Literacies at Play: Digital-Age Literacies in High School Esports

by

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ABSTRACT

The growth of electronic sports (esports) is undeniable. One dimension of esports' growth can be seen in its adoption as an extracurricular club activity across an increasing number of high schools in the United States. Researchers and educators in literacy have increasingly recognized and emphasized the study of students' everyday lives and interests, calling for responsiveness to the ways students actually experience literacies versus how they are traditionally taught. In this respect, the popularity of esports in high schools positions it as an activity in the everyday lives of an increasing number of students. As such, this dissertation project explored the topic of esports in high schools through a lens of multiliteracies and digital-age literacies. This work addresses an important knowledge gap because students are converging to reveal an ecosystem where they are drawing from and building on their everyday literacies in non-trivial ways. And although there is a growing body of multidisciplinary scholarly work on esports, relatively little work has explored esports in high schools. Therefore, I asked the overarching question: How are digital-age multiliteracies taking place in high school esports contexts? Specifically, I focused on the digital-age literacy practices, demands, and perspectives in high school esports. Guided by research questions on these three topics, I carried out a study of two high school esports clubs for 22 weeks. This study was guided by qualitative, interpretive, naturalistic, ethnographic, and case study research designs. My findings describe six assertions: (1) literacy practices were used to engage with each other in communal and competitive ways; (2) the social functions of esports' literacy practices take precedence over scholastic goals; (3) literacy demands of esports

emphasize unambiguous and timely multimodal communication for managing teams and scheduling events; (4) literacy demands of high school esports focus on multidimensional fluencies between what is on and what is around the screens; (5) participants characterize the engagement with esports as positively contributing to “belonging”, of a “safe space”, and of opportunities for “critical thinking”; and (6) participants characterize their engagement with high school esports as positively contributing to future occupational or educational preparedness and health.

DEDICATION

This dissertation is dedicated to the thought that “all work” does not necessarily mean “no play.”

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Without the impact of many people in my life, not only would this dissertation not have come to fruition, but neither would I as a person. I thank my mother and father, Milly and José, for providing a loving and supportive upbringing. Without your love, support, and dedication I would not be the person I am today. I thank my brother, Dito, for your constant guidance and advice. Without your example to follow, my path would have been a very different one. I can't help but keep falling in love with my wife, Priscila, who has been a crucial source of support through every step of this milestone. You make me feel like I can do and learn anything.

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The culmination of this project and program is not just my individual success—it belongs to each of us.

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CHAPTER 1
INTRODUCTION

Background and Theoretical Frame

Researchers in literacy education (e.g., Gee, 2004; Moje, 2004; New London Group, 1996; Walsh, 2010) have increasingly recognized and emphasized literacy practices in the contexts of students' everyday lives, calling for concerted research and pedagogical efforts that are more responsive to the ways students actually experience literacy versus how they are traditionally taught. In this traditional sense, "literacy" and to be "literate" has meant abilities to read and write. However, as the field of New Literacy Studies (NLS) argues, to be literate in the present (and future) world means much more than just an ability to read and write text on a static page (Cope & Kalantzis, 2000, New London Group 1996).

At the center of NLS is the notion that literacies are continually morphing (Coiro et al., 2008). That is, instead of dealing with a static text, as is common in traditional conceptualizations of "literacy", NLS frames literacies as socially and culturally situated practices (Gee, 1990; 2001; Street, 1995) encompassing a variety of contexts that are multimodal by way of combining text, image, movement, sound, and other modes of communication in both digital and analog environments (Jewitt, 2008; Kress, 2001; 2009). One prominent focal point in this subset of NLS has been the varied ways in which digital technologies are framed and used as *tools for* and *forms of* literacy. These technological uses have spanned both in and outside of formal educational settings as well as across physical and online contexts, centering in each the need for understanding

the literacy demands, practices, and experiences of people (Gee & Hayes, 2010; Jenkins et al., 2009; Lemke, 1998).

One way to further frame NLS is by way of a pedagogy of multiliteracies (New London Group, 1996) that recognizes the dynamic nature of literacy practices in a rapidly changing, globally connected, and technologically mediated society. These notions of multiliteracies with implications for the digital-aged world have been framed as digital-age literacies (Aguilera, 2018, Aguilera & Pandya, 2018; Aguilera et al., 2020). Digital-age literacies are a way of understanding the practices of students that carry implications for their preparedness and functionality in the growingly digitized and networked future. Digital-age literacies thus represent a confluence of abilities necessary to navigate and function in the current and near-future world that includes the development of digital-aged: identities, socialization practices, motivations, group belonging, and technological abilities.

Societies around the world collectively expect and entrust formal learning environments such as schools to prepare younger generations for the future, including stakes that range from extending parents' aspirations for their children (Watson et. al. 2016) to a country's prosperity and social cohesion (Tieken, 2014). Given societal expectation of formal educational structures and the associated importance of schools, the need for schools to adapt and leverage emerging technical and creative uses of digital technologies is rendered important. This is especially so as they relate to literacy in the digital age's rapidly changing, globalized, and technologically mediated society.

In schools, one such emerging way that the technologies are being used by students as a platform for engaging in digital-age literacies is electronic sports (esports).

Esports is the competitive and organized (e.g., in tournaments or leagues) play of videogames. Typically, esports events have a specific goal such as winning a match or earning prize money, and there is a clear distinction between players and teams that are competing against each other (Newzoo, 2019). Over recent years, esports has experienced significant and sustained growth along multifaceted dimensions such as at the professional level, the collegiate level, and the scholastic level—and this growth is expected to continue into the near future (Newzoo, 2021). It is the high school level, as an extracurricular activity (e.g., a school esports club) that this study focuses on. But what is high school esports?

Imagine, for a moment, the following scene: Athletes of the high school sports team are arduously participating in their weekly practices. They work hard to improve upon their skills and abilities, allowing them to compete at ever-higher levels. “Maybe”, some of these athletes think, “I’ll be able to join a college or university team. If I get *really* good, maybe I could even join the professional leagues”. While they play and practice with each other, some might receive a pointer or two from their team coach or from a fellow team member. Others might search for tips videos online or participate in discussion forums for their sport. As they slowly bond over their shared game and perfect their techniques, they prepare for their upcoming big game against a rival school. When the big day comes, the team must take to the field of play to begin the match. So they arrive at the room where they will play, sit down in front of their computer monitors, and log in to the videogame they have been arduously perfecting as they prepare to test their skills and abilities.

