual stimuli while women respond to tactile and emotional stimuli. When men see blood splatter on a screen or see visual effects for an explosion, they connect with the game. However, women prefer tactile feedback like vibrating controllers that jolt with in-game movement or an emotional investment to the story in order to connect with the game. Once again, these three types of stimuli preferences

can differ depending on the person, but being aware of all types and including that in the writing is crucial to creating an inclusive environment.

By studying how genders interact, play, communicate, and respond to technology, we can then better understand how to design documents and games to accommodate a broader audience. By taking these differences and approaching the game documentation and marketing, we can begin to understand how to write appropriate content for inclusivity, regardless of gender, taking into account all preferences of play.

Where Technical Communicators Can Utilize Inclusion

After discussing the differences in gender, we can develop technical methods that appeal to various approaches rather than one, hopefully paving the way for inclusion where we can appeal to a wider audience in more than just a binary way. The heart of the game design is where the issues arise. If exclusion exists in the main GDD, the barriers will persist throughout the entire project and final product. The companies that have the most potential for growth are those taking female entertainment criteria into account when designing user interfaces, documentation, visual designs, marketing and more by capturing that untapped source of customers. But focusing on a specific gender is dangerous territory. Inclusion is key to break down these barriers.

One example of a barrier I discussed previously was how genders approach technology with different attitudes, women see it as a friend and men see it as a foe.

Let's take, for example, a popular fighting game, with traditionally "secret" key combos that could be game-winners if pressed in the right order. But these secret key combos

are not found in the game manual, but instead found by trial-and-error key pressing while playing the game. By hiding these secret moves within the game, the game then becomes an enemy.

Players could see this as an obstacle to dominate and will have no problem with this style of play, considering their relationship with machines is dominating.

Some people, on the other hand, may feel betrayed by the technology that is supposed to be helping them if they see it as a tool, no clues to these secret moves in the documentation of the game or in the game interface. This greatly interrupts the enjoyment of a game for a part of the market who looks at machines as a friend or tool.

These barriers to play can be rectified by changing the traditional "secret-move" documentation. A technical communicator can do one of the following; include the secret move in the game manual, lead the player to these secret moves with tool-tips on screen via a tutorial or other method, or foster exploration in-game with puzzles that reward players with these hidden-move combinations. By doing this, we can reduce the barriers to a potential broad audience that sees the computer as a tool, a friend, and a companion there to entertain and support.

As Ray discussed, there is more than one way humans respond positively through stimuli; visual, tactile, and emotional. Adding socially significant situations in the storylines can increase emotional investment in the games. By adding some emotional involvement even in the slightest of ways can open up a game to a broader audience. We see this in Aristotle's theory of pathos, appealing to emotions can be powerful in the hands of a technical communicator. The emotional tie-in does not need to be significant,

but can easily be added to the premise of the game like fighting for world peace or including a quick voice line about missing family back home. Adding a sacrifice or some backstory will build emotional stimuli to a game, which also brings players back to the game regardless of gender.

Ray argues that specifying the planet, continent, terrain, and environment in the original game document as well will inspire the team making the game, and these small details will bleed its way into the final product even if the audience never knows the original back story or details included in the original game document. Including as much background information as one can in the original game document creates a cohesive design, placing all project members in the same realm of creation. Cohesion creates significant emotional and visual stimuli, appealing to a larger audience.

If these game concepts that create barriers (e.g. plot, character design, aggressive style of play) are presented in the first GDD, we can only expect the final game will, as a result, also have barriers to entry like conflict scenarios, sexualized characters, hidden-moves, unintuitive user interfaces, and many of the others discussed. The technical communicator writing this document must then apply inclusivity approaches to their systems to avoid these pitfalls.

A newer methodology in video game development is the Values at Play (VAP), in which designers and those engaged in science and technology can break the model of traditional design, creating games that explore ideas of justice, equity, and cooperation (Flanagan & Nissenbaum, 2014).

This methodological framework, VAP, is comprised of three iterative activities: discovery to identify values relevant to the project (here we would inject inclusion as a value), translation to consider features and architecture used, and finally, verification that these values have been realized in the system. The three activities should be done synchronously and build upon each other. This VAP methodology can easily be translated to technical communication focusing on inclusion. By identifying these values in a simple three-step method, communicators can easily take this strategy and develop a straightforward outline for inclusion, especially for those not well-versed in inclusive writing and design. This theory is new in terms of video game development and leaves much to be explored in future research and application.

