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THE TECHNICAL WORLD OF WARCRAFT

by

DEREK HAMPTON
B.A. Florida State University, 2016

A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Arts
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ABSTRACT

The Technical World of Warcraft explores the various technical instruction elements of World of Warcraft, more specifically observing issues faced by players who take on content at the highest level. The thesis raises the problem of the in-game technical documentation being utterly ineffective for the aforementioned players, causing them to create their own technical documents. While observing the environment found exclusively within the game, research from Jennifer DeWinter and Ryan Moeller, Mark Chen, Sarah Bishop, and more, is used to analyze the game's instructional elements from a critical angle. Several job listings from other major game development companies are also used to bring forward the idea that Activision-Blizzard does not have technical communicators creating their own in-game technical instruction. By considering these factors, the study calls attention to an area within the gaming industry that technical communicators could provide a great benefit and create better support for those who do enjoy video games.

To my parents, Michael and Lizet Hampton. You have supported me through my entire journey in graduate school. You were always quick to offer sound advice and always knew what to say. I would be nothing without your guidance and love.

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CHAPTER ONE: INTRODUCTION

When one first starts up a video game, they require some form of guidance. The digital game space is not one easily navigated and, the nuance of controls or specifications within each system, requires a hefty amount of technical instruction to carry out the optimal inputs to succeed. Depending on the medium, this might be a manual or a tutorial. As the video game industry has shifted towards a more and more online method of delivery, we have seen the traditional paper manuals disappear. The disappearance has come with the newly favored, hands-on, and interactive tutorial level approach. Activision-Blizzard is a well-known game developer, owning a number of studios beneath them. After a 2008 merger, the two individual studios became one body and a powerhouse for developing games like the *Call of Duty*, *Diablo*, and *World of Warcraft* franchises. Though when players want to learn more about the game systems they are going to be interacting with, like many other non-gaming systems, they must consult technical documentation.

World of Warcraft, being a massive multiplayer online role-playing game, has a very different take on technical instruction. The game has players take on a number of skill-based challenges, in a fantasy setting, and is played in the third person. These challenges can range from simple puzzles to extreme technical feats. The in-game documentation is called the Adventure Guide, and features very brief, vague blurbs about key points during an encounter within the game. The tool is used as a sort of launching point to further understand the game features they will be dealing with, rather than an actual “guide” on how to go about specific features within the various forms of content found in the game. Players, and creators of guides, do not make mention of what is available in the game. Many endgame players, who are completing the game’s

maximum level content, simply use it to plan rewards. There are a number of other tools players use that are external to the game itself. As a result, the game's learning environment has become an awkward dynamic with how much support is needed, externally versus internally of game systems, to succeed at the later stages of the game. The community's solution has been to simply create their own support tools.

World of Warcraft, and other games like it, are a worthwhile object of study for technical communicators because of the current situation with technical documentation. Some technical communication scholars have already conducted research in the field of gaming and clarified the connections between technical communication and game studies. To best understand the intersection between gaming and technical communication, we can look to the work of a handful of technical communication scholars. McDaniel and Dear establish that the discourse of game developers shows much of the same practices found within outcome-oriented technical communication. A major take away of theirs was that, "Understanding how an organization deals with problems helps us to understand its culture. This knowledge, as we argued in the introduction, is important for the educators of future technical communicators who will work in such environments as well as for practitioners who can add value to existing communication practices inside game studios" (McDaniel and Dear 164). Reardon et al. looks at the conflict between player choice and developer design decisions. Players have chosen to create their own solution to technical documents, while the developers stubbornly continue with a broken system. Their study states:

Technical communicators need to start viewing audiences as potential collaborators and participants rather than just users. Just as our disciplinary conversations shifted from

‘readers’ to ‘users’ in the 1980s and 1990s, our conversations need to shift from ‘users’ to ‘collaborators’ in the 2010s. Additionally, we need to find new ways to develop relationships of dialogue, participation, and cocreation with consumers. (Reardon et al. 54)

The situation outlined by Reardon et al. is a very close parallel to issues with Activision-Blizzard, who have not recognized their technical communication-oriented player-creators in any kind of greater capacity. A paradigm shift needs to happen to improve the relationship, between player and developer, that has been molding for years.

The issue of developer and player relations has been discussed at length by numerous technical communication scholars; several go on to mention potential solutions to that issue. Verhulsdonck and Shalamova introduce the idea that behavioral design in technical communication can create more effective digital assets and improve the user experience overall. In presenting a workable solution, the two scholars say, “Analyzing behavioral design techniques not only provides technical communication students with another perspective of what makes an information product or digital asset a failure or success but can also inform them to better understand audience needs” (Verhulsdonck and Shalamova 396). The Adventure Guide has only ever seen one major revision to its format and reveals that Activision-Blizzard is either content with how the guide is operating or is simply disconnected from the user experience it provides. Julia Mason, a technical writing scholar, brings up the concept of shared experiences among environments and how, within gaming ecologies specifically, the environments themselves call upon other community members to become technical communicators themselves. She also discusses the idea that non-traditional fields are requiring the work of technical communicators;

in the case of this study, we see how technical communication is being used by a community of non-traditional technical communicators to remedy an issue found within a game. On the topic of how gaming has seeped into areas of technical communication and its influence in other fields, Mason says, “Already, ‘serious gaming’ in areas such as defense, health care, education, and engineering has provided an opportunity for technical communication to increase its influence within fields in which it has traditionally held sway” (Mason 233). Douglas Eyman, a professor of technical and scientific communication, shows the expansive opportunities available to technical communicators within the gaming industry; that is to say that a technical communicator within the video game industry may have status as someone who upholds the quality of the final product. The technical communicators are the line of defense on verifying that a set of instructions are cohesive and correct. He also argues the case that games exist as rhetorical spaces where players and developers engage to solve common rhetorical issues. Assuming a technical communicator is developing the technical documents for a game development company, Eyman says this on their powerful potential, “Technical communicators can, with some imaginative rethinking, enter the game development industry as documentation specialists. Similarly, expertise in rhetoric is an entrée to contributing to the game design process from the outset” (Eyman 248). Knowing how to appeal to the audience of a game, by applying rhetorical devices, can best aid in the deployment of technical documentation for the final product. Both he and Mason look at the applications of technical communication within the game development industry and show how the career can flourish, especially when given the opportunity to work on products that directly end up in the hands of customers.

Technical communication is a vast field that has its roots cast deep into technology, with a budding presence in entertainment. Pringle and Williams, in their article, *The Future Is the Past: Has Technical Communication Arrived as a Profession?*, look at the history of technical communication and the direction it is heading. On the origins of technical communication, they say, “That is, technical communication historically has been characterized by a tension between employing sophisticated rhetorical and analytical skill to create effective communications at the same time those skills relied on technology for their implementation and demonstration” (Pringle and Williams 362). As outlined by the study, the need for technical communicators in the gaming industry is growing daily, as it is a field that blends audio, text, video, and consumer interaction. All four of these elements are met by the extremely diverse toolkit of a technical communicator. Technical communicators are already taking on these issues in their work, within and beyond gaming, and are well-prepared to work with these elements. For example, a technical communicator would easily be able to write and edit the captions for an in-game cinematic scene or even write the directions used in a tutorial.

Many technical communicators hired within the gaming industry are used to write internal documentation for their respective game development companies. In a job listing for Epic Games, the studio says they are, “...looking for a Lead Technical Writer to help craft the documentation for Unreal Engine, our industry-leading game development platform” (“Lead Technical Writer at Epic Games”). More job listings, showing the very same conclusion, can be found in Chapter 4. Of a similar vein, Activision-Blizzard is the game development company that creates *World of Warcraft*. It appears that, based on the current deployment of technical communicators in the gaming industry, the main consumer base for Activision-Blizzard does not receive technical

information that has been worked on by a technical communicator. With opportunities like this stripped away, it calls into question who is creating technical documents for the customers of game studios, if not their technical communicators. Even worse, findings of this study, taken from observation around fan sites, forums, and content creators, suggest players are the ones creating the most effective technical documentation for *World of Warcraft*.

Due to the philosophy of some game development companies, the scope of technical documentation might be more limited. Many other games do not offer in-game technical documentation for the variety of their content. A simple tutorial at the very beginning is all they might have, leaving players to figure out the rest. This still leaves room for technical communicators, but in a much more diminished capacity, though further involvement would be a better step in iterating new game features. *World of Warcraft*, on the other hand, has a plethora of difficulties and content, all of which have in-game documentation to support them. Though, this raises the issue of why players are creating their own documentation.

The thesis will begin by looking at some key definitions of technical elements within *World of Warcraft*. Activities that fall under the branch of the game's player versus environment content are under direct observation. These include instanced content and open world content. They could be viewed as playing against the game's built in artificial intelligence, or the automated game system that players engage with. The artificial intelligence can vary greatly, from requiring multiple players to overcome a difficult situation, to ones that challenge individual player skill. Instanced content, also referred to as "an instance", is any content sealed off from the rest of the world and restricted to a select group of an individual player's choosing. Under instanced content we find scenarios, dungeons, and raids. These activities range from solo story

events to thirty player teams, taking on a singular objective. The bulk of the game's player versus environment content falls under this very category and is the primary draw to the game. Scenarios are typically used to drive the story forward and are very narrow in scope. Many times, a player must undertake the challenge alone, though situations of group scenarios are not uncommon.

Additionally, the study observes the more technical heavy content like dungeons and raids, which form the core of the technical communication issues between player and developer. Dungeons are sprawling levels or areas where players will face common enemies, referred to as trash mobs, and three to five larger enemies, referred to as bosses. Dungeons are always locked to a five-player group size and have four difficulties; the only difficulty relevant to the study is Mythic+, a somewhat infinitely scaling difficulty that offers the highest level of difficulty within dungeons. Within the upper echelons of the Mythic+ difficulty, the true challenge of each dungeon actually varies greatly based on what random modifiers, also referred to as affixes, are present. Affixes appear as random number generators that raise issues within the game space for players. Raids, like dungeons, are large areas that commonly feature various sections with much more challenging bosses and also feature four difficulties. Group sizes in raids can scale between ten and thirty players, though the only relevant difficulty to the study, Mythic, is locked at twenty players. In raids, it should be noted that the knowledge of the trash mobs is irrelevant, due to their simplicity. What makes Mythic+ dungeons and Mythic raids the only relevant difficulties is that both are seen as the most elite, and obstacle laden, activities a player can do in *World of Warcraft*. On a more technical front, when an in-game encounter is contextualized, it is often from these levels of difficulty.

Players that are taking on dungeon and raid content make up groups that fall into two categories: pickup groups and guilds. A pickup group is a group of random players that are grouped together via the various group-finding systems in the game, usually to complete an instance. Wowpedia provides a clear definition of pickup groups as, “Pickup groups are usually less organized...because the players are less familiar with each other” (Wowpedia 2017). Guilds, on the other hand, are more organized groups of players who unite to complete a common objective. This can be any goal, from completing the game’s hardest content, to just expanding a social community. Any key or unique experience within the game’s instanced content is referred to as an encounter. The types of encounters can range from multiple hordes of enemies attacking at once, all the way to a singular boss battle. In these encounters, players will have to deal with unique enemy artificial intelligence attacks or abilities. It is each player’s responsibility to deal with these attacks and abilities, and still defeat the associated enemies. The means by which players interact with the attacks and abilities are called mechanics and are a fundamental part of all instanced content within *World of Warcraft*. From each activity, mechanics can vary wildly in consequence, scale, and severity. Some of the mentioned activities come in a variety of difficulties. The differences between them are an important distinction to be made, as the mechanics and encounters can vary greatly based on what difficulty players are going up against.

These are the primary technical attributes of *World of Warcraft* that other player-creators have to take into account when writing about the game. The level of complexity, detail, and scaling difficulty make *World of Warcraft* a hefty topic with many facets. With all these different moving parts, finding a place to begin is difficult for players, especially newer players.

Unfortunately, as a player begins to step into all these systems, there is no effective tutorial for

the game's later stages. From the game's early history, players often created their own documents to handle difficult content at later levels. This was due to the game simply not having any technical documentation for these later stages, a common trend in many other games like *World of Warcraft*, outside of a simple tutorial level at the beginning of a player's adventure. The game had previously held many of these same conventions. The modern state of the game features use of technical instruction called the Adventure Guide. It can be used to direct new players or provide overviews for most encounters in the game. As of 2021, it is the only form of official in-game documentation and only provides rudimentary details. A more comprehensive look at the Adventure Guide is explored much deeper in Chapter 5.

Even then, it falls extremely short of what one might expect from technical instruction. Key details of dungeon and raid components are missing or unclear. For an entry from the Adventure Guide, "Primal Anima Containers - Anima containers are placed around Lady Inerva Darkvein's balcony that gradually gather anima energy to empower each of her abilities" (*World of Warcraft*). Nowhere in that does it mention the specific health breakpoints or these specific empowered abilities; while there is more to be found within the adventure guide, this type of key information is still missing. Players are left helpless, with little ability to overcome their current dilemma. Rather than accept the situation, players simply choose to ignore much of the in-game technical instruction and simply create their own. Player-creators have existed since the game's inception, but now shine brightly above the game's own tools.

In what follows, the thesis shows how the progression of technical documentation in *World of Warcraft*, such as the Adventure Guide, has actually created an unstable environment for players to properly learn associated mechanics, leading players to create their own. The

Adventure Guide does not do enough to make players feel ready to take on an encounter. As such, they are having to rely on creators outside of the game. While this is an efficient manner to learn and improve, how does a player even know if the source is trustworthy. That comes from a blend of credibility and use of recorded footage. The layer of possible mistrust that looms over the technical documentation only serves to further fuel the unease players have about technical information in *World of Warcraft*.

CHAPTER TWO: LITERATURE REVIEW

In Theory

In their book, *Computer Games and Technical Communication: Critical Methods and Applications at the Intersection*, Jennifer DeWinter and Ryan Moeller dive into the murky waters that is technical communication in gaming. The two make the bold claim that, despite technical communicators growing rapidly and having the entire skillset to create technical documentation, there is very little room for them in the current state of the gaming industry. An interesting hypothesis for this lack of room comes from the ability to simply defer the work to the software engineers. The two also go on to look at *World of Warcraft* as a learning tool. In some exercises of technical communication, students were urged to create their own technical documents after engaging with the game's content, while others look at the knowledge players have to build before engaging with many of the endgame systems.

Many elements of *World of Warcraft's* technical features are put under a microscope as they navigate the territory. These include communication aspects, as well as some of the endgame documentation and interface design. Looking at these game structures from a theory heavy angle allows for deconstruction and analysis that could not happen otherwise. For *World of Warcraft* specifically, these features are found to have high levels of customization, but still carry some major flaws that could be alleviated with the eye of a professional technical communicator.

Their work also goes on later to explain some of the technical structures found within the game's high end social sphere. Specifically, they cite applications to raiding guilds as a major pillar of the community. There is no in-game support for a system like this, despite its sweeping

prominence within the game's social sphere. This is just one example, among many others, that shows how Activision-Blizzard and other triple A game studios underutilizes or outright ignore the benefits that technical communicator provides.

Five concepts DeWinter and Moeller utilize, to deliver the point of greater room for technical communicators within the game industry, are Integrated Procedural Guidance, Modding as Gamework, The Unintended Manual Theory, Transformative Locale in a Virtual World, and the Play and Praxis Concept. Despite touching a wide variety of topics within gaming, these five concepts in the book help best arrive at the conclusion by looking at both the perspective of developer and player; some viewpoints even take the middle road and take angles from both. These balances views are essential, as it builds a robust view of what issues are present within the documentation and technical side of gaming.