The scene described above is quickly becoming a common reality across many schools in the United States. High school esports has grown rapidly in a relatively short amount of time. Roughly 3,100 schools across all 50 U.S. states were registered to the High School Esports League (HSEL) in 2020—a total that was six times larger than roughly two years prior (HSEL, personal communication, April 2019). This growth serves as an indication of the widening interest as well as the increasing popularity (or "every-dayness") of the phenomenon of high school esports and helps build a case for it as a novel context that is worthy of study, framed as a site of multiliteracies as well as digital-age literacies engagements. However, despite this marked growth in scholastic esports specifically—and the similar growth of esports in general (Newzoo, 2019; 2021)—research on esports is only slowly emerging (Steinkuehler, 2019). In addition to this current state of esports research, research on videogaming points to academic benefits in reading, math, and science (e.g., Posso, 2016) and some work in esports specifically has argued that diverse curated experiences with esports may better prepare students for success in STEM fields and entrepreneurship (Anderson et al., 2018).

With the Entertainment Software Association (2020) reporting that 70% of children (under 18) in the United States play videogames, it appears that high school esports' rising popularity and its academic and career impacts are converging to reveal an ecosystem where students are drawing from and building on their everyday literacy practices in non-trivial ways. This, in turn, is creating a uniquely dynamic high school esports context that merits in-depth study. Nevertheless, despite a growing body of multidisciplinary research on esports (Reitman, et al., 2019), esports in high schools remains relatively understudied.

Purpose

The purpose of this doctoral dissertation project was to explore the expanding, yet still under-researched, phenomena of high school esports through the lens of multi- (New London Group, 1996; Cope & Kalantzis, 2000) and digital-age literacies (Aguilera, et al., 2019). Given the projected growth of esports into the future (Newzoo, 2019; 2021), the efforts to coordinate research related to esports (Steinkuehler, 2019), the growth of high school esports (HSEL, 2020), and its potential framing as a site for multiliteracies and digital-age literacies, this dissertation research project investigated the dedicated places and spaces for esports in the context of two high schools through a lens that focuses on student's multiliteracies and digital-age literacies as part of the extracurricular activity of these schools esports clubs. All aspects related to this study occurred during a time when distancing mandates associated with the COVID-19 pandemic were in full effect (late 2020 and early 2021).

Research Questions

Given that researchers have emphasized the variety of contexts in which literacy is engaged in outside of formal schooling, high school esports clubs are particularly interesting because they exist as emergent and increasingly legitimized sites in which no direct literacy instruction is immediately evident. Instead, esports clubs appear to form as a result of an increasing legitimization of a historically out-of-school affinity space (Gee, 2004) for computer and videogames. Despite the lack of an explicit focus on literacy development, I contend that a closer examination of the engagement of student-members and teacher-sponsors of high school esports clubs would reveal a complex tapestry of literacy practices (Street, 1988, 2006), literacy demands (Lemke, 1998), and literacy

perspectives (Perry, 2012) that are inherent in school esports clubs. Thus, I used systematic qualitative methods to expand current understanding of high school esports participants' literacy practices, demands, and perspectives in the digital-age and how they navigate these. To this end, I developed and explored the following research questions:

> ***1.*** *What digital-age multiliteracies* ***practices*** *are students and the sponsor-teacher enacting when participating in high school esports activities?*
>
> ***2.*** *How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies* ***demands*** *of participating in high school esports?*
>
> ***3.*** *How do students and the sponsor-teacher construct and characterize their respective literacy* ***perspectives*** *on their experiences as part of the high school esports club?*

Overview of Study and Methods

Data collection for this study occurred in the American Southwest, at two different high school clubs, for 22 weeks (Sep 23, 2020 to Feb 28, 2021), or roughly five months. During this time, I generated and collected data through participant observations, semi-structured and unstructured interviews, and digital artifact collection. I used these data collection and generation methods to—in addition to my own researcher's role of *participant as observer* (Kawulich, 2005)—gather information from the sponsor-teachers, the general student-members, and five focal student-members. I conducted semi-structured interviews with five focal students from one of the two clubs as well as observed and participated in their practice sessions as a coach for two games, *Tom Clancy's Rainbow Six Siege* and *Call of Duty: Black Ops Cold War*. I also interviewed three sponsor-teachers across both clubs (a club had two sponsor teachers while the other

had one). From this data, guided by interpretive (Erickson, 1986), naturalistic (Lincoln & Gubba, 1985), ethnographic (Hammersley & Atkinson, 2007), and case study (Stake, 1995) research designs, I analyzed my data corpus across two coding cycles (Saldaña, 2016) and constructed three conceptual bins (Tracy, 2013) of literacy practices, demands, and perspectives. From this, I then developed six data-supported assertions in total, two for each research question.

Overview of Dissertation

This dissertation consists of five chapters. Chapter one acts as an introduction to the study. Here, I provided an overview of the study and its rationale, which included laying out the research questions and overviewing the methodological perspectives that I used to answer those questions.

In chapter two, I explicate the conceptual framework that guides this study. I lay out the multi- and digital-age literacy frames and explain the literacy practices, demands, and perspectives that intersect with high school esports. I examine how important concepts and topics such as these have been taken up by scholars working across fields and how I leverage these for this current study.

In chapter three, I expand on the methodological procedures of this study. I elaborate on the research site and participants, explain the data collection and data analysis procedures, and address ethical considerations of the study.

In chapter four, I present my findings by providing detailed evidence that formed the basis for each of my six assertions about the literacy practices, demands, and perspectives of the high school esports participants.

Lastly, in chapter five, I discuss the significance of each of these assertions for literacy and esports research. I conclude this chapter by elaborating on the limitations of this study and delineating potential directions for my future research in these topics.