Games do not have to be "dumbed down" either, as some may feel could happen in the changing of video game structure that caters to a majority. Some examples of design elements that could easily focus attention to accessibility are interfaces and ingame text. Intuitive interfaces are necessary to broaden the reach of the game, by making it accessible to all. This allows the technology to be a tool and not a barrier. Tag lines within video games such as hints on-screen, tutorials, or even menus that tell a player what to do can be considered patronizing when not said in the right tone or with the right words. Being too hesitant or too dominating can drive away players, who are presented with uncomfortable prompts. If a person is placed in a role where they do not know the rules or structure, they are left uncomfortable and unsure of what to do, and this exists for anyone who is placed in an unfamiliar role (Minkler & Biller, 1979).

A large market share of potential video game players, including females, are being stopped at the door by writers not using inclusive language, placing them in roles they are uncomfortable with through the writing (Fox & Tang, 2014; Lucas & Sherry, 2004).

As Hopp and Fisher (2017) explore game performance, they discovered that if females perceive they do not belong or will not be good at a game, they will not ever try the game. Their enjoyment of video games rests on their ability to perform at a high level (Hopp and Fisher, 2017). In turn, if the first language females see on a website is marketed towards men or if the game controls seem overly complicated, this turns away the female market. Also, females are less willing to take risks when learning, they want to know how something works before they attempt it (Gottfried, 1986).

By situating the GDD in a lens that is aware of the audience and presenting the information from a common viewpoint, the reader can become more comfortable and sure of themselves, the role they will play, and how they can interact with the technology presented.

The Sims Franchise: An Inclusive Example

To approach inclusivity through game design, I look to the franchise The Sims as a gender inclusive title that has broken many stereotypes when it comes to women and gaming, which can be seen in their design of play styles, characters, and user interface. They employ many of the techniques that I have discussed thus far and I would consider them pioneers in inclusive video game design.

The Sims is one of the most popular video game franchises and also notes a larger female demographic than other computer games (Beavis and Charles, 2005). The interface is easy to understand, the character design is completely up to the user, and the mechanics of the game are unobtrusive. There is a pause button, allowing the player to interact with the world while their character is stationary, so a player can take as much time as needed to learn the game without feeling rushed.

It's an open world that allows for an infinite amount of choices, none excluding a character from doing something based on their gender, except for childbirth in the earlier versions of the game. A female could be an athletic evil-genius that liked to fish and could be designed with large breasts and green hair, if the player wished to design it that way.

There is no storyline created by developers, any storyline that persists is created by the player during the game. The marketing for The Sims franchise did not tout extreme violence nor pink and girly items.

In game, a player could spend all their time either building houses, decorating rooms, raising children, working overtime pursuing a career, discovering new items, building in-game relationships, setting people on fire, and many more.

So, if we look to a game that tells us how to be inclusive, we can look towards. The Sims for game design. They did not place players in a box, they allowed them to decide for themselves, and the communication used was the right balance of informative and inclusive.

Conclusion

Currently, research in regards to inclusion and game design is centered around the topic of female discrimination in reference to the actual gameplay with situations like in-game harassment or overt sexual character designs that eroticize women (Cote, 2017; Fox & Tang, 2014). Game design, hopefully being recognized as a new form of technical communication, lacks actual research surrounding the topic of the development process and the communication that is being presented to consumers.

Looking through a female-lens, analyzing game documents and marketing, the majority of video games still cater to males, creating those barriers to entry for females as a constructed minority. There is a need for more primary research focused on inclusive design in technical writing, with an emphasis on feminism in order to form solutions to eradicate exclusionary content. If inclusive language is used versus traditional language, how does that affect game sales, the job market, customer base, and so on.

Some say that if we move towards an inclusive approach to design, targeting a specific demographic will be more challenging with the upcoming generation because the lines will blend (Kafai et al., 2008). I believe if inclusion is taught and practiced, then marketing will become easier, demographics may no longer be a necessity and consumers can power the market with their buying power. All things considered, demographic marketing is exactly the reason why genres like "girl's games" failed, developers focused on the differences in gender rather than the similarities, as seen in the design of "pink" games which centered around traditionally female tasks like

cooking, playing dress-up, and playing with dolls. When designing for an extreme end of a demographic, exclusion occurs and the possibility of market growth halts. The stress placed on inclusive design is immensely important so that companies can reach a larger audience, more than ever before.