The Integrated Procedural Guidance concept is one used to describe the major shift to and process of designing in-game instructions. This done through a four-component framework of Integrated Procedural Guidance: Tutorial Levels, Integrated Stepped Tutorials, Integrated Narrative Tutorials, and Adaptive Messaging. The switch to in-game instructions initially began in the 1990's, as players wanted further direction and games were becoming more complex. The side effect of this concept has resulted in the abandonment of technical communicators from game design and forces the constraints of the game space on players.

Transformative Locale in a Virtual World is the concept by which sites of personal, communal, and/or social transformations evolve as part of a digital community discussion. This is essential, when thinking about games that are constantly iterated upon, as the delivery of said changes can easily affect player response. While a bit steeped in rhetoric, the element of

delivering positive or negative feedback to players is one that will inevitably produce a reaction. Having proper technical reasoning for iterations upon a game, make it all the easier to deliver that reason to players. Activision-Blizzard stopped producing player guidebooks because they were iterating upon the game too frequently.

Modding as Gameworld theory suggests that understanding the mechanics behind modifying, or modding, a game can help a participant become more cognizant of intersections within other fields and subject matter. The meaning of games is derived from many sources, though primarily through developer and player. For example, the player-created modifications “Deadly Boss Mods” and “BigWigs” help simplify encounters within the game. The result has been Activision-Blizzard’s complication, in design and difficulty, of encounters across the entire game. With modding, the meaning of the game can change drastically for both parties. When the player wishes to become developer, they look to mod and contribute some form of iteration upon the game for themselves. This multiperspective gives players who do mod a fair ground with which to provide criticisms or feedback on issues within a game. The developers may opt to create more difficulty content, or limit what features players can tinker with. It is for this reason that dedicated players, who are contributing mods to the higher level, simultaneously offer the highest level of quality feedback on documentation for the associated content.

The Unintended Manual Theory suggests that, without a technical communicator’s authority or position for ethos, a guide writer must immerse themselves in the action of a subject to be able to elaborate further. This is largely present in situations where there is no documentation, or the documentation is deemed insufficient by the majority of users. When

spoken of in the context of gaming, specifically, it means that readers are intended to mimic the experiences and best practices of the writer to better optimize their gameplay.

Finally, the Play and Praxis concept is one that looks at the practices and activities of a genre ecology. Within the realm of gaming, these ecologies come through as the various communities shaped within the game and their relations in the digital space. The order of the communities varies by the genre of the game, the most prominent voices within said community, and the tools within the game to establish communities. How these forces all come together would be the best examples of the ecologies found within *World of Warcraft*. These often appear as guilds or clans, that unite to achieve a common purpose. Play and Praxis would come through as any preparatory documents or applications and any actions needed to carry out the activity dictated by the community goals.

Understanding Qualitative Metasynthesis: Issues and Opportunities in Early Childhood Intervention Research is a piece by Elizabeth Erwin et al. that gives a breakdown of what a qualitative metasynthesis is and how it can be utilized in academic studies. Erwin et al. have developed their own definition of qualitative metasynthesis which reads, “Qualitative metasynthesis is an intentional and coherent approach to analyzing data across qualitative studies. It is a process that enables researchers to identify a specific research question and then search for, select, appraise, summarize, and combine qualitative evidence to address the research question” (Erwin et al. 186). Their study speaks to using unique interpretations of professionals for the sake of developing new means of thinking about another topic, possibly in other fields outside of the original field of observation.

Qualitative metasynthesis pairs extremely well with the concept of technical communication in gaming due to the ever-evolving state of documentation in a regularly updated game. Erwin et al. tells us, “Qualitative metasynthesis focuses on selecting qualitative studies on a specific body of knowledge and translating those findings into one interpretation offering a richer, more complete understanding of the phenomenon” (188). That being, it builds upon existing knowledge by introducing new perspectives to a studied topic; this is essential in developing new ways of thinking. As online games receive regular updates, new documentation must be created. By building upon the successes or failures of what documents have existed in the past, newer and more effective documents can be made.

The kind of work Erwin et al. explore is critical, as the topic of specific failings within gaming can often be pinpointed to some shortcoming or oversight by developers. Understanding player perception may often be best attributed to why a game failed, and works to the strengths of a quantitative study, a qualitative metasynthesis lends itself to specific information already found within the game, and the failings that surround that. “Synthesizing a collective body of qualitative or ethnographic research to identify common themes and/or to compare and contrast different groups on a general topic provides deeper insights that might not be available in a single study”, is Erwin’s functioning definition of use for a qualitative metasynthesis (187). In the case of observing *World of Warcraft*, the ethnographic group is the game itself and the community built around it. On the other hand, the various groups of topics would be the official documentation and the player made documentation. To finalize the study, comparing and contrasting them and what it means for the community, would yield the final result.

In their piece, *Online Teaching Experience: A Qualitative Metasynthesis (QMS)*, Jennie De Gagne and Kelley Walters discuss the greater topic of online learning, and how specific qualitative studies can help improve other specific areas within their own respective fields of study. In many ways, World of Warcraft's technical documents are a form of online learning and the study highlights ways that content built upon the game's own framework can best help improve the technical instruction in the future. The authors form their own definition of qualitative metasynthesis. To them it is, "generating new interpretive findings from existing qualitative studies" (De Gagne and Walters 580). While much more brief than Erwin et al., the two are much more up front about their definition; to them, it is about taking what exists and finding the weaknesses within that, from a professional angle.

A Qualitative Metasynthesis of Activity Theory in SIGDOC Proceedings 2001–2011, by Stewart et al., looks at the use of Activity Theory in the ACM SIGDOC proceedings from the listed dates. Their meta study of qualitative metasynthesis looks at broader uses of Activity Theory across several different fields and how it was expanded on. The authors borrow from Wayne Au's definition of qualitative metasynthesis, which states, "part of a tradition of metaresearch that involves synthesizing the results of qualitative studies to gain a better understanding of the general nature of a given phenomenon" (Stewart et al. 342). Such is the nature of qualitative metasynthesis, by using what exists to expand on a greater topic. Ultimately, their findings are proved correct, when the twelve studies, observed by the authors, create better tools within technical and professional communication design by building upon proven and effective strategies.

Erwin and her associates touch on three major areas in which this type of study can be utilized. These methods very clearly highlight where the qualitative metasynthesis falls within the realm of research and methodologies. To do this, the study looks at three areas where the study can be applied. These three methods are:

- Synthesis by identifying common themes and evaluating different groups;
- The allowance for connecting vague evidence to build upon a topic; and
- Shifting to a focus on knowledge application.

By building upon existing knowledge, new chains of thinking are created. To create a new way of thinking about technical information in games, that same model is being applied here.

First is in a situation where synthesizing a collective body of research that is qualitative in nature is used to identify common themes and to evaluate differing groups on a general topic. This gives better insights that might not be available through one study alone. This creates a sort of knowledge chain that can easily be tracked. Operating with knowledge in this manner allows readers the chance to see exactly how a chain of thought is developed. Second, qualitative metasynthesis allows for much more vague evidence-based studies by expanding how knowledge currently exists on a topic. Reexamining known information can certainly help to give further insight on topics that are already well known if sufficient proof for that insight is established. As gaming is a thoroughly researched topic, bringing a critical light to the usage of bad or insufficient documentation helps highlight new issues. Finally, a shift from knowledge generation to knowledge application can help to further complicate specific key issues within a field. This one is most curious, as looking deeper within known information can lead to discoveries of issues

"hidden in plain sight". This does not have to be a large-scale breakthrough in science but can be as small as a reinterpretation of a widely believed topic.

Simply put, a qualitative metasynthesis is best utilized to rediscover or reiterate upon existing knowledge. The thesis utilizes aspects from methods one and two. Thanks to the fact that every endgame experience within *World of Warcraft* is going to be different, it permits a study to have many different potential takes on different game aspects. To paint a complete narrative, multiple studies of the endgame activities need to be pieced together. This will be done by combining examples of critical theory, practical applications, and community voices, that are all centered around *World of Warcraft*. The methodology is perfect for the topic, as it helps chart a path through both the complex history of the game industry, as well as *World of Warcraft's* strange relationship with all things technical. Studies on the game can be transformed into new ways of thinking about where technical communication needs can be found within the gaming industry, though the context of this study looks at *World of Warcraft* and Activision-Blizzard more specifically.

There are some constraints of the methodology that have to be mentioned. The scope of the study observes players engaging in Mythic+ dungeons and Mythic raids, and their interactions with technical information about the game. That is not to say that there are not other perspectives and other conclusions that can be drawn with a qualitative metasynthesis, when looking at another level of gameplay within *World of Warcraft*. Players exist at multiple levels within the game, where some only complete the game's lower difficulties. These players may not have a need for technical documentation with the same graphic detail as players taking on mythic raids. Their perspectives on the game are wholly valid and could be used to draw their own conclusions

about how useful the Adventure Guide really is. That said, choices that players of that caliber make can be reflective of the choices made by higher end players. To give an example, when a lesser skilled player identifies a player of higher skill, they may well feel inclined to speak with that player as to how they can improve. There is a sort of “trickle down” of information, all coming from sources that are external to the game. Therefore, while the outlook on the game’s content might be different, the stream of information remains very much the same.

Though the document is brief, Greene and Palmer’s *It’s All in the Game: Technical Communication’s Role in Game Documentation* establishes the differences between manuals of the past, present, and what the future might look like. Interestingly, video game manual research began with early computer user manuals; many of the learning outcomes were the same. It made sense, as games of the 1970’s came loaded along with the computer. These games were extremely basic but provided good fun and had appropriate documentation. This is largely what sparked the massive explosion that was the modern state of video games.

With the advent of games that were not hard coded onto a computer’s chip, opportunities opened for game enthusiasts and developers alike. This created a surge of new opportunities for several careers to collaborate and begin the early stages of the gaming industry as we know it today. Being so new, these early manuals represented something that came along with the computer hardware itself. This slowly changed over the years, as the core concepts of a game manual came to existence. A universal finding of Greene and Palmer is that manuals have shrunk in the last couple of decades. As CDs became the standard, manuals were squared to fit the jewel cases. From there, many cartridges have continued to shrink, or were elongated vertically. Most important, is their acknowledgement of manuals becoming integrated into the games themselves.

Flavor text, or fun facts about the game that breathed life into the documents, have also disappeared from these manuals and tutorials.

What is most enlightening is a single line, with a prior reference to *World of Warcraft's* massive size. On where most documentation comes from, Green and Palmar say, "Most MMORPG documentation is player-generated..." (Greene and Palmer 2011). Their words directly correlate to the main hypothesis of the paper, as the same case is even happening in a game where documentation is provided. There is still the major issue of players opting to create or seek out player generated guides when the in-game documentation is constantly moving forward with new content updates. Greene and Palmer largely attribute this phenomenon, of player generated guides, to the collective intelligence of the internet and the paradigm shift of seeking professional guidance on how to take on challenges.

Finally, the authors validate the fact that there are no established standards for creating video game documentation and that there is very little use of technical communicators in the video game industry. These points directly correlate to DeWinter and Moeller, who have observed the very same thing (DeWinter and Moeller 18). Despite there being whole teams that collaborate to bring the multimodal experience that is a video game, the quality assurance that comes from technical communicators is largely ignored. They support the claim that technical communicators and game documentation are intrinsically linked. Looking to the future, the authors accept that print documentation in gaming is likely a medium of the past. Documentation and manuals have always reflected their temporal space. Greene and Palmer call for lesser reform with game documentation, as it seems to be lagging behind where it has been in the past. Rather than pulling ahead and leading the way for a player experience, the documentation created by

Activision-Blizzard now sit ignored or skipped over. This is where the work of a technical communicator comes into play, bringing the eye for all things text and text design.

Other studies choose to look at player behaviors, rather than where the documentation falls short. J. Patrick Williams and David Kirschner largely touch on the "on the fly" versus prepared coordination required for raiding in their article *Coordinated Action in the Massively Multiplayer Online Game World of Warcraft*. However, they also take a moment to discuss some of the more technical aspects that go into actions executed in the moment. Most important of these is the design of the player's user interface. The user interface is essentially the player's window into the game world. It is here that players view all information on health, resources, and game mechanics. A user interface is very much like your desk, at work. A clean and organized desk is one of the many tools needed to work at peak performance. This idea of work is actually one many players in the game often have to navigate, as outlined by DeWinter and Moeller, who discuss the Play and Praxis theory. Largely, that the community norms might dictate what a good user interface looks like.

The user interface has a variety of technical information players need to be able to refer to when in the heat of battle. These include the player's health and resources, their ally's health, and the enemy's health. Outside of combat, players also need to keep track of their quest journal and a variety of other options panels. All things mentioned here are considered some of the essentials. The interface also has the potential for near infinite expansion, with *World of Warcraft's* usage of add-ons. There are a variety of templates that can give players radically different experiences. Which interface a player uses is largely determined by the content they are doing. Some might be used to enjoy the scenery, while others are best utilized in an endgame

setting where an overwhelming amount of technical information needs to be shown at the ready. What is most significant, is the way that Williams and Kirschner's research lines up with some of the findings of Bonnie Nardi, who goes on to criticize the game about its lack of technical assistance. The user interface is no exception, especially when user created modifications are brought into the equation. Additions like these only serve to complicate the entire equation and is not something Blizzard prepares players for, despite it being grossly prevalent in the endgame community.

Sarah Bishop, in her dissertation *A Grandiose Reality*, highlights some of *World of Warcraft's* existing technical communication, while also exposing many of its crippling weaknesses. She specifically mentions the new player guide, which originally acted as a compendium of surface level information to the game. Its lack of overall usefulness is attributed to the constant updates to the game versus very periodic updates to the new player guide. As of 2021, the guide is no longer produced. One of the largest issues Bishop cites is lack of reception from player feedback. Most of Activision-Blizzards avenues for player feedback comes from bug reports and a largely neglected feedback forum. Bishop suggests allocating hired professional technical communicators to oversee this forum and engage with players on how to improve in-game documentation. Balance in design is another large issue, as many of the in-game guides are purely textual experiences.

She also looks at technical communication works done by non-technical communicators. These include fan sites, the several wikis to be found about *World of Warcraft*, and guilds creating their own technical documents. This heavily recurring theme, of non-technical communicators creating works of technical communication, is an interesting one, as it exposes

the level of technical prowess required to face difficult encounters within the game. At the same time, it shows how better supported technical work on Activision-Blizzard's end might eliminate the need for such heavy technical communication on the player-creator end.

A fascinating takeaway is that Bishop regularly suggests Activision-Blizzard hire more technical communicators. To her, it is about an issue of consistency. The current in-game documentation has seen three iterations, since its implementation in 2012, and is largely ignored by players who are pushing the game's high-end dungeons and raids. It should also be brought to attention, that these three iterations have changed very little in terms of scope or design choice. The guide has seen colors and information sorting change, with no real impact made on the issue of quality information; due to the varied complexity of encounters, the potential aid from the guide fluctuates. The issue of consistency is one not many players actively think on but has been a nagging issue for the life of the game.