CHAPTER 2

LITERATURE REVIEW & CONCEPTUAL FRAMEWORK

Esports' Multifaceted Growth

To understand the importance of esports as a space for digital-age literacies practices, demands, and perspectives in schools, it is important to understand its centrality in broader culture first. The rapid and multi-faceted growth of the competitive videogaming phenomenon known as esports is undeniable. Before the impacts of the COVID-19 pandemic, market analysis entities such as Newzoo (2019) and Goldman Sachs (2019) reported projections for sustained growth in esports audiences and revenues alike through the year 2022. Despite the unquestionable negative impacts of the COVID-19 pandemic on many facets of daily life such as health and economies, its negative impacts on the videogaming industry has been relatively low. Due to lockdowns, most major game publishers across all platforms have reported an increase in revenue from sales as well as active user bases (Video game industry, 2021). For esports specifically, revisions to the pre-pandemic projections listed earlier from Newzoo and Goldman Sachs resulted in relatively small negative impacts. For instance, regarding revenue, although esports as an industry saw decreased growth in 2020 when compared to original projections, this represented only an 0.8% decrease from 2019 and the industry is still projected to achieve over 15% revenue growth from 2018 to 2023 (Rietkerk, 2020). Additionally, regarding audience sizes, Rietkerk (2020) remarks:

> It is worth noting that the esports audience is not smaller (meaning there's no decrease in demand) and the number of organizers is not fewer (so there's no decrease in supply). Instead, our adjusted revenue number is *mostly a result of*

> *this year's* [2020] *postponed and canceled esports events* (para. 3, emphasis in original).

These audience and monetary gains, however, do not represent the only marker of esports' growth. Colleges and universities have been swiftly adopting institutionally supported esports programs since 2014, when Robert Morris University launched the first scholarship for their *League of Legends* team. Two years later, the National Association of Collegiate Esports (NACE) was founded and two more years after that, NACE had a total of 127 colleges and universities participating (Morrison, 2018)—a total that was up from around 50 colleges and universities since the previous year (Best Colleges, 2018). As of 2021, the website for NACE advertised that it has over 170 registered colleges and universities (National Association of Collegiate Esports [NACE], 2021).

Esports' growth is also evident in its portrayal through the lens of major popular culture outlets such as *Netflix's* original series called *Explained* alongside the popularity of videogame streaming platforms such as *Twitch* and *YouTube*—two main web sources for esports content. Additionally, major news outlets such as CNN continually report on the growing legitimacy of electronic sports' place in schools alongside traditional sports such as football (Jimenez, 2019), and the sports-oriented organization *ESPN Magazine* recently featured Ninja—the world's most popular professional videogamer—on its cover (Bankhurst, 2018).

The growth of esports is further evident in the academic interest garnered over the past decade. Electronic sports has experienced a flourishing scholarly interest across varied fields such as psychology (e.g., Bányai et al., 2019), gambling (e.g., Macey & Hamari, 2018), sports philosophy (e.g., Jenny et al., 2016), management (e.g., Funk et al.,

2017), legal studies (Holden et al., 2017), and identity and marketing (e.g., Seo, 2016), among other fields. Moreover, the National Science Foundation (NSF) has recently funded large-scale research projects delving into electronic sports and its relation to topics such as Culturally Relevant Computing Activities and Career Readiness for At-Risk Youth (National Science Foundation [NSF], 2019) and the Social Dynamics of Organizational Behavior in Temporary Virtual Teams (National Science Foundation, [NSF], 2018). Furthermore, scholars and professionals are coalescing into conferences dedicated in their entirety to the burgeoning field of esports across the United States and elsewhere, with the Electronic Sports Conference (ESC) held at the University of California, Irvine serving as a noteworthy example (Steinkuehler, 2019). As part of the growing scholarly interest in esports, there is a body of scholarly work that has attempted to clearly define and understand it.

The Field's Definition of "Esports" and Prior Work

Some of the earliest scholarly work on esports emerged in the mid 2000's with Hemphill (2005) who dubbed it "cybersport" in his attempt to bridge the field of sports philosophy and how playing videogames might fit within the sporting definition. Other early work in esports includes that of Wagner (2006) who spoke about the scientific relevance of esports, saying that the competitive play of videogames could be said to offer a kind of *cyberfitness*—a set of competencies that are valued in an information and communication society. Esports has since been defined somewhat inconsistently across disciplines that have studied it, with each highlighting aspects of esports that are relevant for their disciplinary interests across fields such as law, business, sports science, cognitive science, informatics, law, media studies, and sociology (see Reitman, et al,

2019 for a review). For instance, Freeman and Wohn (2017) state that esports "can be used to describe a large variety of different 'types' of eSports, ranging from a professional environment in which players compete in person in large arena settings to semi-professional and entertainment forms of eSports played online" (p. 436). They also state that "some even suggest that there is no clear differentiation between 'eSports' games as opposed to 'non-eSports' games" (p. 436). That is, some say that esports is more or less a meta-game that can be played based on almost any digital game. Further, in some of their work, Freeman and Wohn (2017) consider esports as "the competitive play and/or spectating of online games" (n.p.) in line with Gandolfi (2016) and Hamilton et al., (2012).

These differences in definition also stretch into the *seemingly* inconsequential choice of abbreviating the term for "electronic sports". Pérez Cortés and Kessner (in prep.) have found that during the past decade and a half, research publications have employed a total of eight notable variations (see Figure 1).

Currently, a push to standardize the abbreviation of "electronic sports" continues to gain momentum. Such a standardized abbreviation functions as a regular word in that, for example, the first letter is capitalized only when beginning a sentence while never using a hyphen (i.e., Esports or esports). This abbreviation (see Figure 2) appears to increasingly represent the preferred and "in-the-know" variation across contexts—a sentiment most recently reflected in the title of Chaloner's (2020) book *This is esports (and how to spell it).* While I have chosen to adopt this abbreviation, not all do.

“esports” (e.g., Macey & Hamari, 2018)	“e-sports” (e.g., Heere, 2017)
“Esports” (e.g., Bányai, et. al., 2019)	“E-sports” (e.g., Zang, Wu, & Li, 2007)
“eSports” (e.g., Jenny, et. al., 2016)	“e-Sports” (e.g., Martončik, 2015)
“ESports” (e.g., Kane & Spradley, 2017)	“E-Sports” (e.g. Burk, 2013)

Figure 1. *Differing abbreviations of "electronic sports" in scholarly publications*

For example, when employing the abbreviation “eSports” and then proceeding to conceptualize it, Wagner (2006) stated that “eSports is an area of sport activities in which people develop and train mental or physical abilities in the use of information and communication technologies” (Defining eSports section). Similarly, Freeman and Wohn (2017) employed the same abbreviation of “eSports” but chose to conceptualize it instead as “the competitive play and/or spectating of online games” (p. 97). Although both abbreviations are consistent, the authors’ conceptualizations differ in potentially nontrivial ways when they are closely examined. Wagner appeared to reveal an ideological leaning of esports that foregrounds its technologically mediated nature, which may lead to improved technological literacies given sufficient practice. In contrast, Freeman and Wohn emphasize the consumer and participatory nature of esports through strictly online means, making no explicitly stated inclusion of physical (or “in person”) instantiations of esports nor of any potential for technological literacies development.