In the analysis of technical communication in regards to sexist 19th century sewing machine manuals, Durack (1998) writes of a supposed catch-22 we face when writing to an audience because we potentially participate in reinforcing the social constructs of gender. If we write inclusively, however, why are social constructs of gender necessary? There is no catch-22 if we choose to write inclusively, the perceived audience is not seen in their differences, but in their similarities to which we focus our writing. I believe the movement towards gender equality and inclusive writing in this space will bring in more gaming minorities like women, and the diversity will drive out the traditional patriarchy structure of technology as a whole.

If games are created with inclusion at the forefront, this will draw in more gamers that are currently minorities in this space. This then allows minorities to enter technical spaces from an early age. Since most technological professionals are self-taught (Ray, 2004), it stands to reason that expanding the range in which games and technology target people will lead to more diversity within the field itself. The cycle then begins by making entertainment spaces into learning spaces. The ultimate goal would be to create a virtuous cycle of creating technical fields entertaining for women/minorities, so they purchase more and participate more. Therefore, this creates a bigger market with their purchasing power, which can then induce the virtuous cycle of attracting an audience

outside of the traditional designs, allowing them to enter career fields where they can use their voice to inspire others. Ray suggests a similar cycle in the lens of video game development, but this virtuous cycle can be applied to almost any field that is still experiencing exclusionary practices.

While all of these suggestions and explorations help us understand a small part of what technical communicators can do to approach game development in an inclusive way, there are still many ways research can spur action and movement to put this methodology at the forefront of this field.

In conclusion, it is unclear to what extent we are acknowledging whether inclusive writing works to close this divide. Not many studies have been done on the impacts of the current changes that have occurred in technical communication, but by bridging technical communication to the professional fields in which we are participating, like game development, we can start to draw convincing evidence that inclusive communication is key for the future.

References

- Beavis, C., & Charles, C. (2005). Challenging Notions of Gendered Game Play: Teenagers playing The Sims. *Discourse: Studies in the Cultural Politics of Education*, *26*(3), 355–367. https://doi.org/10.1080/01596300500200151
- Bogost, I. (2008). The rhetoric of video games. *The Ecology of Games: Connecting Youth, Games, and Learning,* 117–140.
- Browning, E. R., & Cagle, L. E. (2017). Teaching a "Critical Accessibility Case Study":

 Developing Disability Studies Curricula for the Technical Communication Classroom.

 Journal of Technical Writing and Communication, 47(4), 440–463.

 https://doi.org/10.1177/0047281616646750
- Cote, A. C. (2017). "I Can Defend Myself" Women's Strategies for Coping With Harassment While Gaming Online. *Games and Culture*, *12*(2), 136–155.
- DeAnda, M. A., & Kocurek, C. A. (2016). Game Design as Technical Communication:

 Articulating Game Design Through Textbooks. *Technical Communication Quarterly,*25(3), 202–210. https://doi.org/10.1080/10572252.2016.1185161
- Durack, K. T. (1998). Authority and audience-centered writing strategies: Sexism in 19th-century sewing machine manuals. *Technical Communication*, *45*(2), 180–197.
- Entertainment Software Association. (2017). 2017 Essential facts about the computer and video game industry. Retrieved from http://www.theesa.com/article/2017-essential-facts-computer-video-game-industry/
- Eyman, D. (2008). Computer Gaming and Technical Communication. *Technical Communication*, *55*(3), 242–250.

- Fisher, S., & Jenson, J. (2017). Producing alternative gender orders: a critical look at girls and gaming. *Learning, Media and Technology, 42*(1), 87–99. https://doi.org/10.1080/17439884.2016.1132729
- Flanagan, M., & Nissenbaum, H. (2014). Values at play in digital games. MIT Press.
- Fox, J., & Tang, W. Y. (2014). Sexism in online video games: The role of conformity to masculine norms and social dominance orientation. *Computers in Human Behavior, 33*, 314–320.
- Gill, R., & Grint, K. (Eds.). (1995). Introduction. *The Gender-Technology Relation.*Contemporary Theory and Research (pp. 1-29). London, England: Taylor & Francis.
- Grau, S. L., & Zotos, Y. C. (2016). Gender stereotypes in advertising: a review of current research. *International Journal of Advertising*, 35(5), 761–770.
- Haas, A. M. (2012). Race, rhetoric, and technology: A case study of decolonial technical communication theory, methodology, and pedagogy. *Journal of Business and Technical Communication*, *26*(3), 277–310.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?--a literature review of empirical studies on gamification. *2014 47th Hawaii International Conference on System Sciences (HICSS)*, 3025–3034.
- Hartmann, T., & Klimmt, C. (2006). Gender and computer games: Exploring females' dislikes. *Journal of Computer-Mediated Communication*, 11(4), 910–931.
- Henning, T., & Bemer, A. (2016). Reconsidering Power and Legitimacy in Technical Communication: A Case for Enlarging the Definition of Technical Communicator.