In Practice

Bonnie Nardi begins her book, *My Life as a Night Elf Priest: An Anthropological Account of World of Warcraft*, by explaining what *World of Warcraft* is, that being a massive multiplayer online roleplaying game that offers unique challenges to both individuals and groups. She takes some unique looks at player populations and how each server grouping plays the game a little differently. Over the years, this sense of server community has devolved into a sort of hive mind metagame, through the allowance of playing together, regardless of server grouping. She also looks at theorycrafting and game modifications. In her own words, "Theorycrafting is the discovery of rules that cannot be determined through play" (Nardi 137). Discoveries utilizing this

method often help shape preexisting notions of what will or will not be powerful by combining several technical aspects. These include damage simulations, datamined balance changes, and the number of enemies present in an encounter. All of these approaches are methods external to the game.

Nardi mentions that *World of Warcraft* shipped with absolutely no in-game technical information, until 2012 added the Adventure Guide. This was a double-edged blade, as it created many opportunities for players hungry to discover the metagame, but also created a barrier of entry that still exists to this very day. Many raids, before late 2008, required the completion of an attunement quest. Wowpedia says this about the modern state of instances, “Many of the endgame instances originally required you to complete a quest or obtain a certain item to enter. This strategy has largely been phased out, although some instances (particularly select Mythic dungeons) still require attunement” (Wowpedia 2021). The daunting barrier of entry still rears its ugly head, in the form of unclear technical instructions, as newer players attempt to rise in the game’s difficulties.

Modding is another technical aspect of the game that involves creating and installing additional programs into the game. The feat of modding is accomplished by using Activision-Blizzard’s permitted API (or application programming interface) with the LUA programming language to create custom interface features. *World of Warcraft* largely limits this to surface-level technical aspects or enhancing certain visual features. The exploration of this area has led to several enhancements to the game, with Blizzard going as far as to adopt some of the cornerstone mods utilized by the majority of the player base.

Where these mods cause issues, however, is a near requirement for entering high-level play. Whether this be player versus player or player versus environment activities, gameplay aspects like enemy information and what mechanics are coming up, are considered essential heads-up data in overcoming these challenges. This data can further be customized in terms of layout, color, and style, effectively adding an incredible depth to interface design. Her work shows how difficult it can be to succeed in *World of Warcraft's* endgame environment. The overwhelming number of third-party tools that are required to do the game's difficult content largely stems from the lack of technical information found within the game itself. This argument can easily be extracted from Williams and Kirschner, who discuss many of the complications and design principles required. These gaps in the technical information, while allowing the community to spread this among themselves, blocks off players who are not willing to research for the information outside of the game environment.

In *An Unexpected Font of Folklore: Online Gaming as Occupational Lore*, by Ben Gillis, he creates comparisons between work ethic and the requirements of playing *World of Warcraft* at its higher levels. He specifically cites the dedication and training needed to take part in the activity. He also notes the many social similarities that can be found between a workplace and a competitive end game team, as the two both strive for results. This parallel helps to shed some light on *World of Warcraft's* weaker technical aspects. The main concept that is established is referred to as occupational folklore. This idea suggests there are collaborations, specific requirements, and legends that occur within the machinations of the workplace. While this strange, social concept seemingly has nothing to do with *World of Warcraft*, the two are linked

through the norms of a raid team. Interacting with others, on a semiprofessional level, has many of the same practices.

Work ethic is a topic Gillis travels deep on. He creates a parallel between everyone at work pulling their weight, as a group on *World of Warcraft* must do the same to succeed. Shortcomings are easy to spot through key technical information. In *World of Warcraft*, mechanisms exist to display the amount of damage and healing players are doing. Players who are competitive are often optimizing and trying to push the limits of their characters.

Collaboration is another major topic. Gillis' study looks at a situation where twenty people must come together to meet a common goal. All roles must be juggled, at the same time, to overcome whatever the objective is. At the same time, training is an effort that requires a great deal of collaboration on both fronts. This ranges from creating training documents or scheduling training sessions, to taking players to a dungeon for some field work. This duality helps further expose some of the connections found between each area. To further show the links, competitive warcraft teams often have potential players apply to the team. This behavior is nearly identical to how a person looking for work would submit an application, and the employer would select the best applicant. This practice has existed since *World of Warcraft's* inception, and was very likely adopted as a "best practice" of filtering for players.

As companies have detailed histories of their financial successes, *World of Warcraft* guilds often have detailed histories of their own; we should recall that guilds are groups of players organized for a common purpose. Competitive guilds will often flaunt their progress in the most current raid to attract new members. Those who push further into the raid may even become legends on their servers or on Activision-Blizzard's World of Warcraft Hall of Fame. At

the same time, a new guild might mirror a startup company, relying on new talent to build their team. Even in a small group, these “startup” guilds might go on to have detailed histories of their very own, that add to the game’s storied history.

Overall, the two have striking similarities. From histories, to recruitment, guilds and the workplace rely on their people to be efficient. Another common factor is training and technical documentation usage. If a workplace, or a guild, cannot effectively prepare for the challenges ahead, the prospects are rather grim. Gillis’ findings line up extremely well with Amon Rapp’s work, as the two both observe some behaviors and practices of high-end guilds. This is primarily through their preparation and execution, which plays a major role in the end game technical experience of *World of Warcraft*.

Alex Golub’s *Being in the World (Of Warcraft): Raiding, Realism, and Knowledge Production in a Massively Multiplayer Online Game* explains some of the draws to virtual worlds. More specifically, Golub discusses raiding and the community nestled within the competitive endgame of *World of Warcraft*. Their inherent need to push more and more difficult content is a drive very much founded in reality. An individual’s passion naturally pushes them to continue with something, whatever that something might be. In this case, the idea of “pushing” in *World of Warcraft* is called into question. When a player pushes content within a game, they are gathering as much information as possible and using that knowledge to complete progressively more difficult content.

Rather than looking at the game as a database built into a game, Golub turns that idea into how people turn a game into a database. This is the very foundation of how one makes technical documentation for *World of Warcraft*. Realism and the game begin to butt heads here, as you are

no longer your character defeating a boss, but a player in the real world utilizing technical information to overcome some objective. A grim outlook for sure, but such is the reality of technical documentation for any game. This also depends on the outlook of the player. Golub continues to build on the idea of instanced content and provides examples of endgame activities within *World of Warcraft*. As already outlined, these include dungeons and raids. As the game is a massive multiplayer online roleplaying game, most of its challenges are performed in organized groups.

Specifically, *World of Warcraft's* endgame content is notorious for having a high barrier of entry. In the past this came in the form of hours long quest lines to unlock the content, to the technical preparation and requirements of the modern game. For many, this can be a frustrating barrier to get through, as the game itself does not prepare you for it by any means. One could place the blame squarely on the community, though DeWinter and Moeller's concept of Transformative Locale in a Virtual World suggests it is up to the developer to grapple with their ever-evolving community. Speaking on the gross amounts of technical knowledge required, the authors said, "Add to this the sheer amount of information needed to play *World of Warcraft* as a master player (the WoW Wiki is the second largest wiki after Wikipedia), and the information design challenge appears daunting. *WoW* gets around this by having a fairly supportive and welcoming community comprised of players who often meet new players and offer to show them around" (DeWinter and Moeller 82). The authors emphasize the needed skill, along with the reliance players have on one another for attaining the proper information to be able to play the game at a masterful level.

Early in his dissertation, *Leet Noobs: Expertise and Collaboration in a World of Warcraft Player Group as Distributed Sociomaterial Practice*, Mark Chen first mentions the dire need for technical resources when taking on great challenges within the game. Chen makes mention of two encounters, Majordomo Executus and Ragnaros, which were among the greatest technical challenges of the time. Chen tells of the “...unique monsters with carefully scripted combat sequences, providing players greater technical challenge, with names like Majordomo Executus and Ragnaros” (Chen 30). These two encounters required a greater level of preparation and knowledge of game skill. For many guilds, this meant screen capturing various angles of the boss’ rooms and assigning locations for where specific players had to be at given times during the encounters.

Chen also goes on to bring up how every monster within *World of Warcraft* has its own set of abilities, that are unique from the players’. To highlight the specifics that some enemy monsters have, Chen says, “Like all World of Warcraft monsters, each monster in MC had a set of abilities they used when fighting. For example, Molten Giants had a Stomp ability that damaged everyone around them” (Chen 30). Knowing how to cooperate and overcome these abilities is a large part of participating in *World of Warcraft's* endgame. As stated, the two avenues are trial and error and/or technical instruction. Blizzard, having always erred on the side of technical instruction, likely wants players to take this avenue. The technical documents used to guide encounters in world warcraft better allow coordinated action to be done properly. For the average player, this may never exceed the abilities listed in the dungeon journal. However, as more skilled players prepare, they will utilize a number of multimodal tools like videos, gifs, written guides, or even simulations of the encounters.

Chen uses the example of The Pacifists Guild's Guide to Ragnaros. Ragnaros was *World of Warcraft's* first "last boss." Though this encounter, and the accompanying document is nearly fifteen years old, it provides great insight into what technical aspects of an encounter were deemed important or not. This document is a fourteen page guide to a single encounter within the game. One of its many facets was an overhead map of the boss room. Positioning, and knowing your spatial surroundings is a key factor in *World of Warcraft's* more difficult instanced content. The map provided in-game shows little more than pings on a radar. Being able to plan, by expanding a screen capture of the map and giving players assigned spots, helps streamline the process of taking down encounters. This process might seem trivial, but coordinating ten, twenty, or even thirty people can quickly become overwhelming for anyone organizing the group. Player-created tools, like the The Pacifists Guild's Guide to Ragnaros, were a historic landmark among community created tools because it gave way for future design principles of player-creator documents.

By modern standards of raiding, such a guide would be considered ludicrous. Though encounters have gotten more involved, the mechanics a singular role must deal with have become more streamlined. As such, a damage and a support character may deal with the same type of mobility challenge. A defense-oriented character may never even have to deal with such a thing. This tinkering of who does what also varies based on encounter. While some may have skill overlaps, encounter preparation will always be a unique experience. Looking back, The Pacifist Guild's Guide to Ragnaros was an early stage in the realm of player created documentation and may well have shaped the path to other player created technical instruction in the years that would follow.

Amon Rapp carried out his study, *Gamification for Self-Tracking: From World of Warcraft to the Design of Personal Informatics Systems*, by directly observing and engaging with players that partook in *World of Warcraft's* endgame activities. He largely uses game data and guild created documents as the basis for his findings. Many of his findings are consistent with the many other scholars who observe guilds directly, suggesting there is some preparation pattern that guilds follow when getting ready to raid.

Playing *World of Warcraft* at a high skill level comes with the burden of needing to perform well in the competitive space. The same could be said for any competitive activity, be it sports or games. Often, a player would be competing with peers for a spot on a team. While the community one joins will largely shape the actual outcome of such, the reality is that high-level encounters require more skilled players. Rapp suggests some of these performance measurements and outcomes might just be universal across all games. Players who want to strive for the top will never rely on what the game has alone and will always seek out external tools to assist in improvement. He suggests that anyone looking to become an expert will put every action they take under a microscope to improve.

With that, we have two pillars of sorts: the virtual activity and the technical preparation. The question of what, exactly, makes the game's own technical works insufficient is still left unanswered. One might attribute this to the many variables present. A player's performance will change based on the encounter, what their character has equipped, and even what character or role they are playing. That said, players looking to improve, who already play at a fair level, may be inclined to reach out to even more skilled players for advice. These more skilled players may ask to see what technical information, as well as some of their methods the learning player is

utilizing. By looking through the numerous technical channels, the more skilled player can then make appropriate suggestions for improvement.

CHAPTER THREE: WORLD OF WARCRAFT'S TECHNICAL DEPTH

As a massive multiplayer online role-playing game with a complex end-game structure, *World of Warcraft* carries with it a great number of technical demands. These can range from the physical operating system and hardware requirements to the specific goals and skill sets required within the game to succeed. This study will be observing the technical aspects behind the skill set and preparation required to tackle this end game content, and the endless depth that comes with it, in something as “simple” as a video game.

To call *World of Warcraft's* fanbase devoted to enhancing player performance by making use of what little information they have would be a gross understatement. For over a decade, player-creators have continued to take advantage of the API, or application programming interface. The API is what defines interactions between the intermediaries of software and hardware. By pushing this interface to its limits, players have discovered numerous opportunities to create tools for other players taking on these end-game challenges. We have seen whole websites created around simulating character damage or generating a score based on your character's dungeons completed, with specific parameters. With these tools, proper technical knowledge of encounters is required to properly execute the mechanical steps needed to succeed.

The length that players are willing to go to create better opportunities for one another is astounding. Player-creators have developed more and more complex game modifications and interface tools, in an effort to overcome the encounters that existed in *World of Warcraft's* earlier days. These efforts stem from the originally non-existent documentation to be found within the game itself, which is now written by Activision-Blizzard. To combat the mounting player-creator efforts, the company has decided to sharply increase the mechanical complexity of the game over

the years, while also publishing technical documentation that only serves to confuse newer players and be ignored by veteran players. In essence, these two forces of player and developer are on opposing sides of where the difficulty of the natural state of the game should be, with modding and interface adjustment as a major source of frustration.

For those versed in gaming, you may note the lack of mention about player versus player documentation. It should be stated that while documentation for combat against fellow players does exist, there is simply very little player versus player technical information from Activision-Blizzard, and most of what does exist is outdated. Thus, players have taken on the role of creating the vast majority of the technical information for player versus player activities. With this in mind, the technical aspects of player versus player and player versus environment cannot fairly be compared and will not be observed by this study.

Player Versus Environment

Player versus environment is essentially players engaging against a semi-scripted encounter. It is also the core topic that most of *World of Warcraft's* technical documentation is written about. This includes boss mechanics, gear drops, and more. What exists within the game is extremely sparse and only gives you very raw details about what challenges you will be facing, or the rewards you could obtain by completing the encounters. To that end, this has created challenges for player-creators wanting to expand on the few technical details we do have.

The term player versus environment is quite vague, in the context of gaming. It can mean content found within the open world, instanced content, or any activity where you play against the artificial intelligence of the game. The level of difficulty of said artificial intelligence can vary

greatly, often featuring multiple modes of scaling challenge. More specifically, this study looks at instanced dungeons and raiding as the primary focus of the term player versus environment.

Player versus environment, overall, can be seen as a bit of a dance. Performing all the right steps will almost always result in your success. That said, one misstep can also result in your group's demise. Subcategories of encounters, like scripted or randomized encounters can make certain encounters more intriguing by providing unique challenges, both in relaying relevant technical information to players, and how players approach and defeat the encounter. The knowledge of a player's character and advanced skills also determines the chance of success with timers and enrage mechanics barring your group's path to victory.

Within *World of Warcraft*, specifically, player versus environment typically refers to Dungeons or Raids. This means dungeons, for groups of five, and raid for groups ranging anywhere from ten to thirty players. Such a wide variety of players makes conveying the technical aspects behind the content an essential function before players can really step into the encounters. For dungeons, you are having to do things like planning your route through the dungeon, knowing what challenges even the smallest of enemies will throw at your group, and defeating the correct number of regular enemies before fighting the last boss. Raids require coordination of more people for a single unified goal with complex mechanics layered in between.

In the following sections the study will be looking at the two major classifications of encounters found within *World of Warcraft's* player versus environment content: Scripted and Randomized Encounters. These types of encounters can often determine the difficulty, pace, and other factors a player might have to deal with. A scripted encounter does not guarantee an easy

kill, due to complications in mechanics. At the same time, a randomized encounter can be quite easy, if the random pairings do not cause catastrophic results.