Figure 2. Chaloner's visual representation of the general sentiment of a standardized abbreviation for "electronic sports" as shared on Twitter.

Defining Esports

Despite any inconsistencies present in the definitions of esports, competitive (video) gaming is a widely accepted description (Reitman, et. al. 2019). However, because defining esports is a nontrivial debate that underlies scholars' framing of their research (Reitman, et. al., 2019), I will now proceed to offer my definition, based on Freeman and Wohn's (2017) views of esports as being multidimensional in that it (a) encompasses varied computer-mediated competitive gaming activities, (b) attracts spectators, (c) can involve both professional and amateur levels of play, and (d) can occur across a wide range of different game titles.

First, in keeping with how esports can encompass varied computer-mediated competitive gaming activities, esports does not exclusively refer to moments when players interact with the game's content as rendered on the screen. Instead, it includes a multitude of related activities that are anchored around these moments of on-screen interaction. These related activities may include interactions that can center on players'

play but need not take the form of "playing". For example, the act of engaging in an in-person or online conversation with teammates, opponents, strangers, and/or acquaintances that examine, say, a particular gameplay strategy counts as engaging in an esports activity. Given the notions of (a) "big 'G' Games" (Gee, 2007)—a term used to highlight the varying related activities and modes of participation that may take place "outside" any given software—and (b) affinity spaces (Gee, 2004), what I consider esports includes a range of activities and sites for participation. As such, in contrast to Freeman and Wohn (2017), I maintain that the competitive gaming activities I refer to with the term esports need not be strictly—though most definitely are—computer-mediated.

Second, a salient characteristic of esports is that it attracts spectators at each of the levels in which they are played. At the professional level, where players compete for substantial monetary prizes as their way of making a living, spectators (attendees of an in-person, live event) or viewers (at-home audience members tuning in through popular broadcasting platforms such as *Twitch*) typically gather around the competition in varying numbers. This spectator characteristic of esports is also evident at the non-professional levels of play where the players do not make their living from the competitive prize earnings. For example, a streamer (someone who broadcasts their gameplay for others to see) can host a number of viewers that tune in to the streamer's gameplay on their own computer, phone, or television screens. Nevertheless, it is important to make a distinction here that may otherwise go unnoticed. I adopt Freeman and Wohn's inclusion of spectators to help define esports. This, however, runs the risk of inaccurately characterizing esports as any videogame activity that attracts a group of

spectators. As such, to be clear, the attraction of spectators, while necessary, is not a sufficient trait for gaming activities to be considered as esports. Other traits, such as displaying an organized, structured, or otherwise coordinated competitive play is another important requirement.

Third, esports can involve both professional and amateur (or non-professional) levels of play. Esports has reached the mainstream as a billion-dollar industry with major events that regularly rank among the highest viewership ratings, sometimes even ranking above major sporting events such as baseball and basketball (Newzoo, 2019). But the professional, "big money" side of esports is not the only one that "counts" as esports. The non-professional level of esports play that might range from esports leagues formed as a hobby or include more serious (yet non-professional) leagues such as those formed in collegiate settings across universities and colleges (e.g., the Collegiate Star League) as well as high schools (e.g., the High School Esports League, the North American Scholastic Esports Federation) still count as esports. At the non-professional levels of play there are few monetary prizes to be earned as a result of esports participation and the players who do earn prizes do not mainly earn their income from their esports participation. Instead, they are at the non-professional level, where although they participate in similarly organized and competitive structures of professional esports competitions, these do not represent a primary source of income. For the purpose of this research, I focus on the non-professional level of play that occurs at the high school level.

Lastly, esports can occur across a wide range of different game titles. This means that there is no *one* videogame title nor genre that encompasses the entirety of esports. As such, it is important to clarify that esports does not simply refer to the electronic play of

sports in a videogame domain. For example, on the one hand, while someone playing a videogame about baseball, such as *MLB The Show*, is indeed playing a videogame about a sport, this player is not necessarily playing it as an esport if they are not doing so as part of an organized and competitive effort. On the other hand, if someone is playing a videogame about farming, such as *Farming Simulator*, they are not playing a sports videogame, but if they are playing it as part of an organized and competitive effort, then they are playing that farming game as an esport (e.g., Gamasutra, 2021, Nicholson, 2020).

This definitional framing of esports that I developed above is relevant for understanding the literature that I draw from in this research project. This literature involves extracurricular activities, new, multi, and digital-aged literacies as well as affinity spaces.

Extracurricular Activities

In the United States, participation in organized activities after or outside of school is a somewhat expected experience for many youths. In national surveys, between 60% to 70% of children and adolescents report participating in one or more organized activities (Feldman & Matjasko, 2005; United States Census Bureau, 2014). This expectation to participate is perhaps a consequence of a broad range of established and emerging extracurricular activities that are intended to target the varied interests of students while striving to improve their lives in multiple, sometimes interconnected ways. For example, research suggests that participation in a variation of organized, extracurricular activities such as athletics or debate teams is linked to a broad range of positive outcomes for child development that include socialization (Mahoney 2000), school performance (Roeser &

Peck 2003), avoidance of violence (Jiang & Peterson 2012), identity development (Dworkin et al., 2003), self-esteem (McGee et al., 2006), physical activity (Halpern 2003), and civic orientation (Denault & Poulin 2009).

However, some scholars have also questioned expected positive effects of extracurricular activities. Eccles and Gootman (2002) edited a widely cited book in which the chapters demonstrated an interest in the developmental consequences of extracurricular programs for youth that was fueled, in part, by concerns about the role such activities might play in promoting or deemphasizing school achievement and impacting youths' preparation for an increasingly demanding and technical labor market. Still, for the most part, research on extra-curricular activities points to its benefits. For instance, extracurriculars have consistently been linked to increases in interpersonal competence, self-concept, grade point average, school engagement, peer belonging, and mental health (Elder & Conger, 2000; Oberle et al., 2019). Furthermore, sports participation—in many ways the prototypical extracurricular activity—has been linked to lower likelihood of school dropout and higher rates of college attendance (Marsh & Kleitman, 2003; St-Amand et al., 2017).