 Journal of Technical Writing and Communication, 46(3), 311–341.

 https://doi.org/10.1177/0047281616639484

- Hopp, T., & Fisher, J. (2017). Examination of the Relationship Between Gender, Performance, and Enjoyment of a First-Person Shooter Game. *Simulation & Gaming, 48*(3), 338–362. https://doi.org/10.1177/1046878117693397
- Hundleby, M., Allen, J., & Sides, C. H. (2010). Assessment in Technical and Professional Communication. Amityville, NY: Taylor & Francis Group. Retrieved from http://ebookcentral.proquest.com/lib/mnsu/detail.action?docID=3117816
- IAB Platform Status Reports. (2010). Retrieved March 13, 2018, from http://iab.atlasworks.com/research/947954/389299
- IAB Research: Mobile Video Usage, A Global Perspective. (n.d.). Retrieved March 13, 2018, from https://www.iab.com/insights/iab-research-mobile-video-usage-a-global-perspective/
- Ibrahim, R., Wills, G., & Gilbert, L. (2010). deGendering games: Towards a gender-inclusive framework for games, IADIS International Conference: Games and entertainment technologies part of the IADIS multiconference on computer science & information systems (MCCSIS 2010), Germany. Retrieved from https://eprints.soton.ac.uk/id/eprint/271564
- Ivory, J. D. (2006). Still a Man's Game: Gender Representation in Online Reviews of Video Games. *Mass Communication and Society, 9*(1), 103–114. https://doi.org/10.1207/s15327825mcs0901_6
- Jackson, L. A., Zhao, Y., Kolenic III, A., Fitzgerald, H. E., Harold, R., & Von Eye, A. (2008).

 Race, gender, and information technology use: The new digital divide. *CyberPsychology*& Behavior, 11(4), 437–442.

- Jones, N. N. (2016). The Technical Communicator as Advocate: Integrating a Social Justice

 Approach in Technical Communication. *Journal of Technical Writing and*Communication, 46(3), 342–361. https://doi.org/10.1177/0047281616639472
- Jones, N. N., Moore, K. R., & Walton, R. (2016). Disrupting the Past to Disrupt the Future: An Antenarrative of Technical Communication. *Technical Communication Quarterly*, *25*(4), 211–229. https://doi.org/10.1080/10572252.2016.1224655
- Kafai, Y. B., Heeter, C., Denner, J., & Sun, J. Y. (2008). *Beyond Barbie and Mortal Kombat:*New Perspectives on Gender and Gaming. Cambridge, MA: The MIT Press.
- Kerr, A. (2006). *The Business and Culture of Digital Games: Gamework and Gameplay*.

 Thousand Oaks, CA: SAGE Publishing.
- Kimball, M. A. (2017). Tactical Technical Communication. *Technical Communication Quarterly,* 26(1), 1–7. https://doi.org/10.1080/10572252.2017.1259428
- Kuznekoff, J. H., & Rose, L. M. (2013). Communication in multiplayer gaming: Examining player responses to gender cues. *New Media & Society*, *15*(4), 541–556.
- Kuznekoff, J. H., & Titsworth, S. (2013). The impact of mobile phone usage on student learning. *Communication Education*, *62*(3), 233–252.
- Laszlo, J., & Committee, I. M. A. (2009). The new unwired world: An IAB status report on mobile advertising. *Journal of Advertising Research*, *49*(1), 27–43.
- Levy, L., & Novak, J. (2009). *Game development essentials: Game QA & testing*. Boston, MA: Cengage Learning.
- Lucas, K., & Sherry, J. L. (2004). Sex differences in video game play: A communication-based explanation. *Communication Research*, *31*(5), 499–523.