Scripted Encounters

When one uses the term “scripted” in the context of gaming, they often mean that the encounter they are facing off against is semi-predictable based on some factor; said factor can be time, a previously seen mechanic, etc. The majority of *World of Warcraft*'s encounters are scripted in some major way. The script being some major mechanic going off at a very set time that can be tracked. The use of such design often means that these events can be heavily prepared for and countered by observing some of the previously stated methods.

Scripted encounters make it very easy for a communicator preparing the technical documentation for the encounter, as they can take note of the surrounding mechanics. For many, this means recording gameplay and providing a rough estimate of when this happens. For others, they might simply take the word of a more experienced player and use it for their guild's private technical documents. On the game development side, scripted encounters are essential as they are very easy to tune. They allow developers to identify what specific areas of an encounter or boss abilities players are struggling with most and to adjust them, accordingly, opening the gate for more players to succeed and venture further into the raids. Oftentimes, this comes after many top players have defeated the encounter.

The issue with scripted encounters is that players must exclusively rely on their own abilities to carry out the required mechanic. This creates a sort of disparity between very advanced and middling players, where the high skilled players will find the mechanics

underwhelming, whereas the middling players may struggle severely. Regardless, it is up to Activision-Blizzard to decide what encounter will be extremely difficult or on the easier side. The company has never identified this to be an issue, and rarely fixes issues of more complex, static mechanics. Scripted encounters are still a fundamental aspect of participating in *World of Warcraft's* end game raiding.

Much earlier in the game's history, on June 19th, 2006, a raid called Naxxramas was released. This raid became significant for a multitude of reasons, though a large focus was on the encounter Patchwerk. Patchwerk was a massive creature that players had to defeat in order to progress through the raid. The encounter bears a lot of weight as the ultimate scripted encounter, even generating the phrase "tank-and-spank" for similar encounters. While the encounter required a great deal of optimal damage, healing, and tanking, it had very little to do with mechanics. Despite being little more than a meat sponge, Patchwerk created waves through the *World of Warcraft* raiding community. To date, almost fifteen years later, Patchwerk is still used as the benchmark for any damage test.

In *World of Warcraft's* sixth expansion, Battle for Azeroth, the Eternal Palace raid instance saw an encounter called "Queen's Court". This encounter served as a great example of a heavily scripted encounter that still offered a high level of difficulty. A major difficulty hurdle found in this encounter, specifically, is the requirement of coordinating twenty individual people. That is, an assortment of twenty people need to carry out nearly the same action, in a very small window of time. On the specific mechanic, the Adventure Guide tells, "Decrees – Throughout the fight, Queen Azshara enacts various decrees that must be dealt with. On higher difficulties, the amount of downtime between decrees is reduced" (*World of Warcraft*). All six of the decrees

listed in the Adventure Guide occur in the exact order they appear. While they are by no means a feat of technical communication, there is clarity and players can, at the very least, plan for the mechanics that will happen.

Next the study will look at randomized encounters and how they interact with the technical aspects of *World of Warcraft*. Due to their random nature, they are very hard to document properly and can cause issues for guide creators. The in-game technical documentation is especially not helpful in this case, due to its overload of clashing issues for players to deal with when in the encounter.

Randomized Encounters

Randomized encounters serve as a direct opposite to their scripted counterparts. Typically, randomized encounters carry a certain cadence throughout the encounter, with its randomized mechanics taking most of the technical complexity. There are also examples called “Spell Queued” encounters, that feature a loose system based on boss health or conditions met within the encounter, allowing for mechanic skipping or falling behind based on very specific windows of damage done to the boss. The issue is that these factors can be so different, from encounter to encounter, that preparing for them is nigh impossible due to their spontaneous nature. Encounters like these are often not well regarded by players, as the random or varied elements force a deep understanding of each individual mechanic or damage needed within a small window of time, and must prepare for such, rather than simply the mechanics their role needs to have executed.

Encounters that do randomize mechanics can often be simple in nature but become complex when certain combinations of mechanics are intertwined. The situation then results in a

lopsided difficulty curve for some very brutal combinations, where other combinations can cause an extremely simple demand. Encounters that overdo it, however, and are mostly randomized, are often reviled by the community as poorly designed. This can be understood as taking the control and power away from the players. No amount of preparation or technical observation can save you from bad luck, while even middling players might find success with little more than good fortune.

Part of what makes randomized encounters such an essential area for coverage is their sheer difficulty in providing technical support for. When mechanics have multiple pairings, you are looking at dozens of possibilities and combinations. On both the developer and guide writer end, it would be unwise to provide commentary on each pairing. For examples like this, we see Activision-Blizzard's in-game documentation simply list what each does and move on. Many guide writers, like those found on numerous fan sites or blogs dedicated to the game, offer small tier lists of difficulty.

While almost every raid or dungeon has some form of randomized encounter, the degree at which the type of design is found can vary greatly. Some encounters rely on randomization to extract their difficulty, while others simply use it to fill in some blanks and generate a nice level of difficulty. Some encounters even turn this concept on its head and randomize some of the players in groups. It is extremely difficult to end up in a group where everyone has the same level of gameplay. Players may find themselves within a bracket of difficulty but, outside of the very top, will likely never truly be of equal skill to every player within their group.

In *World of Warcraft's* most recent expansion, Shadowlands, the Castle Nathria raid saw an encounter called "Innerva Darkvein". This encounter served as an example of poor

randomization, through spell queuing, with scripted elements that were very easy to track from a technical standpoint, but almost impossible to track from a performance standpoint. Furthermore, the encounter required inefficient use of potential and player abilities to best curve some of the negative randomizers. Nothing in the in-game documentation even suggests holding your players damage in an effort to avoid some of the boss' other randomizations and punishes players for optimizing their gameplay.

After looking at player versus environment encounters, this study will observe player's Class Knowledge. This knowledge is an essential function in how human operators deal with player versus environment mechanics. Due to the wide variety of characters available to players, each does something different. A player might want something strong, fast, and in your face, or a character that can deal magic damage from a great range. Each option is viable and brings its own set of pros and cons, though the technical information before making your choice is a major flaw of *World of Warcraft's* character creation process.

Class Knowledge

A new player logs in to the game and they make a character. The blank slate they are handed is left up to much of their own interpretation and customization. Depending on your level of dedication, however, the knowledge of a player's character becomes one of the most technical heavy aspects of the game. A class, in World of Warcraft, is a character archetype that players can use to determine their skill sets or abilities later in the game. How to best utilize your character's skill sets is an extremely complicated task that involves managing dozens of abilities, some in special sequences. Each character also brings unique abilities to different scenarios,

making each valuable in their own right. Class knowledge has extreme overlap with how a character deals with certain mechanical interactions. Encounters are going to have varying mechanics, which may call for a different skill to best cover that issue. For example, when a mechanic instructs a character to move from point A to point B, the player has numerous options in how to deal with that mechanic. Players may simply opt to walk there if the character is fast enough. Many magic-based characters have a unique brand of teleportation ability, while many physical or melee classes have some kind of leap to quickly arrive at their destination. This, of course, is just one example among many.

Oftentimes, we will see mechanics called soaks. Soaks involve players standing in an ominous looking circle that will often result in damage and some sort of negative effect on the character. Who can soak these, and why, is another key component of which class should be doing what portion of an encounter. Some classes have the ability to become immortal for very short windows of time, with an incredibly long cooldown. These immunities almost always negate the effects of soak mechanics and can trivialize entire encounters. Oftentimes, newer or noncompetitive players will not even be aware of the power that their class holds in dealing with special situations

Class knowledge also extends to leadership. The one making the calls in these dangerous encounters needs to know what toolkit each of their players brings to the table and is defined as the raid leader. The raid leader could be thought of as a conductor of sorts. It is on them to make calls, based on the situation, to have the group overcome the scenario they are currently facing. These sorts of decisions can be handled ahead of time, coordinating who will do what and when, and can even be seen in custom documentation utilized by guilds. Understanding what factors

influence the raid leader's decisions is an important question, and one that shapes the guild's success. From what is suggested in Mark Chen's work, they often use a framework for each encounter. Due to the variety of guides, a raid leader will stick to a set of principles in how to deal with every present mechanic. Some major fan sources include FatbossTV, Stankie Gaming, or Complexity-Limit. The significance of these sources is that they complete the content so far ahead of the rest of the community, they are then left with the opportunity to fill in many of the blanks left by Activision-Blizzard's weak in-game documentation.

That said, the very top players often utilize a trial-and-error method as they learn encounters. These players make up guilds like Complexity-Limit, Echo, and Big Dumb Guild. An important note, however, is that these guilds often test the encounters before they are made widely available. Their testing is done on a blank server with new content, called the public test realm. Here, players are given copies of their existing characters and are allowed to trial content that is beyond the beta testing stage, but not yet ready to be pushed to the live servers. While one could say the two principles overlap, the fact that the server is for testing every new feature of the game would nullify that. Even then, there is in-game documentation when players are on the public test realms.

A damage rotation is also a major contributor in a player's knowledge of their class and overall performance. A damage rotation, or simply rotation, is the sequence of buttons pressed to execute various abilities throughout an encounter. From the concept of a damage rotation, we can extract a large critical flaw of *World of Warcraft*. Nothing, built into the game, teaches you about this damage rotation. Very early on in the character creation process you are taught some low-level abilities. When you factor in all the skills you gain as you level, there is no smooth

transition. Only technical information outside of the game teaches you how to properly execute this damage rotation.

Once more, it is crucial to note that the game itself has no way of determining just how much damage your character is doing. While there is a combat log feature that determines individual hits, it would be impossible to determine the numbers in your head, while also playing the game; such an approach to damage calculation has been the approach since the earliest days of massive multiplayer online roleplaying games. External tools fill this need in games, reaching back as far as *Everquest* in 1999, as damage meter add-ons have been used to show players exactly how much damage their character are doing. The damage is kept by a calculator and read back, in real time, to determine a character's raw output. The very idea of having no way to see your damage by default could be seen as extremely upsetting to newer players, who are trying to improve their own skills at the game. These new players often find themselves at the mercy of more experienced players, who either show them firsthand or provide the generated damage report and explore for themselves. As add-ons are not officially supported by Activision-Blizzard, the external tools can have an extremely steep learning curve and rely exclusively on community support.

There are some minor conditions to the idea of class knowledge as a technical failing. Occasionally, the game sees changes to various classes and specializations. This knowledge soft reset occurs any time a class sees change. These mentioned changes can involve borrowed powers with high priority, minor additions to the specializations, removal of spells, or even complete reworks of classes. All these things are almost exclusively reserved for the release of a new expansion. Ultimately, the game cannot hold a player's hand through every single aspect of

character knowledge. Some of the more specific details come from acquired knowledge by simply playing the character. A great example of an old intersection between practical and heavily technical comes from Activision-Blizzard, that being their original player guide. The *World of Warcraft: Game Manual* presented common tricks each class could do, listed impactful abilities, provided situations in which a class operated most effectively, and more.

SAMPLE WARRIOR ABILITIES

This is a small sample of abilities available to the warrior. More fantastic abilities are available at even higher levels.



Battle Shout: Boosts the attack power of the warrior and any nearby party members. Higher ranks increase attack power further.



Charge: The warrior rushes the enemy, generating rage for the warrior. Requires battle stance. Higher ranks can stun the target.



Hamstring: Does damage to the enemy and slows its movement speed greatly. Higher ranks do more damage. Requires battle stance.



Taunt: Forces nearby enemies to disengage from their current target and attack the warrior. Higher ranks are more effective. Requires defensive stance.



Disarm: Disarms the target's weapon for a short duration, forcing it to fight unarmed. Requires defensive stance.



Cleave: Does massive damage to a target and a nearby enemy. Requires berserker stance.



Recklessness: Turns all your attacks into critical hits for a few seconds and makes you immune to fear, but greatly lowers your armor. Requires battle stance.

Figure 1: A brief overview of the numerous warrior class abilities from 2004, discussing how they operate

Source: *World of Warcraft Game Manual*

Figure 1 shows a page from the original *World of Warcraft: Game Manual* and highlights a list of sample abilities. From top to bottom, prospective warrior players can see what abilities they might be looking forward to. Each ability is given a brief description and some slight mention of mechanical interaction. Due to all the aforementioned requirements to deal with encounter mechanics, knowing what you are signing up for when you decide on a class is an essential function. The unfortunate thing is that the abilities are presented in a vague and generally not helpful format. The guide teases the player at the prospect of future power through grand new feats, however, it provides no structure. Players are not told at what level new abilities are unlocked, nor are they given any help on what order these abilities should be used in to generate a desirable result. That said, while not overly helpful, it did give the player hope and conveyed some technical information. In today's *World of Warcraft*, the information was cut altogether.

To take a brief aside from Class Knowledge, we need to closer examine *World of Warcraft's* in-game tutorial. In contrast, the newest tutorial is very different. In answering it briefly, it is a small area called Exile's Reach. Here, new players learn of their abilities, do their first quests, and see a little bit of an unrealistic example of life on the outside. This was a massive change, brought about in late 2020, with the release of the eighth and newest expansion, *World of Warcraft: Shadowlands*. This overhaul sought to unite newer players, who would opt to go the route of Exile's Reach and, hopefully, make some friends before they have even left the area. In a sense, it is an outdated desire of a bygone era, where strangers could easily become good friends over the internet.



Figure 2: An in-game screenshot of the tutorial playthrough of World of Warcraft in 2021, featuring extremely limited abilities

Source: *World of Warcraft*

Figure 2 comes from Exile’s Reach and does little to help new players decide what class they should dedicate their time to. The current tutorial of the game does very little to show a prospective player what a class of their choosing is capable of. Activision-Blizzard claims this about their updated new player experience, “If you’re new to World of Warcraft and have never created or leveled a character, you will automatically begin your journey into Azeroth with the starting experience—helping you learn the basics of your class and the fundamentals of interacting with the world you’ve become a part of” (2020). Unfortunately, the limited skillset shown in the figure does not paint the slightest picture of what any one character is capable of in

the game's middle to later stages and gives an extremely warped view on how a player might come to feel about the potential of their class.

The glaring issue with the game's current tutorial is that it has no actual documentation whatsoever and offers no such information on what a player can look forward to. As an integrated narrative tutorial, the game's artificial intelligence only shows players what tools they currently possess and are never given a structured look at what benefits and tricks they might be utilizing in the future. On the reception of tutorial levels, DeWinter and Moeller said, "Yet players were skipping these levels or not paying attention to the lessons. Thus, at the most fundamental level, the ability to enjoy a game is intimately tied to (at the very least) a basic understanding of the controls and goals, which are covered in the tutorial" (DeWinter and Moeller 75). This can be quite damaging to the new player, who sticks with and is very positive about a character, only to realize they are not content with the class' ability to deal with mechanics or cadence of abilities. These issues are quite common among both newer and mid-level players, who may overestimate what a character brings to the table, or not enjoy their playstyle when they have attained the maximum level.

Knowing what class to pick and utilize is an essential function of Class Knowledge, as the current in-game support is extremely sparse and can easily lead a player down the wrong path. The issue of poor documentation is further compounded on new players, who the experience is tailored to, due to them not knowing what outside sources they could benefit from. Afterall, it is immersion shattering for a new player to be looking for information outside of the game. The reality is, they might not. Instead, they are put into a vicious trial-and-error cycle of creating and

leveling a class until they are content with their choice; this is after they have dumped countless hours into a character that has failed them.