Extracurriculars are often seen as a way of "saving" adolescents from too much leisure time as it is often warned that adolescents spend more than half of their day in leisure activities (Larson & Verma, 1999). This is usually followed by arguments that, for many students, much of this time is spent in either unstructured peer focused activities or in front of the television. In their book, Eccles and Gootman (2002) acknowledge that both developmental scientists and youth policy advocates have suggested that this leisure time could be better spent in other ways such as participating in high quality out-of-

school and after-school programs—extracurriculars—that would both facilitate positive development and prevent the emergence of developmental problems.

Esports as an Extracurricular

Esports represents an emerging option for an extracurricular activity. It is currently experiencing rapid adoption across schools, spawning a category of esports known as high school esports. For instance, the High School Esports League (HSEL) increased its total partnered schools from 500 in 2018 across all 50 U.S. states (personal communication, April 10, 2019) to over 3,100 schools across multiple countries in 2020 (HSEL, 2020). However, due to its novelty, scholarly research into high school esports' effects on students is still heavily underexplored with only a handful of studies currently published (e.g., Gerber et al., 2019) looking into high school-aged participants. This lack of scholarly research is troubling, given the evident spread and popularity of esports and its anticipated continued growth into the future across all levels (Newzoo, 2019; 2021; Rietkerk, 2020, Strebig, 2021). There are currently two major concerted efforts to bring esports into high school settings in the United States that compete with each other to recruit schools to join their respective leagues. These are the entities of the High School Esports League (HSEL) and the North American Scholastic Esports Federation (NASEF). Preliminary findings shared by NASEF through conferences such as Games 4 Change (G4C) and The Esports Conference (ESC) report on low levels of racial tension in their clubs and positive feelings of inclusion among other preliminary results (LaBeaux, 2019). Additionally, there is developing work in esports as part of the regular curriculum (i.e., esports in classes) done by NASEF as well (Anderson, et al. 2018). If high school esports as an extracurricular activity will continue to spread, potentially

affecting students' lives in multiple—perhaps unpredictable—ways, it becomes imperative to dedicate in-depth scholarly explorations of the phenomenon of high school esports. For this reason, I examine high school esports from a theoretical frame that draws and builds on New Literacy Studies.

New Literacy Studies

This study focuses on exploring high school esports by seeking to understand the literacy practices, demands, and perspectives of those who participate in it. As such, I overview the relevant theoretical background on literacies, which I place under the umbrella term of New Literacy Studies (NLS). There was a significant movement in the 1990s encompassing adjacent disciplines (such as sociolinguistics, psychology, ethnography, situated cognition, and sociology) that resulted in a significant shift of literacy research (Gee, 2000). One such instantiation, widely considered as foundational in this movement, is the work of the New London Group (1996) (see also Cope and Kalantzis, 2000). In these works, the argument centered on a "pedagogy of multiliteracies" that recognized the dynamic nature of literacy practices in a changing, global, and technological society. That is, this work encompasses the realization that "[t]he world was changing, the communications environment was changing, and it seemed … that to follow these changes literacy teaching and learning would have to change as well" (Cope & Kalantzis, 2013, p. 106).

Through the work of scholars belonging to the New London Group, the singular and monolithic term "literacy" began to shift towards a plural consideration of "literacies" or "multiliteracies" (Cope & Kalantzis, 2000). Thus, the "camp" of NLS within the literacy field resulted. NLS regards reading and writing not just as a set of

mental processing skills dealing with static text as is common in traditional conception of "literacy", but are instead socially and culturally situated practices (Gee, 1990; Gee, 2001; Street, 1984; 1995) encompassing a variety of contexts that are multimodal by way of combining text, image, movement, sound, and other modes of communication in both digital and analog environments (Jewitt, 2008; Kress, 2001, 2009). NLS holds at its center the notion that literacies are continually morphing (Coiro et al., 2008) and argue, in short, that although "reading" the world and the word are both inextricably interwoven, we never simply read the word. I argue that videogames in the form of esports—more specifically high school esports—are only one non-trivial example of digital-age, multimodal technologies that are impacting notions of multiliteracies in the modern-day world.

Videogames and New Literacy Studies

In present-day society, videogames are only one of the many important examples of our ever-advancing technologies. Scholars have been exploring videogames' affordances for decades, with Malone (1981) offering one of the earliest of such studies. However, the literature on videogames' value in domains of learning and literacy quickly accelerated with the publication of *What video games have to teach us about learning and literacy* (Gee, 2003/2007). In this book, Gee challenged the perception of videogame playing as a waste of time and elaborated how they regularly display models of good design for teaching and learning. A number of scholars have since examined videogames' varied potential for broad domains in similar book-length publications. Among these domains are those of learning (e.g., Shaffer 2006; Squire 2011), business (e.g., Edery & Mollick 2009), addressing social problems like depression, obesity, poverty, and climate

change (e.g., McGonigal 2011), and serving as platforms for art and politics (e.g., Bogost 2011). Indeed, videogames have been studied and considered widely by academics interested in learning, literacy, and other varied fields.

For example, Steinkuehler (2010) explains that there are two perspectives on videogames and literacy—one with implications for digital literacy as defined by O'Brien and Scharber (2008) and one with implications for community or social literacy that go beyond an individual and their interaction with technology. Steinkuehler reasons that the play of videogames is a form of digital literacy practice if it is defined as O'Brien and Scharber (2008) do "as socially situated practices supported by skills, strategies, and stances that enable the representation and understanding of ideas using a range of modalities enabled by digital tools" (p. 66-67). According to Steinkuehler, gaming is a form of digital literacy because it involves the production of meaning within available semiotic resources (i.e., things that take on meaning such as images, sounds, gestures, movements, graphs, diagrams, equations, objects) of the videogame. This is because "gaming is a narrative, hewn out of the 'verbs' made available within a game design" (Steinkuehler, 2010, p. 61). Other work on games and literacy by Steinkuehler similarly pull at these threads of gaming as a form of digital literacy (Steinkuehler, 2006a, 2008).