- Lynch, T., Tompkins, J. E., van Driel, I. I., & Fritz, N. (2016). Sexy, strong, and secondary: A content analysis of female characters in video games across 31 years. *Journal of Communication*, 66(4), 564–584.
- Marchand, A., & Hennig-Thurau, T. (2013). Value creation in the video game industry: Industry economics, consumer benefits, and research opportunities. *Journal of Interactive Marketing*, *27*(3), 141–157.
- Mason, J. (2013). Video games as technical communication ecology. *Technical Communication Quarterly*, *22*(3), 219–236.
- Meloncon, L. (2013). Rhetorical Accessability: At the Intersection of Technical Communication and Disability Studies. Amityville, NY: Baywood Publishing Company, Inc. Retrieved from http://ebookcentral.proquest.com/lib/mnsu/detail.action?docID=3117919
- Minkler, M., & Biller, R. P. (1979). Role shock: A tool for conceptualizing stresses accompanying disruptive role transitions. *Human Relations*, *32*(2), 125–140.
- Near, C. E. (2013). Selling gender: Associations of box art representation of female characters with sales for teen-and mature-rated video games. *Sex Roles, 68*(3–4), 252–269.
- Norris, K. O. (2004). Gender stereotypes, aggression, and computer games: An online survey of women. *Cyberpsychology & Behavior, 7*(6), 714–727.
- Nystrom, R. (2014). Game programming patterns. (n.p.): Genever Benning.
- Oswal, S. K., & Meloncon, L. (2014). Paying Attention to Accessibility When Designing Online

 Courses in Technical and Professional Communication. *Journal of Business and Technical Communication*, 28(3), 271–300. https://doi.org/10.1177/1050651914524780

- Paaßen, B., Morgenroth, T., & Stratemeyer, M. (2017). What is a true gamer? The male gamer stereotype and the marginalization of women in video game culture. *Sex Roles, 76*(7–8), 421–435.
- Ray, S. G. (2004). *Gender inclusive game design: Expanding the market.* Hingham, MA: Charles River Media.
- Schell, J. (2014). The Art of Game Design: A book of lenses. Boca Raton, FL: CRC Press.
- Seabrook, J. (2006, October 30). Game Master. *The New Yorker*. Retrieved from https://www.newyorker.com/magazine/2006/11/06/game-master
- Shen, C., Ratan, R., Cai, Y. D., & Leavitt, A. (2016). Do men advance faster than women?

 Debunking the gender performance gap in two massively multiplayer online games.

 Journal of Computer-Mediated Communication, 21(4), 312–329.
- Smyser-Fauble, B. (2015). Applying a Feminist Disability Methodological Framework in

 Technical Communication by Interrogating Access & Deconstructing Social Barriers of

 Exclusion. (Doctoral dissertation). Illinois State University, Illinois, USA. Retrieved from

 https://ir.library.illinoisstate.edu/etd/420
- Spence, I., & Feng, J. (2010). Video games and spatial cognition. *Review of General Psychology*, *14*(2), 92.
- Steinkuehler, C. A. (2006). Why Game (Culture) Studies Now? *Games and Culture, 1*(1), 97–102. https://doi.org/10.1177/1555412005281911
- Sutcliffe, R. J. (1998). Feminizing the professional: The government reports of Flora Annie Steel. *Technical Communication Quarterly, 7*(2), 153–173. https://doi.org/10.1080/10572259809364622

- Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review, 17*(3), 320–337.
- Thompson, I., & Smith, E. O. (2006). Women and feminism in technical communication—An update. *Journal of Technical Writing and Communication*, *36*(2), 183–199.
- Wajcman, J. (1991). Feminism confronts technology. University Park, PA: Penn State University Press.
- Whiteside, A. L. (2003). The Skills That Technical Communicators Need: An Investigation of Technical Communication Graduates, Managers, and Curricula. *Journal of Technical Writing & Communication*, 33(4), 303–318.
- Williams, D., Consalvo, M., Caplan, S., & Yee, N. (2009). Looking for gender: Gender roles and behaviors among online gamers. *Journal of Communication*, *59*(4), 700–725.
- Williams, D., Martins, N., Consalvo, M., & Ivory, J. D. (2009). The virtual census:

 Representations of gender, race and age in video games. *New Media & Society, 11*(5), 815–834.
- Williams, D., Yee, N., & Caplan, S. E. (2008). Who plays, how much, and why? Debunking the stereotypical gamer profile. *Journal of Computer-Mediated Communication*, *13*(4), 993–1018.
- Yee, N. (2006). Motivations for play in online games. *CyberPsychology & Behavior, 9*(6), 772–775.
- Youngblood, S. A. (2013). Communicating Web Accessibility to the Novice Developer: From User Experience to Application. *Journal of Business and Technical Communication*, 27(2), 209–232. https://doi.org/10.1177/1050651912458924