In this case, it is not the character, but Activision-Blizzard that has failed them. In the next section, the study will be looking at ways that the colliding forces of academics and community contributors, as well as developments of the in-game tools, seek to alleviate the issue of technical information shortcomings from the developers. Due to the continued criticism from academic sources, superior documents from content creators, and lack of push from Activision-Blizzard, it seems clear that this is not a priority for the company. The overwhelming observation, however, does come in the wake of the game's most updated tutorial.

CHAPTER FOUR: COLLIDING FORCES

With the fundamental technical aspects of *World of Warcraft* established, the study can look at where the major players lie on the subject. This includes a handful of leading scholars on the topic, major community contributors and fan writers, and a look at the in-game tools being used to bring it all together. While these academics all speak on the game in some capacity, each has their own unique take on how the game should be utilized in the context of technical communication. The major community contributors and fan writers have varying levels of completion within the game, but all have key positions of authority on the topic of the technical documents found within. Most importantly, combining the narrative of these two bodies helps paint the clearest picture of technical documentation in the current state of *World of Warcraft*.

Some major academics on the topic include Jennifer DeWinter and Ryan Moeller, Mark Chen, and Alex Golub. Some scholars take a very theoretical look, like DeWinter and Moeller, to analyze the game from an outside perspective. Other scholars, like Chen or Golub, take the game by the reins and exercise very practical methods; one might consider it a sort of field research approach. One way or another, contextualizing *World of Warcraft* within the academic sphere is at the heart of their works.

To add depth and more meaning to their study, one must look at the many people under observation. The community of *World of Warcraft* has a dedicated base that adds to the technical understanding of the game on an almost daily basis. Information of that nature comes from web sources like Wowhead and MmoChampion, as well as independent in-game guilds that create resources for themselves or consumption by the public. What makes the aforementioned sources more effective comes from their direct and repeated experiences at dissecting the game's content

The in-game tools are a large source of controversy for *World of Warcraft's* endgame player versus environment content. The aspects under observation include issues like the Adventure Guide itself, the highs and lows of the user interface, and a player strategy issue of trial and error. Understanding these issues is a core part of grasping why the tool is so ineffective for player's taking on more difficult content. There is also the stagnant nature of the Adventure Guide, that has seen very little design changes, though this is covered to greater effect in Chapter 5.

The way these forces interact is what builds the backbone of the argument. By utilizing multiple perspectives, the study can gnaw at the information until it arrives at some truth hidden among the various clashing forces. What the study is digging for is exposing the reality that player created guides, due to their meticulous breakdown of game mechanics, are the most efficient means of understanding how the game works, versus the documentation found within the game itself, that does little more than list what a few abilities do.

The Academic

The Academic section will look at scholars who have made direct observations of *World of Warcraft* in some technical capacity, though from the lens of scholarly theory. In a sense, this means much less observation about the game directly, but more about how the game and its numerous gameplay systems interacts in a greater context of learning or the development of technical communication. Observing some of the content is also necessary to grasp how these works of technical communication are being created.

That is not to say that the authors have not, or did not, play the game during their research or in the past. Understanding *World of Warcraft* directly helps to build a critical eye for its technical systems and flaws. The game's vast player base also allows for an interesting look at specific audiences within. Two audiences, however, rise above the great populace for utilizing technical documentation: new players and endgame players. Most content and writing in the game is specifically created for both groups.

DeWinter and Moeller, Mark Chen, Sarah Bishop, and others are prominent figures in the academic sphere, who utilize *World of Warcraft* as a means of exploring methods of technical communication in the field of gaming. Being an industry steeped in technology, the connection makes a lot of sense, and arrives at the crossroad of a leisurely hobby and a very competitive activity. Due to the variety of methods that the game is consumed, it makes the game the perfect ground to observe content needing to provide a one-stop solution for many audiences.

DeWinter and Moeller

In their book *Computer Games and Technical Communication: Critical Methods and Applications at the Intersection*, Jennifer DeWinter and Ryan Moeller take a theory heavy look at where technical communication stands in the modern era of gaming. They open their book by making the bold claim that there is no space for technical communicators in the current atmosphere of game design, with the statement, "However, what we found in 2011 reflected the reality of 2004; technical communicators were not part of the call to join game development teams" (DeWinter and Moeller 17-18). Strikingly, this may not always be the case, as technical communication is a grossly expanding field that does not look to lose its steam any time soon.

Since writing their book, opportunities for technical communicators have continued to open up in the gaming industry. Job listings from Amazon Game Studios, Epic Games, and Electronic Arts all show that technical communicators are being sought after by the gaming industry. However, there is one large caveat; the three job listings below, from major game development studios, are still quite vague about the documentation that the hired technical communicators would be creating. Each of the samples below offer varying degrees about how vague the job listings are, with Amazon being the vaguest, and EA offering the most concrete job description; Below, they are ordered from vague to specific examples of work responsibility. For the majority of the listings, it is clear that the documentation created would not be directly for gameplay, but for other software support utilized by the software engineers. The responsibilities listed do support DeWinter and Moeller's criticism of a diminished player experience, though it should be noted, that technical communicators are being hired regardless.

A Technical Writer listing for Amazon Game Studios has the strict requirement of experience in Amazon Web Servers, a broad service used across many studios in the industry. With responsibilities like, "Work directly with development teams, AWS Support stakeholders, and other Technical Writers to produce world-class knowledge base articles", the technical communicator is left wondering about what specific knowledge base articles they might be writing for. While there is a hint of loose job descriptions throughout, that requirement would lead an applicant to believe they would be working on documentation for internal applications and not the in-game systems. "Our technical writers ensure that AWS products are clearly described in documentation that is accurate and useful" is among the only clear representation

about what the technical writer would be doing, and that is working purely on the web service side, and not any game documentation arriving in the player's hands.

The Lead Technical Writer listing for Epic Games is a little bit more direct in what the writer would be doing. "Owning the quality of the documentation for assigned areas of the product" and "Collaborating with development, support, and QA engineers to enhance the documentation" give a bit of hope for technical communicators in the gaming industry, however, there is still a thick fog in what documentation the writer might be working with. Given the line, "Identifying and meeting customer needs for technical documentation, best practices, and other instructional content", a technical communicator looking at this job might believe they're also playing the role of an instructional designer. The language used is incredibly odd about whether this would reach the hands of people playing games, or customers using the unreal engine (a separate discussion altogether).

The Contract Technical Writer position at Electronic Arts finally offers a glimmer of hope for creating products directly for players. "You will guide documentation tooling and process improvement across multiple, simultaneous projects and systems" gives the potential for a writer to be creating documentation players might use in-game. The evidence is in the usage of multiple projects, which studio often work on several projects, at different stages of completion, at any given time. Each game has a huge need for proper editing and documentation creation, which this writer might be filling. Seeing what the rest of the game industry offers is imperative in understanding where some of the shortcomings in *World of Warcraft* might be coming from.

Technical Communicators working within the gaming industry are still very much game developers. According to an article about Lewis Jordan, a technical communicator working for

the global developer Unity, “...work with developers to write guides, reference documentation, and other supporting documents to help Unity creators use graphics features in the Unity Engine” (Thomas 1). This revelation does line up with what other findings have suggested, that technical communicators in the industry are being brought in to create documentation for many of the tools used to create the games. These can range from documentation on the game engine, the program where three-dimensional assets are collected and assembled into what we know as a game, all the way to creating protocol standards for three-dimensional model creation. Technical communication has an exciting place within the gaming industry, however, it does not serve to create the tools that directly guide players.

With *World of Warcraft*, DeWinter and Moeller take a very learning outcome-based approach. Their many examples include things like how technical information created for the game can better influence technical communicators and affect some situations in the classroom. Due to the wide variety of technical documents to pick from, there are many good and bad examples to show learning technical communicators. That said, immersing students in the actual content of the game, showing how the technical documents fit into the grand scheme, is one of the most useful aspects of their study. Their extremely practical approach serves to further the academic credibility of the game as an area of observation and potentially provide a solid eye for future technical documents of the game.

DeWinter and Moeller bring up the “Modding as Gamework Theory”, which suggests that wherever a developer falls short, the technical communicators among dedicated players will pick up the slack. For *World of Warcraft* specifically, we see this come in the form of modifications to the game. In most cases, these appear as minor edits or popup notifications on the user interface.

They have existed since the earliest days and have only gotten more powerful. While Activision-Blizzard has allowed them to persist, the two forces do seem to be in a constant battle.

In their section about the Play and Praxis theory, the authors analyze practices and activities of a genre ecology and used *World of Warcraft* as an organizational model. The idea of Play and Praxis is universal but has very direct application in the context of technical communication in gaming. The theory boils down to a specific behavior within a subgroup or looking at how *World of Warcraft* players handle the on-demand and on-the-fly request for technical information from fellow players within a branch of the community.

Most often, this takes the form of guilds or clans, which are groups of players who unite to achieve a common goal. DeWinter and Moeller utilized a classroom of students taking on dungeon challenges in the game. They were then asked to watch one another take on the activity, while others took note, before swapping out with one another. This created an interesting communal aspect, with a singular common goal. In practice, Play and Praxis is the use of preparatory documents or applications and any actions needed to carry out the activity dictated by the community goals. The situation that the authors created, perfectly mirrors this idea. The documents created from the situation were very tailored to a specific situation and can be pulled out and utilized at a moment's notice. Many times, guilds will have their members review some of the instructional material ahead of time, with other elements being introduced as they begin learning the encounters.

Modding as Gamework is another central theory to technical communication's state within modern game development. In essence, it claims those that have a grasp of what needs to be explained or modded can help those undertaking a challenge become aware of other cross

sections and subjects. The players who complete the more difficult content are, in turn, best qualified to talk about it. It's not enough to read other guides and try to create one from the ether, despite how well one might understand the mechanics of an encounter in conjecture.

The less flowery side of the theory suggests the aforementioned modders, with a grasp of the mechanical intricacies, may be doing so to fill a void in the core content they are covering. In this case, that gap would be *World of Warcraft's* lacking technical documentation. There is also a level of exploitation occurring, as Activision-Blizzard does their best to avoid acknowledging mod creators. For example, in 2011, the developers adopted the use of a system called "item-level" as a means of curating a player's skill. Players who completed more challenging content had a higher item-level. The concept came from a previously established add-on called "Gear Score", which effectively did the same thing. Rather than give any mention or praise, Activision-Blizzard adopted it into the game with few words. Unfortunately, no document can be provided to support this, due to the game developer changing forum servers, where any players may have brought up the issue at the time.

Finally, the lack of criticism around the in-game documentation raises many questions. The lack of criticism is despite these content creators, who have taken on the role of player-developer, having a strong critical eye for what makes a piece of technical documentation about their subject-matter quality or not. Their unnerving silence suggests they may utilize the documentation early on, but create something more effective, that the player-base can much more easily digest. Their, typically, visual mediums offer players a different learning opportunity versus something that is purely based in text.

DeWinter and Moeller offer excellent explanations for why players may interact with the Adventure Guide in the ways that they do. Despite what good they do, the two have no actual experiences in *World of Warcraft*. The following section looks at how academics like Mark Chen and Sarah Bishop have digested some of their personal experiences with the game and spun it into papers about social behaviors. Their work still shed some light on the systems players are forced to engage with, and how better technical communication can improve those areas of the game.

Mark Chen and Sarah Bishop

Mark Chen, in his dissertation, *Leet Noobs: Expertise and Collaboration in a World of Warcraft Player Group as Distributed Sociomaterial Practice*, discusses the importance of technical communication within *World of Warcraft*, but also looks at the massive variety of technical information and certain quirks of the ecologies that exist within the game. Establishing that the game has ecologies helps better define player groups and who has better authority to speak on the topic of the game's technical instruction.

Chen looks at a guild's user created technical document at dealing with a specific encounter; that being, *World of Warcraft's* first final boss, Ragnaros the Firelord. The image shows an aerial shot of the room, with each player and role's positioning; this is a method used in community created technical documents to this very day. From there, specific sub-roles are assigned to each player based on what their characters bring, or even the player's personal skill.



Figure 3: An image taken from The Pacifist Guild’s guide to Ragnaros, a 14-page long guide to *World of Warcraft’s* original final boss

Source: The Pacifist Guild’s guide to Ragnaros

http://web.archive.org/web/20071213075344rn_1/pacifistguild.org/ragnaros

Despite what DeWinter and Moeller raise, about communities and common goals, Chen found that atypical situations can leak into this and complicate the situation. Despite preparing and having the tool to handle an encounter, there can also be slip ups which cause players to work against one another actively and aggressively. Chen defines this as an “Atypical Night” and can be a reality for many *World of Warcraft* guilds. This often stems from frustration at lack of performance, misunderstandings of encounter mechanics, or other defeatist emotional states. That said, these frustrations still exist despite players having the technical information available to them and, presumably, understanding it.

Most interesting is Chen's mention of scripted encounters, where he cites the use of addons to aid in the proper execution of these mechanics. It raises the point that certain encounter designs are accepted and regularly used as a model. More interesting is the usage of the very same wording outlined earlier in this study for encounter design. Finding that the same definition has been used, links the idea that technical instruction will vary from an encounter-to-encounter basis, with some having more complex needs than others. It should be noted that the Activision-Blizzard documentation has the same formatting across the entire Adventure Guide and does not handle each encounter with the specifics it requires.

Sarah Bishop opens her section on Technical Communication and *World of Warcraft* by showing the staggering amount of technical knowledge needed for a player to belong in the game's endgame community, as well as the struggle for a newer player to attain knowledge within the game. Bishop provides an assessment on technical communication in the game's community with, "The game and its community are, essentially, an example of a place where excellent technical communication is needed because gaming concepts may be completely foreign to aspiring new players. The user is required to read, understand, and perform technical actions with the help of official and unofficial guides within and outside of the game" (Bishop 36). She is exactly on the mark with that evaluation, and links well with what Bonnie Nardi speaks about her experiences of technical instruction within a video game setting. Players, new and veteran, are required to fully grasp the complex mechanical guides created to overcome the extreme variety of encounters within the game. While encounters may share similarities with one another, no two encounters will be exactly the same. As such, deciphering and understanding these guides is a thorough exercise of technical communication.

The topic of information design is also something raised by Bishop. As discussed already, player groups may be using their own internal documents. Getting a better view of these documents helps to understand their level of effectiveness. Unfortunately, it is extremely difficult to place a finger on the sheer number of technical documents created for and shared around by players. Some may be more secretive, while others may be freely shared as an accepted standard for completing an encounter.