As such, I locate the work of this dissertation in similar literacy frames. The work of Steinkuehler also points to a second important sense in which games and literacy are related. This second sense comes about when the focus from the "individual player + technology" framed by digital literacies above is widened to include the communities that emerge around games. Communities that form around games are often referred to as "fan communities" and those involved in them may do a great number of game-related

activities. For example, they may form communally authored user manuals (i.e., game guides), create fan art, or collectively read and write multimodal texts that are part of or inspired by their play (Black & Steinkuehler, 2009). An illustrative example of this multimodal composition is provided by Gee and Hayes (2010) with the story of a young girl who writes fan fiction based on *Twilight*—the young adult vampire novels from author Stephenie Meyer—that uses screenshots from the videogame *The Sims 3*. This fanfiction is published on online websites. Several scholars have shown that, on these websites, writers can gain instruction, mentoring, feedback, and develop an audience (Black, 2008; Hellekson & Busse, 2006). The work explored above suggests that videogames are not in competition with the concept of "mere literacy" but instead can be considered literacy practices in and of themselves. An important reason for why this "non-competition" is so, ties back to Gee's (1989) definition of literacy as control of secondary discourse such as those used in schools, workplaces, stores, government offices, businesses, churches, and many other interest-driven contexts. The context of interest-driven spaces comprises one such example of these secondary discourses.

Digital-age Literacies

Digital-age literacies (Aguilera, 2018; Aguilera, et. al. 2020) is a term that is preferred over *digital literacies* to highlight the ways that contemporary literacy practices are becoming increasingly dispersed across virtual and physical contexts (Aguilera & Pandya, 2018) and are not, therefore, focused on a proficiency with any set of digital technologies by themselves. Rather, digital-age literacies is a term "meant to emphasize the multi-dimensional nature of literacy demands, practices, and discourses in the rapidly changing, digitally connected contexts through which we exchange meaning in the

modern world" (Aguilera, et. al. 2020, p. 3). Digital-age literacies lie at the intersection of three overlapping and interconnected lenses of analysis (Aguilera, 2017). As Aguilera explains, one lens is the *content dimension* which highlights aspects of the multimodal content rendered "on the screens". Another is the *procedural dimension* which comprises the technological rules operating "beneath the screen" that give rise to and constrain digital literacy experiences. Finally, lying "beyond the screen" is the *contextual dimension* which highlights sociocultural issues related to the production, dissemination, and use of digital media technologies.

As Aguilera, et. al. (2020) discussed, the foundations for these three dimensions can be borrowed from other work. For example, the basis for the content dimension stemmed from work in the area of social semiotics where Serafini (2010) identified a tripartite framework for reading multimodal texts that focused on perceptual, structural, and ideological perspectives. Similarly, informing the procedural dimension is the work of Baldry and Thibault (2006), which characterized three hierarchical levels of analysis that could be used to break down websites at the levels of interface, culture, and data. Finally, to inform the contextual dimension, Pauwels (2012) developed an analytical procedure for analyzing websites as cultural expressions. Leveraging the frame provided by digital-age literacies carries the purpose of looking *across* these different dimensions, at how each might overlap and intersect to inform literacy research in theory, method, and practice.

I frame the literacies that happen around videogames as socially situated and context dependent (Rowsell et al., 2013). That is to say, these literacies involve cognitive capacities, social practices, and a mixture of digital and physical technologies all of

which can happen in many places, be it in a classroom, in the hallway, or among communities of videogame players in an after-school setting. I build on the work on NLS, multi- and digital-age literacies to focus on literacy practices, demands, and perspectives.

Literacy Practices, Demands, and Perspectives

A practice is generally the different types of things that one does or can do in a given situation. In the context of this study, a literacy *practice* (Lankshear & Knobel, 2011; Street, 1988) foregrounds the ways that participants appear to engage in multi- and digital-age literacies. In this regard, literacy practices, as Lankshear and Knobel explored, are the kinds of multimodal things people (can) do in the digital age with digital technologies of which a non-exhaustive list includes blogging, making or remixing music, editing wiki sites, photo or video sharing, and social networking of many kinds. In addition, these practices are, as Street elaborated, "aspects not only of 'culture' but also of power structures" (p. 60). That is, how these practices take on meaning for those who engage in them is always dependent on the (un)stated ideological conceptions and values of their societies. More specifically, these practices are shaped by and take on their own meaning within the social context of esports in high school too.

In my use of the word "demand", I adapt the multimodal nature of scientific and mathematical literacy that Lemke (1998) described. These fields, as Lemke explained, make use of not only verbal language, but also of mathematical, graphical, diagrammatic, pictorial, and a host of other modalities of representation. Thus, the literacy demands here are of articulating information *across* these media of representation. This articulation is an appropriate (or perhaps even necessary) way to engage in that context because of the multimodal representations that are attributes of it. In this respect, a literacy demand

involves being able to fluently juggle multimodal representations and/or interactions between whichever is most appropriate (useful, relevant, well-understood) in the moment and freely translating back and forth among them.

To describe literacy perspectives, I draw from the work of Perry's (2012) sociocultural framing of literacy perspectives. Sociocultural perspectives of language (e.g., Gee, 1996; Halliday, 1973) help us see language as dependent on the social world. This means language occurs within and is shaped by a cultural context. As Gee (1996) noted, language "always comes fully attached to 'other stuff': to social relations, cultural models, power and politics, perspectives on experience, values and attitudes, as well as things and places in the world" (p. vii). Gee called this "big 'D' Discourses" and referred to them as an "identity kit" that can reflect all of this "other stuff". As such, it is this other stuff—the big 'D' Discourses—which I refer to when I say "perspectives".

Videogames—commercially successful videogames specifically—recruit important literacy practices, demands, and perspectives effectively because they are an area of passionate interest for many who play them. Much like videogames are an area of passionate interest, so too are esports a similar subset of videogame interests. It is in the leveraging of these passionate interests—also known as *affinity spaces* (Gee, 2004)—that I now turn this discussion to.

Affinity Spaces

The term "affinity space" was used by Gee (2004) as a way to frame critiques of traditional schooling by comparing it to how people organize and operate in out-of-school, interest-driven contexts. Gee lists eleven important features that describe an

affinity space—most of which, in Gee's view, stand at odds with how traditional schooling is carried out. These eleven characteristics are the following:

1. Common endeavor—not race, class, gender, or disability—is primary. That is, in an affinity space, these variables take on background roles.