Figure 4: The game's very basic interface tutorial comes turned off
Source: *World of Warcraft*

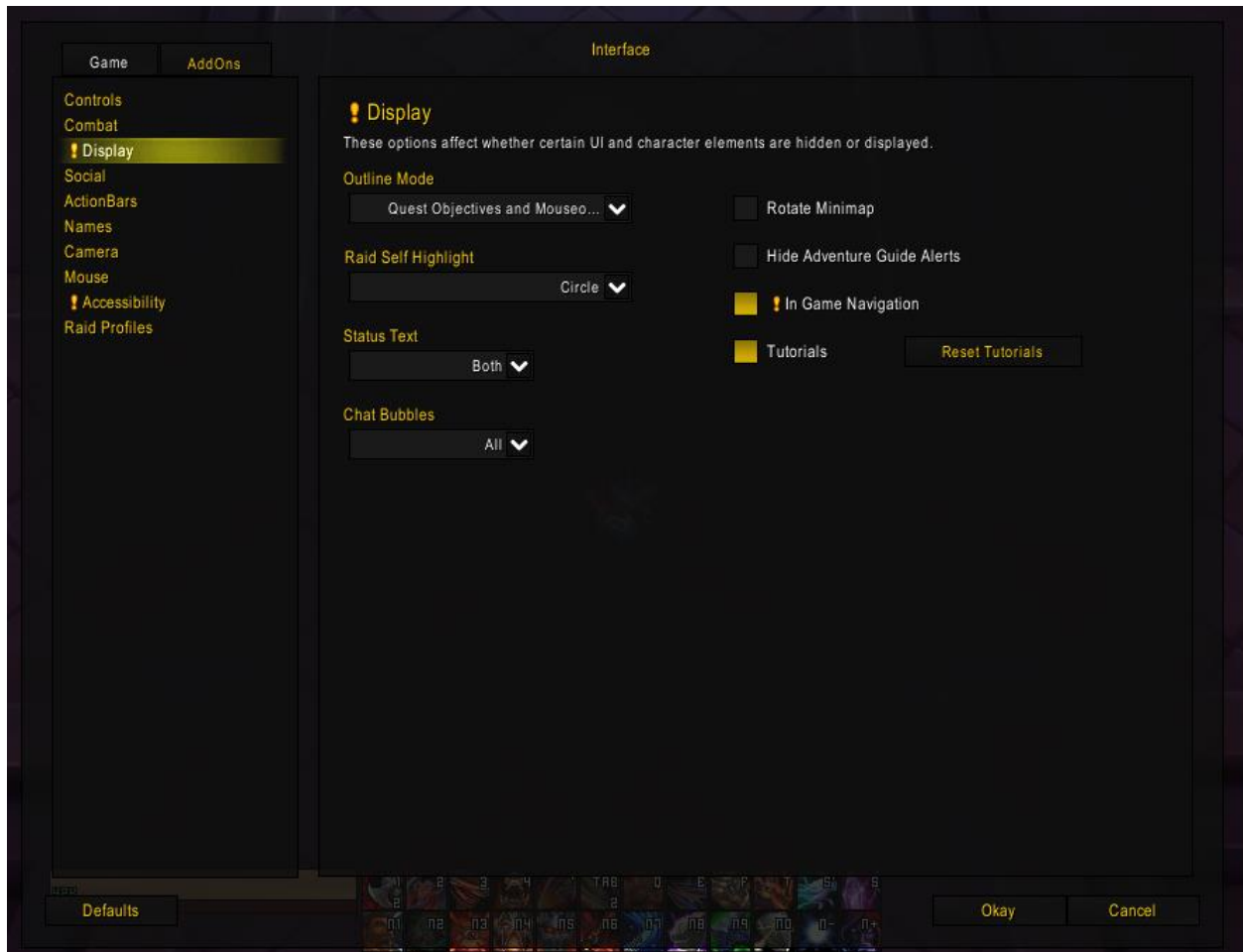


Figure 5: The modern menu, with a minor visual modification, has moved the tutorial under Display options

Source: *World of Warcraft*

In the modern state of the game, the tutorials are enabled, but offer very little assistance with game mechanics. Their primary focus is navigating the menus and trading items with non-player characters. Instead, new players are urged to undergo the new player starting zone called Exile's Reach. Bishop directly calls out the lack of a more substantial experience for new players, "The lack of a comprehensive in-game tutorial that is present from the moment a new player enters the game makes the beginning stages of WoW unnecessarily challenging and time

consuming” (78) Instead, players who do enable the tutorial are given prompts at odd times, that can even interfere with their current activity. Activision-Blizzard has split the new player experience into an awkward two stage progression that benefits no one and proves to be a poor exercise of technical communication.

All four scholars raise the concern of technical documentation’s place within *World of Warcraft* and make a note that the optimal technical instruction is not being created by professional technical communicators at Activision-Blizzard, but by secondary creators or those who have completed the content for themselves. This raises many concerns about the technical and mechanical understanding of the manual writers at the development studio, and as to whether they really understand their player base’s needs.

Other Voices

People like Bonnie Nardi and Amon Rapp take a very “field research” type approach in their works. Their methods involved either playing the game directly, or working alongside those that do, at a level that gives excellent exposure to the systems under observation by this study. Nardi goes into great details about the early and pioneer stages of the game, while Rapp gives a more modern take on the general state of the technical aspects at the end game.

Nardi shows what some of the game’s earlier days looked like and how the lack of technical information influenced the community. On how players evaluated their damage and healing output, she says, “Technically oriented players designed quantitative experiments, performed tests, analyzed the results, published them online, and worked with one another to solve puzzles of game mechanics” (Nardi 139). To provide additional context, players would find

enemies with a large number of health and attack them for prolonged periods of time. By measuring their numerical outputs, against set real-time intervals, they could calculate their precise damage numbers. The community would then compare results, identifying which character specializations were preferred for their damage output. These “wild west” days are long past, but best capture the lengths players were willing to go to get answers to their mechanics-related questions.

Bonnie Nardi’s *My Life as a Night Elf Priest: An Anthropological Account of World of Warcraft* analyzes her direct experiences in *World of Warcraft* and its numerous systems. Among these are her voyages into the game’s endgame systems that require a hefty amount of technical knowledge before it is undertaken. She calls her early experiences with the game an Aesthetic experience, while referring to her experience after reaching the maximum level in the game as a logistical one. Generally, this makes sense. The experience of leveling, versus immersing yourself in the game’s challenging later stages, are two completely different worlds. In very few ways does *World of Warcraft* prepare you for what a player will encounter at its grueling depths.

The fact that the game launched with very weak and intrusive in-game technical information is something that Nardi calls a double-edged sword. Her assessment is extremely on point, as it provided the developers a stance on how content should be interacted with. On the one hand, players were thrust into this world and forced to adapt and learn on their own; this also pushed trial and error as the go-to method for learning the game's challenges. On the other hand, players had the opportunity to discuss and shape the metagame at their own whim, encouraging each other to try new opportunities. These pioneer days are often looked back upon with rose tinted glasses and with a heavy dose of nostalgia.

2012 brought a major shift to the game, with the introduction to the first piece of raw technical information. The Adventure Guide, then dubbed the Dungeon Journal, greatly changed how encounters were perceived and analyzed, as well as muddying the waters of the accepted trial and error phase the game had previously lived in. The newfound abundance of technical information allowed experienced groups to nitpick every aspect of an encounter and optimize team compositions around that. Despite this, nothing really changed. Players still created mods to handle encounters on the fly, as the provided technical documents were not enough to use practically, only theoretically.

Game modifications are also a large topic under observation by Nardi. Even in *World of Warcraft's* earliest days, modifications to the user interface were allowed. She comments on the observation of game modification with, “When I discovered mods, I was surprised that Blizzard allowed such experimentation with its software” (Nardi 149). Though exactly what can be displayed has been cut down throughout the years, it is still a fundamental aspect of attaining further technical knowledge in game. Specific interface modifications went as far as to trivialize encounters; the player’s understandings of what mechanics to trivialize calls back to DeWinter and Moeller’s Modding as Gamework theory. As such, Activision-Blizzard has historically taken action and disabled the ability to show or even edit the aspects of the interface that the given element affects. Rather than take the route of dialogue or better design on their end, the developers have chosen to close doors for their player-creators.

Nardi also raises the issue that many of these mod authors work for free. The given situation creates an extremely awkward dynamic, as the authors continue working harder and harder to one-up the challenging mechanics the developers throw at the community. Time and

time again, there is some sort of user interface assistance that allows players to continue to somewhat trivialize or add baseline difficulty to an encounter. As stated in the above situation, only when it completely removes all challenges from a game situation will Activision-Blizzard act. Most prominently, we saw this on the raid bosses Chromaggus, for whom the add-on Decursive was developed to remove the various negative effects he placed on players, or Kormrok in June of 2015, for whom mod developers created a module that showed players exactly where to stand to deal with his most challenging mechanic.

What makes her explorations on this topic so insightful is seeing a window into *World of Warcraft's* past. We see a time when we had nothing to help with encounters, and a default stance, to a time where we have technical information that is not entirely working right, and no given stance. In today's game, the days and mindset of trial and error are dead. Players who participate in endgame content are expected to know the nitty gritty of every encounter before they even arrive at a boss.

Amon Rapp's article, *Gamification for Self-Tracking: From World of Warcraft to the Design of Personal Informatics Systems*, directly engaged with and observed players partaking in the game's later stage activities. His observations largely revolved around players reaching *World of Warcraft's* maximum level, entering the activity, and optimizing performance. The game, alone, does not give you the proper tools to be able to work through each of the mentioned steps for the currently established endgame progression system.

His look at gamification, or gaming in a non-gaming context, is what helps open the bridge to the majority of the game's technical aspects. Technical communication, for example, is very much a topic outside of gaming, yet works of technical communication are extremely

prevalent in the community of *World of Warcraft*. This is mostly due to the unspoken method of preparing for and handling encounters in the game. A player ends up having to utilize many outside sources for information displays of their damage done, how to handle encounters, among many other informatics that are withheld from them. That said, Rapp also suggests that the variety of technical communication on the topic makes it a bit of a subjective experience, and there is a definitive truth in that. Two players, who watch or read two separate guides, will have very different means of dealing with an encounter in-game. These strategies are then adopted by communities who may swear by using one or another.

Among these scholars we find one major connecting theme: the technical information does exist, though it is not at all effective or simply found in places outside of the game, and the best of it is not produced by Activision-Blizzard. The revelation of such correlates directly with findings from DeWinter and Moeller, Mark Chen, and Sarah Bishop. Finding this commonality is quite revealing for Activision-Blizzard, especially as scholars specializing in the technical aspects of organizing information tear away at the developer's poor implementations of their own game-related documentation.

The Community Voices

As others, like Sarah Bishop and Amon Rapp, have echoed, *World of Warcraft* is a game that heavily orbits the realm of technical. These thoughts are very much in line with the reality of the situation, as players are willing to go great lengths to prepare for new encounters. There are strong voices in the *World of Warcraft* player community that discuss and create content for the game's technical aspects. Furthermore, there is a guaranteed level of quality and solid trust

between players and the content creators that are well known among the game's broad population. Respected community individuals exist on platforms of their own to deliver commentary on how certain mechanics, or encounters, might be handled by a group of players. Individuals in this category might include community leaders, high performing players on leaderboards, or players with a good understanding of the game's mechanics.

Blogs and newsletter type hubs are also a common theme for community contribution, such as the websites Wowhead or MmoChampion. Each have unique takes on the game's overall state and offer insights into how challenging endgame content can be maneuvered. Many of these insights are written and maintained by players from the previously mentioned category; this allows for a trust level of quality to all the content that is published by the websites.

Wowhead

Many among the *World of Warcraft* community might consider Wowhead to be the leading source for all things involving the game. The website saw its origin in December of 2005 as a talent calculator for the game's initial release and early stages. Since then, it has grown exponentially, opening up for quest help, and becoming a titan among its *World of Warcraft* content site peers. According to Wowpedia, "Wowhead is a World of Warcraft information database featuring a JavaScript interface. The site catalogs items, quests, talents, and much more — all able to be searched, sorted, and arranged to find the information needed. Wowhead is currently the only major database website that has been mentioned by Blizzard in their Community Spotlight" (2019).

Wowhead has become the premier spot for finding guides on all stripe of *World of Warcraft's* content. In a sense, it is “peer reviewed”, as higher end players often submit and curate guides on the website. Furthermore, these are updated on almost a monthly basis, with any minor changes to the game being taken into account. This is true for almost all of their content, which is kept up with integrity and promptness. A minor criticism comes from their overall lack of a cohesive style, as there is little uniformity among their many different guide writers. A style guide would serve them well, though that does not reduce what they do for the *World of Warcraft* community as a whole.

Finally, Wowhead does a lot of promoting for other content creators. This is oftentimes a display of media, but sometimes offer critical statistical data when a serious point is proven by a member of the community. They are quick to cite sources of good reputation and offer up very readable forms of visual technical communication. They utilize these visual mediums to best deliver a point to both unify readers and point out issues to Activision-Blizzard, who have worked with Wowhead in the past. Being such an integral part to the community has only helped further cement their status as accurate and credible.

Mmochampton

Mmochampion is a very news heavy fan site, that often features breaking news about *World of Warcraft's* upcoming releases. The website was established in March of 2007 and has generated content around the game ever since. Its content includes datamining for and reporting upon new game updates, general Activision-Blizzard news, and more. What makes Mmochampion so significant is their coverage of statistical events in *World of Warcraft's*

history. This includes things like content participation, subscription numbers, and details around anniversaries.

While their coverage does sometimes overlap with that of Wowhead, the two offer very different flavors and have distinct voices. Much of Mmochampion's technical instruction comes in the form of the website's forum. Here, players of all stripe come to seek improvement or share their insights. Community leaders will often create threads on specific topics, or provide comments tailored to direct questions. Players will also have discussion about guide videos posted and offer fair criticisms or praise for the given content.

The website is also a marvel of good visual technical communication. Most of its presented information is well-organized, color coded, and concise. Their sources are well documented, do not clutter their graphs, and add to their credibility. Furthermore, the website has developed a style that it strictly follows, suggesting there is an inhouse style-guide the administrators and writers utilize. Such structure can be rare from fan sites and gives Mmochampion a definitive leg up in that area.

Independent Resources

While Wowhead and Mmochampion might be "independent resources", in their own right, the individual community contributors are some of the most essential functions of the *World of Warcraft* community. They are the bold pseudo-technical writers who brave the content and share their experiences either with the general public, use them internally, or even both. These resources can be found at their personal websites, on resources like Wowhead or Mmochampion, or shared within their respective community's text channels and forums.

The game's end game community largely revolves around guilds who have put in the work to find a place very high up on the Activision-Blizzard official leaderboards, as well as other fan ranking websites. It is the most outgoing voices from this group that shape the independent resources mentioned above. An important note is that these voices have strong credentials behind them, and excellent writing skills to back that up. Namely, community leaders like limit_maximum offers extensive support for players looking to improve themselves, or other guild leaders trying to help their team progress. As of writing this study, limit_maximum is the guild leader of the world's number one ranked Mythic raiding guild, Complexity-Limit; as such, his insights are extremely valuable to all players. Resounding much of what has already been spoken, he publishes technical guides for all current encounters available in the game, largely ignoring what is posted in the dungeon journal and basing the content off of his first-hand and professional experience.

Another great community contributor is StankieGaming, who primarily focuses on end game content. He offers insights on the specific in-game role of tanking and comprehensive encounter guides. Many consider StankieGaming to be a much more realistic example of what progression raiding looks like, largely due to the timing of his guides and the methods by which he analyzes an encounter. Very few times does his guild utilize or exploit certain encounter designs or stack classes that are best tailored to a specific encounter. Finally, Hazelnuttygames brings the best of both worlds to community contribution. Hazel combines in-game footage with vlog style videos to create a personal atmosphere, while also seeming friendly and inviting to the game's more challenging content. Interestingly, she does not partake in the highest level of difficulty but does open the door for players who wish to proceed higher on the ladder. By being

that first level of contact to tough aspects of the game, it makes her content a great starting point for newer or more casual players.