2. Newbies, masters, and everyone else share common space. That is, in an affinity space, the whole continuum of people from new to experienced, from unskilled to highly skilled, from minorly interested to addicted, is accommodated in the same space.

3. Some portals are stronger generators. A portal is some form through which a person can enter the affinity space. For example, online forums on car repair is a portal to the affinity space of repairing cars. A generator is what the affinity space is about, as it generates the content of the space and how people interact with it and with each other.

4. Content organization is transformed by interactional organization. That is, what members of the space do and say can change what the content is about. For example, players providing feedback on features of a videogame through various online forums can spur the game development company to fix the game's bugs, therefore changing the content's organization (the game) based on the interactional organization (the various posts complaining about the bug).

5. Both intensive and extensive knowledge are encouraged. To clarify, "intensive" knowledge is specialized, "extensive" knowledge is less specialized, broader, and more widely shared. This creates people who share lots of knowledge, but each have something special to offer.

6. Both individual and distributed knowledge are encouraged. To clarify, individual knowledge is stored in one's own head and distributed knowledge is knowledge that exists in other people (for example, on websites).

7. Dispersed knowledge is encouraged. That is, knowledge that is not actually at the site of the content itself, but at other sites or in other spaces.

8. Tacit knowledge is encouraged and honored. Tacit knowledge is knowledge players have built up in practice but may not be able to explicate fully in words.

9. There are many different forms and routes to participation. That is, people can participate peripherally in some respects or centrally in others. Patterns can change from day to day or across longer stretches of time.

10. There are many different routes to status. That is, different people can be good at different things or gain repute in a number of different ways.

11. Leadership is porous and leaders are resources. That is, affinity spaces do not (and cannot) order people around or create rigid, unchanging, and impregnable hierarchies.

To clarify, however, these eleven traits are not a set of criteria that are necessary nor sufficient for defining an affinity space. That is, Gee (2004) tries to describe the features of affinity spaces as opposed to gate-keeping what counts as one. It is helpful to remember that these eleven traits are intended to help sharpen the differences between how literacies are practiced and enacted outside of formal schooling. Furthermore, according to Gee, the concept of *affinity space* is similar to, but contrasts with *community of practice* (Lave & Wenger, 1991) in several important ways. First, "community" carries a sense of belongingness or close-knit ties among people that do not necessarily fit in

formal settings like a classroom. Second, “community" carries the notion of people being "members", but membership can take on many different meanings across contexts that this may not be a helpful notion. Third, the notion of community of practice has been overly used across scholarly work despite Wenger et al.’s (2002) attempts to delineate what is and is not a community of practice. In Gee’s view, the major problem with notions like “community of practice” is that:

> they make it look like we are attempting to label a group of people. Once this is done, we face vexatious issues over which people are in and which are out of the group, how far they are in or out, and when they are in or out. (p.70)

In contrast, an affinity space is made up of a group of people associated within a given domain. People in an affinity group can recognize others as more or less “insiders” to the group. In their interactions, which may be in person or online, synchronous, or asynchronous, they can recognize certain ways of thinking, acting, interacting, valuing, and believing as typical of people who are into the semiotic domain.

Scholars working to understand the transmediatic (i.e., across several types of media) yet connected nature of varied informal contexts have argued for the importance of exploring videogames and the internet more broadly (e.g., Jenkins et al., 2015). Although I will focus on the play of videogames, the term “affinity space” has often been used to describe and study the interest-driven phenomena that occur around many areas. For example, Steinkuehler et al., (2005) argued for appropriating different but compatible methodologies when studying different affinity spaces such as those involving online fan fiction, massively multiplayer online games, and single player videogames. Other work on videogaming as affinity spaces include that of Duncan (2010) who addressed approaches to uncovering and theorizing the design activities that occur in online gaming

affinity spaces; Tran (2018) who argued that *Pokémon GO* and other games and digital media experiences that families engage with at home can be powerful resources that connect and integrate with other sites and resources both in-school and out-of-school; Gee and Hayes (2010) explored affinity spaces that relate to women and gaming specifically; Hayes and Duncan (2012) edited a book called *Learning in video game affinity spaces* where contributions varied from fan sites, modding, and 3D modelling (among other topics) as affinity spaces around videogames.

Videogames lie at the nexus of a complex constellation of literacies practices (Steinkuehler, 2007). Members of fan communities collectively read and write vast varieties of multimodal text that accompany their play, form communally authored user manuals, create online discussion threads on fan sites, write fan fiction, and create digital fan art (Black & Steinkuehler, 2009). Thus, from a framing of NLS and digital-age literacies in a way that is enhanced by affinity spaces, there are complex occurrences of literacies happening in and around the realm of videogames—with esports in particular being of special interest.

Esports as an Extracurricular Affinity Space

Esports as an extracurricular activity in high schools are an example of affinity spaces. There are multiple national-level high school esports organizations in the U.S. such as NASEF and the HSEL. In addition to facilitating wider adoption of esports as a high school extracurricular activity across the U.S., the existence of these national-level leagues suggests the growing interest in high school esports and simultaneously helps legitimize this phenomenon. Indeed, a growing number of high schools across the U.S. are already affiliated with a national-level esports league. These leagues allow individual

school teams to tap into shared organizational resources such as coaches, tournament prizes, and access to other similarly competing schools.

However, some schools do not belong to these national leagues. Instead, these schools participate in esports in more localized ways, competing internally between members of the same club, within the same school. Sometimes, this localized way of participating is also extended to play with other nearby schools but is nonetheless achieved without the support of national leagues. These types of localized participation are often for little more than to fulfill the desire to connect, play, and compete because they do so without any of the other resources offered by membership in a national league (e.g., prize money, coaching).

Regardless of whether high school esports participation occurs in formalized national-level structures or localized independent ones, for the most part they occur as an extracurricular activity. As an extracurricular activity, the teacher and students involved meet and interact around esports once school has adjourned for the day, in a voluntary manner, outside of official "school hours". Though many clubs seeking official recognition as a school affiliated team must then maintain academic standards amongst its members, such as a minimum grade point average, my own field experience with local schools has shown that a significant number of clubs are preoccupied with legitimizing their activities in the eyes of administrators and parents alike. This means they plan to seek such official school recognition (and therefore enforce associated academic standards) at a later date, once more groundwork has been laid down. This means that, in many ways, high school esports represents an example of an affinity space (Gee, 2004)

where participation is interest-driven and is not a requirement to achieve or remain in good standing with class, school, or district requirements.