This reflects directly towards what Mark Chen suggests, in that observing “expert” play is one of the most efficient means of expanding knowledge on the game. Chen comments on the help of better players by stating, “Gaining access to expert player groups and learning from them, accruing social and cultural capital, and building one’s social network affect a player’s learning trajectory far more than simply grasping the game’s Mechanics” (Chen 73). That said, the outside means of observing play, not being self-contained or promoted within the game, do not give them a certain stamp of quality that the developers suggest comes with the in-game documentation. It can also be confusing, for newer players, and they can easily come across misinformation. Regardless, expert play is generally thought of as a safe means of improving a player’s individual skills.

The In-Game Tools

The study now arrives at its most critical and central observation, the In-Game Tools. *World of Warcraft* originally released with extremely poor technical assistance. Sarah Bishop’s finding points out that the tutorial option was off by default. This would only serve to frustrate a player wanting to be better guided through the early stages of the game. Otherwise, all knowledge was assumedly gained through trial and error, or very primordial community contribution. This existed as little more than quest help and directions with a comments section.

In the nascent days of *World of Warcraft*’s endgame design, little to no encounters had ability telegraphs or call outs either. The lack of audio and visual queues meant players relied

solely on primordial call outs to handle mechanics that may have been more difficult than they could really keep up with. Considering the year was 2004, the technology that went into the game then was a fraction of what it would be. Game and User Interface modifications have developed alongside it, prompting many issues for both sides, as well as the vast spread of game media.

In 2011, Activision-Blizzard's answer to players resorting to outside sources was the implementation of in-game documentation. The tool was implemented directly into the game's main menu and was made available to all players. However, the game's default user interface remained much the same, and was not conducive to the level of mechanics now being thrown at players during encounters. Speaking on the positive aid provided by modifying the game, Nardi says, "Mods enhanced these abilities by displaying information about facts and variables not visible in WoW's standard user interface" (Nardi 146). The following section will begin to look at these tools and expose some of the cracks in them, shedding some light on why players continued to create their own documentation and modifications to the game.

The Adventure Guide

Simply put, The Adventure Guide is *World of Warcraft's* definitive in-game documentation for the majority of its player versus environment content. It provides encounter insights for the game's dungeons and raids. These mechanics can be further broken down by a player's active role, to see what duties they will have to carry out during an encounter. The in-game documentation contains specific technical information on various encounters throughout the game. The information within comes from all the game's front runner content, released since

the game's inception, and includes crucial details like lore, mechanical information, rewards, and even 3D models of the major enemies players will be facing.

Upon its release in 2011, the technical documentation was originally released as The Dungeon Journal and was changed later to The Adventure Guide. The two are fundamentally the same, though it has seen some minor interface changes throughout the years. The current incarnation is supposed to exist as a one-stop shop to direct newer players where they might need to go to continue their journeys. Though the success of the tool may be met there, the technical information in the Adventure Guide is found lacking. For a prime example of the modern complexity found within the in-game resource we are given the entry for Vectis, a boss from 2018, "Overview – Vectis creates instances of Omega Vector which bounce endlessly between players during the encounter. When Omega Vector jumps between players it leaves behind a stack of Lingering Infection, which has no duration and cannot be removed. Vectis will create multiple instances of Omega Vector at the beginning of the encounter" (*World of Warcraft*). For a "brief" overview of an encounter, there are a lot of specific mechanics presented, that have no clear means of being dealt with. The lack of clarity of context leaves much to be desired when searching for more specific answers.

For the best quality information, with a much better perspective on how the metagame works, players are better off taking a trip down the rabbit hole of Wowhead or the numerous video channels belonging to community contributors. Creators like "Bellular" offer whole playlists on their YouTube channel specifically tailored to new players. Once again, Sarah Bishop specifically targets Activision-Blizzard's poor handling of directing new players into their game

world. While the expectation of holding a player's hand is a bit unrealistic, better direction is a great solution. Hiding it deep within the user interface is also not a good solution.

User Interface

The user interface is another major point of technical shortcomings in *World of Warcraft*, that also dips into many visual technical communication elements. The interface is a player's window into the game and acts as the lens through which players decipher the game world. In many ways, a custom interface is a player's personal touch on what best suits their playstyle. Being comfortable with your screen is something that also determines how well they can read information at a moment's notice.

Williams and Kirschner, in their article, *Coordinated Action in the Massively Multiplayer Online Game World of Warcraft*, discuss the weighty importance of a good user interface. In their findings, it allows a player to make better and faster split-second decisions, when facing off against an encounter. Aside from a few telegraphed or pre-placed abilities, there are very few enemy ability queues to determine what is coming next. That is why addons and modifications are then used to display timers for when these abilities are coming up; the default interface simply does not do this.

Many player-developers offer advice and write about the technical encounters found at the endgame player versus environment content. Some of them arrive at the point of needing a custom and clean user interface. Very few of the community content creators utilize the default interface, created and shipped by Activision-Blizzard, and opt for a custom one they create themselves. Their custom user interfaces can be seen in any videos they produce that show live

gameplay. Furthermore, each has their own preference for organization, though tips for a generally good interface are freely given. The aforementioned “limit_maximum” creates a guide for a raid leader’s user interface, on his YouTube channel, stating, “It’s just objectively better than having your health up here, your abilities down here, your debuffs up here. That’s why, like, classic UI is so bad. Why it’s evolved is because its just more efficient. If you are currently playing with that, including the best players... You will be a better player in PvE if you have an optimized UI.” (Limit_maximum 2:03-2:28).

The next section will provide the study a proper timeline and look at the implementation of, and begin to draw criticisms on, the lacking in-game documentation that exists today. It will also look at what makes the technical documentation fall short by comparing what is available in-game to a player created guide, as well as showing what experts have to say on the topic.

CHAPTER FIVE: DEVELOPER SHORTCOMINGS AND COMMUNITY CONTRIBUTIONS

Developer shortcomings can happen within gaming industry. Regardless of whether the game is played online, with others, or offline, in a private environment, developers can fudge many aspects of a game. Two recent examples of this are *Cyberpunk 2077* or *Outriders*, games that have taken a significant number of downloadable patches or server upgrades to work as they should. That is not to speak on the quality of their technical documents, but to show that developer shortcomings in the modern era of game design are not completely unheard of.

However, developers can also experience shortcomings on the technical and documentation side as well. These shortcomings can look like an unclear tutorial, incorrect onscreen instructions, typos, or more. These exact reasons are what make having a technical communicator working with the team an essential function, and heavily reflects on the issues raised by the work of Sarah Bishop. “For complex activities, I think that a tutorial involving interaction and having to successfully complete an objective multiple times in a closed environment would help eliminate confusion and trial-and-error mistakes for new players by providing better, more immersive instruction” (Bishop 79). The visibly lacking areas create a flaw that players are then forced to fill.

In the case that a game is successful, but there are developer shortcomings on the documentation end, community contributors will often pick up the slack. Gaming communities are often composed of artists, streamers, and more. Among these are the pseudo-technical writers who are boldly creating content for those seeking help in completing content within the game itself. These player-creators, who are making their own technical documents, have a solid

understanding of the game and its systems, and are often hailed as the most efficient means of guiding regular players through the content.

History

For as long as *World of Warcraft* has existed, it has encountered technical issues of varying nature and scale. Due to being a game that is updated regularly, the “issues” never really stop, though that is because new content and systems are always being introduced. That said, it allows issues of a grander scale to persist, if the game is functional. The reasoning for that stance is due to the urgent need to fix new problems as quickly as possible. The Adventure Guide could definitely be viewed as a grand scale issue that has persisted to today.

There was a time in the game’s history when such a tool was nonexistent and did not need to exist. Looking at accepted structures for how to navigate endgame content, *World of Warcraft* was in a unique and powerful position. Given how popular the game was, heaps of content were being created and/or published on the topic of the game's most difficult content. That meant player-creators were the only means of improving or refining strategies, as nothing existed within the game.

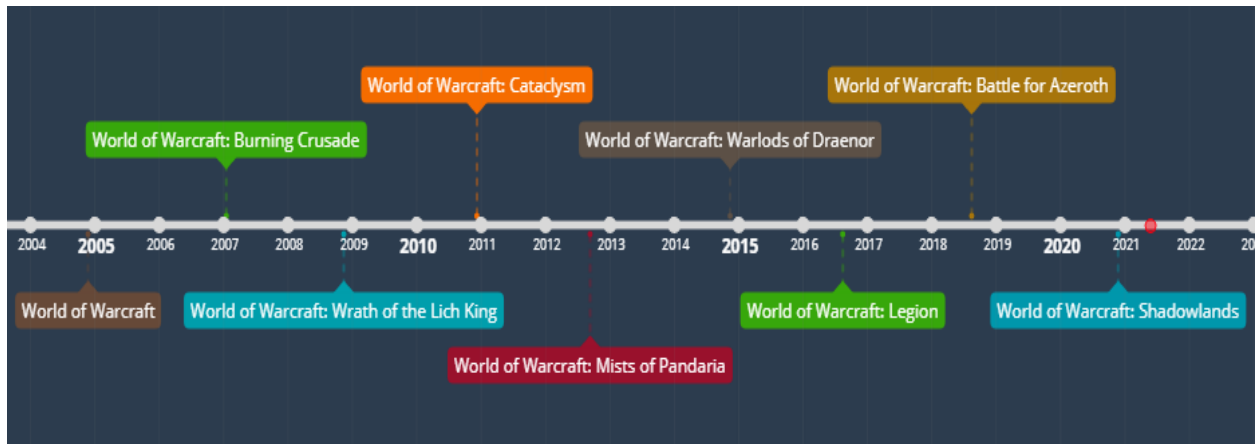


Figure 6: A timeline of *World of Warcraft*'s various expansions

World of Warcraft's history of technical documentation can be broken into 2 major parts: 2004-2011 and 2011-present day. The former shows a time where there was virtually no technical information to be found within the game itself. The latter, and the most current study of *World of Warcraft*'s technical side, displays a time where the game is heavy with technical information. The reception of the in-game technical information is striking and poorly received at the higher levels of play.

2004-2011 A Time Before the Adventure Guide

As the study has already established, *World of Warcraft*'s earliest days featured no technical information on player versus environment encounters. The lack of such meant that players had to rely on themselves to build resources for their own groups and for the community at large. The lack of structure, at the time, also meant each player group had their own method of dealing with the associated mechanics of every boss.

The lack of established in-game documentation meant players had to take very methodical steps in every attempt to learn the game's higher-end challenging encounters. Continuing, no rigid documentation meant theorycrafters had a difficult time organizing mechanics, as there was no compendium of what to expect, and data analyses of the various encounters present within all the games content.

Lastly, players were expected to work together and forced to learn from one another. The community bonding meant players were generally civil, even with others of lower skill. This sense of community was found across all servers, in a time where anonymity on your server was at an all-time low. Playing with people outside of your server was all but nonexistent in the early 2010 era.

For these reasons, players flourished and the high-end content was regarded as difficult, despite some mechanics being thought of as rudimentary. The assumed and accepted structure of trial-and-error simply worked, and few had any reason to question the state of *World of Warcraft's* endgame content. The game modifications players used had also been standardized for a long time, including modifications that showed dungeon and raid loot, as well as heads up displays for encounters. Activision-Blizzard sought to change all of that with the release of the Firelands raid.

2011-Present An Ineffective Form of Technical Communication

In June of 2011, Activision-Blizzard introduced a new piece of user interface called the Dungeon Journal, alongside the Firelands raid. As the study has already made note of, this was later changed to its current incarnation, the Adventure Guide. Both are extremely similar in what

they offer players and can almost be used interchangeably. The official name, in the current game, stands as the Adventure Guide.

Mmochampion initially referred to the Dungeon Journal as, “an in-game encyclopedia listing everything you need to know on instances and raid bosses” (Mmochampion 2012), and this was partially correct. The state of the game was very different at the release of the interface tool. Dungeons were locked at only two difficulties and raids offered far less complicated designs. There were also mods and philosophies that the community had accepted as the predominant method of handling content.

While the introduction of the Dungeon Journal did do a good job of eliminating the need for some modifications, it also served to raise eyebrows from the end game community. Its insights were more readily available than a quick search on youtube or Google, though the quality and direction of the content was much different. The community at large was already accustomed to another method of instruction.

Very little changed after the name was updated to the Adventure Guide. Some very minor navigation and color design changes were made. Overall, it was the same product. As of today, no major overhauls have been made. The state of *World of Warcraft* as a whole, however, has seen hefty changes over the years. New systems and difficulties were added that changed the way most players had to deal with encounters. While design of the content has shifted dramatically, the technical instruction has sorely lacked behind.

Why the In-Game Technical Documentation Falls Short

Unfortunately, the Adventure Guide has not seen any major revision or format updates since its implementation. Keep in mind, this is from an era where the content had far fewer difficulties and challenges for players to undertake. The dated nature of the documentation is made even more apparent when one takes into consideration the fact that there is no option to sort for the Mythic+ difficulty in dungeon content. The fundamental design of Mythic+, that being progressive scaling, deserves to have appropriate documentation that shows the scaling damage players will have to endure. Activision-Blizzard has opted to ignore the issue since the introduction of Mythic+ in 2016.

Oftentimes, the most elite players will take to the public test realm. In this enclosed space, any player is allowed to trial content before it is released. In a sense, it operates like active beta testing. It is here where they face all stripes of encounters before it hits the live servers. Being beta, they do not have the luxury of a completed Adventure Guide and often take on the encounters blind. These high-end players, in turn, create their own documentation and publish before Activision-Blizzard has even finished creating official work for the Adventure Guide. If changes are made by the time new content is released to the live server, player made guides from reputable sources are updated to reflect that.

Another major issue, stemming from lack of revision, comes in the form of encounter design complexity. With compounding, randomized, and spell queued mechanics being thrown into the design philosophy of modern encounters, the simplistic nature of the Adventure Guide creates a bloat of information that players must wade through to finally arrive at their desired

outcome, which very rarely is optimal. This is among many other reasons that players seek out guides external to the game itself.

Finally, there is the conclusion that technical communicators, hired by and working for Activision-Blizzard, are not writing technical information for the Adventure Guide. Somewhat in line with DeWinter and Moeller's claims, industry leaders are utilizing technical writers for areas like UI/UX technical editing, creating documentation for software, and internal process improvement. The two expose the lack of technical communicators creating documentation for end-users through their findings with the line, "Respondents had a variety of answers for who produces the client-side documentation including game design leads, project leads, and even marketing personnel, but technical writers and/or technical communicators were once again absent from this list" (DeWinter and Moeller 29). Technical communicators are being hired, but not working in areas that will directly benefit the people whose hands the product is in.

Ability Interaction

A clarification that needs to be established before the study can proceed is the difference between abilities and mechanics. All entities within *World of Warcraft* have abilities, this even includes players and the various monsters listed in the Adventure Guide. Mechanics, however, are how players deal with abilities utilized by the game's artificial intelligence. Therefore, some abilities are mechanics, while many ability interactions can also be mechanics. The Adventure Guide does a fair job of mentioning how abilities interact. Many of the abilities that do interact are presented in an "if X, then Y" format; commonly, it is organized under subsections of the originally listed ability. If the combination is lethal to most players, it is often marked as such and

understanding how and who should deal with that mechanic is a fundamental part of playing *World of Warcraft*.

The purely textual format, organized in the manner that it is, leaves players being able to directly correlate abilities, though reading what ability does what is not very practical in execution for a number of reasons. Video games being an almost entirely visual medium, having a purely text-based guide does little to create a meaningful connection between the mechanics a player will be encountering. Of all the elements that are working well, the ability interactions are one of the few redeeming factors of the Adventure Guide. Despite its shortcomings, players should be able to identify what ability causes what mechanic and how to interact with it. Otherwise, the lack of a visual element is the downfall of the ability interactions. The correlation between a factor A and factor B, especially in a visual medium, means text might not be sufficient to convey that point.

Additional Enemies

Additional enemies during an encounter occur in a few different scenarios. These include during boss encounters, throughout dungeons, and/or mini bosses. While not always pivotal to the success of the encounter, overall, the difficulty and scaling of additional enemies can vary wildly. Some additional enemies are mentioned, not because they are important, but exclusively because they are a function of the boss encounter. This would align with the visual technical design of the Adventure Guide but adds importance to a mechanic that can largely be ignored.

Dungeon enemies are a huge sore spot for the Adventure Guide. Dungeons, being sprawling networks of caves or castles that players must explore, they are extremely common in

that type of encounter. As the study outlined earlier, a certain percentage of regular enemies must be defeated before players can even complete a Mythic+ dungeon. Despite making up a significant portion of the dungeon content, they have absolutely no documentation found in the dungeon section of the Adventure Guide.

When you look at the context of Mythic+, the issue is compounded by how the progression system works. Players feel very conservative about certain dungeons combinations in their possession, due to players having to earn and “push” select keys, while throwing away or “dropping” others. This results in players over preparing and gathering as much information as they can about a dungeon key they are about to undertake to a higher difficulty. Inversely, due to the difficulty spike, lower difficulty keys cannot be used as an accurate measure for what to expect in an extremely tough content scenario.

As a result, players are left to rely almost exclusively on information, exterior to the game, on how to go about the dungeons in the most effective manner. These additional enemies are a significant portion of the Mythic+ dungeon experience yet are left out of the Adventure Guide altogether. The issue is made worse by there being no documentation on the scaling nature of the dungeons; the Adventure Guide only shows the damage numbers at the lowest difficulties.

Hidden Mechanics

The study defines an exception to the Adventure Guide as any interaction during an encounter that has some kind of hidden component, or a component players could not otherwise prepare for. The hidden mechanics to an encounter would mean relevant technical information is simply not found in the Adventure Guide. When looking at fundamental needs from technical

documents, having missing instructions makes them utterly useless. Two specific examples from the Adventure Guide come to mind.

Lady Innerva Darkvein is one of the early bosses in the Castle Nathria raid. As of undertaking the study, it is *World of Warcraft's* most recent raid. Establishing that Innerva is a modern encounter helps to show that this is a modern encounter design, and not something outdated. Her importance as an exception to the Adventure Guides documentation comes from one of her major ability interactions. At the 75% health threshold, Innerva causes three players to explode and summon additional enemies. While that type of ability interaction sounds like a fine mechanic for an encounter, the issue comes from the lack of mention in the Adventure Guide about this specific health threshold.

Due to Innerva skipping this ability cast when her health drops below 75%, and the Adventure Guide not mentioning this interaction, a troubling design flaw is revealed. Guilds have planned their entire strategies around dealing just enough damage to wait for that 75% and play around that single mechanic. No player, exclusively using the in-game tools, could possibly prepare for that mechanic. As a matter of fact, many might just brute force the mechanic altogether and face the consequences as a result; the consequences being a more difficult encounter overall. The fact that players, who follow all provided instructions found within the game, are still facing a more difficult encounter is stark evidence that the documentation is insufficient and forces players outwards.

Another major example of an exception to the Adventure Guide's convention is the boss Gul'Dan from the Nightwell raid. He is the ultimate boss of the raid and offered a significant challenge to players upon his release. On the highest level of difficulty, several large changes are

made to the encounter. The additional enemies are summoned differently and the rest of the encounter goes by at a much faster pace. These changes are outlined in the Adventure Guide, though one enormous change is completely left out.

When Gul'dan is defeated an entirely new boss springs forward and attacks players, bringing a new set of mechanics to the table. The frustrating part is that the Adventure Guide makes absolutely no mention of this hidden enemy at all. The last entry, for Gul'dan's abilities in the Adventure Guide says, "Stage Two: The Master's Power - At 50% health Gul'dan harnesses the Eye of Aman'Thul to gain new and empowered abilities, also disrupting the powers that players received from the Eye" (*World of Warcraft*). The issue is only compounded by the fact that this new boss is only found on the highest difficulty. With newly presented mechanics, that cannot be prepared for, players taking on the encounter would be left completely bewildered by the sudden change in what they are engaging with.

Having discussed the theoretical and looking at the systems that actually go into the game, a final look away is in order. Actual voices from the community need to be heard, on the topic of what tools players are using. Players themselves are the ultimate judges of what preparation for content looks like. Though criticisms have been drawn of the Adventure Guide, hearing what a player-creator has to say, will best drive the point home.

Players Picking Up the Slack

The stagnant condition that the Adventure Guide has been revealed to be in leaves players in an extremely awkward spot. The result has been players utilizing all different methods, rather than exclusively using what the game itself provides. Rather than accept the mediocrity, guilds of

ranging skill opt to make their own resources for internal use. To best highlight a practical situation of preparing for *World of Warcraft's* endgame content, an interview was graciously accepted by Zader, an officer and raid coordinator for the Mythic raiding guild <Close Enough>. The guild is in the top 100 rank on the extremely populated server Area-52 and hold a top 2000 world rank. He often creates technical documents, if an encounter calls for specific actions or assignments to individuals, and does a great deal of identifying strategies for the guild.

Some of the first elements Zader looks at are the overall challenges of an encounter. These elements include targeted mechanics or additional enemies, and when they occur. From there, he looks at how the features interact and the set times when these mechanics intersect. That means highlighting small windows of time and planning around the given information. His primary source is the website Warcraftlogs, which allows you to see aerial recaps of how other players dealt with an encounter. He even states his use of the Adventure Guide is very sparse.

He identifies the role of a raid leader and officers as the ones who prepare for, "the macro performance of the group holistically" (Zader 1). A glimpse of high-level play provided by Zader suggests that all players on a team must reflect on planning and improvement just as much as the ones prepping the group overall. Once more, he suggests Warcraftlogs and YouTube guides as one of the best sources for player improvement and strategy refinement. His mention of outside sources clearly highlights the issues present in the study.

Zader also explains when the situation is appropriate to create internal documentation. We are told that the need for internal guides varies from an encounter to encounter basis. Encounters that do not require heavy specifics can just have an overall plan laid out. On that topic, he says, "An internal and custom technical document is catered to the group for which it is created for,

which makes it easy to modify strategy on an individual by individual basis” (Zader 2). On the other hand, encounters with very specific details, of needing proper positioning or key windows of damage, may well need the raid coordinators to make custom instructions for their team.

Finally, he goes on to provide an example of how players might use the Adventure Guide. What is key is that he says players should use it as a sort of framework, to build their strategies around, rather than an actual guide. More specifically, on using the in-game documentation as a foundational piece, “For the most part, I think it serves its purpose of setting foundational information for the individual/party to form their own strategy on how to deal with an encounter, if that was the intention for the creation of the adventure guide.” (Zader 2-3) While that is a fresh perspective, he also goes on to make his own criticisms of the Adventure Guide. His views align with the study in that it is not sufficient as an exclusive tool and simply does not work for players engaging in Mythic+ dungeons.

His account is extremely telling, in that the Adventure Guide simply does not work for players who are completing the game’s most challenging content. This grand flaw in the present technical instruction only serves to confuse newer players and frustrate players who do not wish to rely exclusively on exterior information. The following chapter of the study will seek to close everything out and bring together all evidence for the claim of *World of Warcraft’s* poor technical documentation.

CHAPTER SIX: CONCLUSION

Activision-Blizzard's *World of Warcraft* is a marvel of a game with deep technical communication opportunities, hidden within its many complex layers. The game has an astonishing number of elements that require the skill of a technical communicator to be broken down in the most efficient manner possible. With things like multiple difficulties, across a variety of different content, the need for such a professional is clearly there. Based on current job listings with other industry leaders, the study finds that trained technical communicators are not being used to create this material for players. So bad is the situation, that players have taken the technical communication into their own hands.

The study began by showcasing the importance of *World of Warcraft*'s technical elements. The mentioned elements range from personal character stats, to encounter guides; all of which are crucial to a player's success. At the surface level, these are not easily readable either. Haste or Mastery, two stats found within the game, have absolutely no meaning to a new player. While one can infer what they might do, proper communication of these technical elements is required. Player versus environment encounters are a whole other beast that require detailed write ups to properly tackle.

Next, the thesis looked at how more theoretical academics like DeWinter and Moeller or Mark Chen, and more practical academics like Bonnie Nardi or Amon Rapp grappled with their own understanding of the game's technical aspects. Their findings each play a unique part in unveiling technical communication's place within both *World of Warcraft* and the gaming industry as a whole. The critical looks at technical communication in the industry shows that while technical communicators are being hired, they are not being utilized in areas creating

content that will directly land in the hands of players. Instead, the developers at Activision-Blizzard have inadvertently created an environment where players are the authority on the game's technical aspects, rather than themselves.

Finally, the study took specific examples of poor technical communication found within the game's very own Adventure Guide. By taking snapshots of the game's climate upon initial release and modern times, there is a stark contrast in the desires and motivations of player-creators. The analysis of the Adventure Guide included things like Ability Interactions, Additional Enemies, and Hidden Elements. The final section features an interview with a dedicated guild officer and player-creator, Zader. His findings only further serve to prove the ineffectiveness of the in-game tools.

Given what is established by research and community perception, the initial suspicion is proved correct. The progression of technical documentation in *World of Warcraft*, such as the Adventure Guide, has actually created an unstable environment for players to properly learn associated mechanics, leading players to create their own. While the Adventure Guide can be used as a reference tool, players still have to gain a baseline understanding of how an encounter operates. This contrast to the original, trial and error method has just caused players to default to means of help outside of the game.

While the study has only served to raise an issue for technical communicators and players of *World of Warcraft*, a proposed solution to the problem is also in order. Two major ideas come to mind. One would be to address the intentions of the Adventure Guide. This method would require very little effort on the end of the developers. The other would be to open, or shift, more technical communicator positions into reworking the Adventure Guide. More opportunities for

technical communicators would be opened like this, helping further expand the broad toolset of the profession.

The "easiest" solution is to simply state the intention of the Adventure Guide. If it was never meant to be a true guide, and is operating as intended, then stating that could go a long way for how players view the tool. Updating the tool's name scheme, with the stated intention could also change its reception. With how players had previously dealt with guides, in a time before the Adventure Guide, and how they deal with them now, very little has changed for the average player tackling the content. With a revised purpose, players may find specific situations to use the tool, while not necessarily needing to dive headlong into a fully fleshed out guide.

The more difficult solution would be to hire or shift professionals trained in technical communication to handle the technical elements that end up in the player's hands. Not only would technical communicators be playing a much more active role in the product that players directly interact with, but they would also be able to best convey elements that are currently used as little more than reference points. A more complete write up of encounters means the Adventure Guide could see use as an exclusive tool self-contained within the game, rather than forcing players to find technical information outwards.

One might counter that providing a full explanation for encounters would spoil the ingenuity of players or give away too much for players who prefer to play through an encounter once before finding the most optimal methods. This is not entirely false, though a technical communicator could quickly see major holes in the Adventure Guide; these holes might include missing things like trash mobs in Mythic+ dungeons or hidden elements in the games own technical information. Better technical instruction also does not guarantee the optimal method of

performing a task. As players are constantly developing new strategies, outside of the most popular methods for encounters, this situation is no different.

APPENDIX A: IRB APPROVAL LETTER



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board

FWA00000351
IRB00001138, IRB00012110
Office of Research
12201 Research Parkway
Orlando, FL 32826-3246

Memorandum

To: Derek Hampton
From: UCF Institutional Review Board (IRB)
Date: June 24, 2021
Re: Request for IRB Determination

The IRB reviewed the information related to your thesis *The Technical World of Warcraft*.

As you know, the IRB cannot provide an official determination letter for your research because it was not submitted into our electronic submission system.

However, if you had completed a Huron submission, the IRB could make one of the following research determinations: "Not Human Subjects Research," "Exempt," "Expedited" or "Full Board".

Based on the information you provided, this study would have been issued an Not Human Subjects Research determination outcome letter had a request for a formal determination been completed to the UCF IRB through Huron IRB system.

If you have any questions, please contact the UCF IRB irb@ucf.edu.

Sincerely,

A handwritten signature in black ink that reads "Renea Carver".

Renea Carver
IRB Manager

APPENDIX B: INTERVIEW WITH ZADER

DEREK: When looking at a raid encounter, what are some of the first elements that need to be hashed out?

ZADER: In a general sense, I look at the overall framework of the fight, which starts with what things look like, such as specific mechanics or adds, and when specific events occur. From there, I look at how those features that I am looking for interact with each other, essentially looking for if something happens at a set time frame or if the player controls the fight. Looking at those things help me to figure out the plan moving forward for an encounter.

DEREK: What kind of preparation do the officers/raid leader do that the rest of the raid team doesn't know about?

ZADER: Generally speaking, an individual would look at their specific play in an encounter by viewing another player playing their class, or to look at a replay log in order to optimize their performance in an encounter to the fullest. An officer/raid leader prepares for the macro performance of the group holistically. To succeed in an encounter, the officer has to coordinate the team in such a way that each phase of a fight is accomplished purposefully. The upper echelons of difficult encounters require a team to systematize their approach for meaningful progression to beat a boss. So, not only will an officer/raid leader look at how they will play, they will also theorize when a player or players should use their main damage abilities, healing abilities, or utility to beat a specific mechanic or to bypass a phase in an encounter.

DEREK: What warrants an encounter requiring internal, custom created technical documents, versus simply using any other guide (this includes the Adventure Guide)?

ZADER: An internal and custom technical document is catered to the group for which it is created for, which makes it easy to modify strategy on an individual by individual basis.

DEREK: What's one of your biggest sources for raid/mythic plus guides? Why?

ZADER: While I do look at generic youtube guides, I tend to look at mostly Warcraftlogs. You can see the full encounter and how a guild beats it, and you can pinpoint how they did certain mechanics or phases.

DEREK: Do you use the Adventure Guide? If yes, how often do you utilize the Adventure Guide? If not, why?

ZADER: No, not very often, but only guides that were created for easier consumption (ie youtube guides) may have already done the job of utilizing the adventure guide and presenting it for us. However, that may not always be the case, as the creators always see the bosses before anyone else. If I need to recall an individual detail of an encounter, I might look at the adventure guide, but guide creators typically do a better job of presenting the information.

DEREK: In your experience, do you believe the Adventure Guide is a sufficient tool for raiders at the Mythic level? And players doing high mythic plus dungeons?

ZADER: It is helpful to get data about a specific move or mechanic about a boss, otherwise certain numbers in a fight would be made on assumptions/guesstimations. For the most part, I think it serves its purpose of setting foundational information for the individual/party to form their own strategy on how to deal with an encounter, if that was the intention for the creation of

the adventure guide. If players are looking for a “how to” for an encounter, the adventure guide is not a sufficient tool. For mythic plus especially, since it doesn’t provide information outside of the bosses in a dungeon, the adventure guide will not suffice.

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