Summary

In this chapter, I have overviewed previous work in esports. I have also provided the conceptual and theoretical framing of this study, which lies at the intersections of extracurricular activities, new literacy studies, digital-age literacies, multiliteracies, and affinity spaces. I have also defined the key terms of literacy practices, literacy demands, and literacy perspectives. In chapter three, I proceed to overview the methodological processes of this study, which include my research design, the research site and study participants, the data collection and analysis procedures, and my role and positionality as the researcher in this project.

CHAPTER 3

METHODS

In this chapter, I overview my research design, describe the research site and study participants, detail my data collection and analysis methods, and discuss my role and positionality as the researcher in this project.

Overview of Research Design

This research study sought to explore and describe, through the lens of digital-age multiliteracies, what happens in the dedicated places, spaces, and interactions within and around high school esports. The following overarching question guided this study: *How are digital-age multiliteracies taking place in high school esports contexts?* The specific research questions that further refined the focus of this study were:

> ***1.*** *What digital-age multiliteracies* ***practices*** *are students and the sponsor-teacher enacting when participating in high school esports activities?*
>
> ***2.*** *How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies* ***demands*** *of participating in high school esports?*
>
> ***3.*** *How do students and the sponsor-teacher construct and characterize their respective literacy* ***perspectives*** *on their experiences as part of the high school esports club?*

Guided by these research questions, I carried out a study of two high school esports clubs that was guided by qualitative and interpretive (Erickson, 1986), naturalistic (Lincoln & Guba, 1985), ethnographic (Hammersley & Atkinson, 2007), and case study (Stake, 1995) research designs.

Data collection for this study occurred in the American Southwest for 22 weeks (Sep 23, 2020 to Feb 28, 2021), or roughly five months. During this time, I generated and collected data through participant observations, semi-structured and unstructured interviews, and artifact collection. I used these data collection and generation methods as a *participant as observer* (Kawulich, 2005) to gather information from the perspectives of the sponsor-teachers, the general student members, and the focal student members. I conducted semi-structured interviews with five focal students from one of the clubs and observed and participated in their practice sessions as a coach for two games, *Tom Clancy's Rainbow Six Siege* and *Call of Duty: Black Ops Cold War*. I also interviewed three sponsor teachers across both clubs (one club had two sponsor teachers while the other had one). From this data, I pieced together interpretive representations of the specific situations in their contexts—what some call an interpretive "bricolage" (e.g., Denzin & Lincoln, 2005, p. 5).

Data analysis of these collected data occurred through a lens that focused on multiliteracies (Cope & Kalantzis, 2000; New London Group, 1996) and digital-age literacies (Aguilera, 2018, Aguilera, et al. 2020). As part of this data analysis process, I explored and described the literacy practices, demands, and perspectives that were "put into play" within two high school esports clubs from a phenomenological (Maxwell, 2013; Van Manen, 1990) approach. By adopting a phenomenological approach to the context and the collected data, I sought to describe the nature of the particular phenomena (Creswell, 2013) by inquiring as to the commonality of high school esports players' lived experiences.

Research Site and Participants

The study took place across two different high school esports clubs, each situated in a different school: School A: Play High, and School B: Game High (pseudonyms). I selected these clubs/schools for three main reasons: (a) they had an active high school esports club that I found by navigating through the High School Esports League's (HSEL) website, (b) they were physically located within easy commuting distance from my residence and work locations, allowing for sustained visits over the study's five-month duration (though initially important, this reason would later become irrelevant for data collection given COVID-19 lockdowns and the shift to online modes of participation); and (c) they had practice and meeting schedules that did not overlap with each other. For example, the two esports clubs each had their own meeting days, with Play High meeting on Mondays and Game High meeting on Tuesdays and Thursdays. Furthermore, each of the esports clubs' sponsor-teachers had documented their willingness to work with me on this research project in a signed letter of expressed support (Appendix A) in addition to having already welcomed me into their respective esports spaces as a district-approved volunteer.

Conducting this study across two research sites was intended to facilitate the construction of more empirically informed findings by leveraging insights from multiple locations and contexts. These locations varied in relation to, for example, each teachers' years of experience, the students' demographics, general club resources, and the extent of participation in esports activities. These empirically based findings would thus help better inform my interpretations of high school esports sponsor-teachers' and student-

participants' multi and digital-age literacies practices, demands, and perspectives within the rapidly expanding extracurricular phenomenon of high school esports.

I initially identified after-school esports clubs as sites for research in Spring 2019 as part of my efforts in a doctoral research methodology course. I later became a district-approved volunteer at each of these clubs in the spring of 2020. In each club space, one or two sponsor-teachers hosted regular club meetings that typically lasted for one hour, after school had adjourned for the day. These club meetings, much like students' regular class schedule during COVID-19 lockdowns, were carried out online through *Google Meet*—a video-enabled web-based communication that was widely used for remote teaching and learning during most of the 2020-2021 academic year. The exact number of students that attend these sessions across contexts fluctuated from week to week, but were consistently between 8-18 students of various genders, grades (between 9th and 12th grades), and ethnicities. Below, I offer brief descriptions of each of the three different school contexts and populations.

School A: Play High. School A is one of seven schools in its district. It serves 9th through 12th grade by offering curriculum in standard, honors, advanced placement, and dual enrollment/college credit courses. Students are also provided with career-shadowing opportunities, internships, and a personalized learning environment. It has a rating of B according to criteria mapped out in the states' accountability system. It is a Title I school. It serves approximately 1,700 students of which 46.81% identify as Hispanic, 29.76% as White, 10.84% as African American, 4.86% as Native American, 3.33% as Asian, and 1.13 as Pacific Islander.

Teacher 1: Mrs. Kendra at School A. Mrs. Kendra (pseudonym) is a female who has a 27-year career as a teacher, with three of these years at School A. She teaches World History to freshmen as well as World Religions and Psychology to grades 9 through 12. I made initial contact with Mrs. Kendra through her work email. In that email, I expressed my interest in helping contribute to this club as a volunteer while also making clear my interest in more closely studying this esports club for a later study (this current study). Later, I asked Mrs. Kendra to provide her agreement, in writing, to take part in this study and she accepted. Mrs. Kendra said she does not play videogames herself, but she has expressed her familiarity with videogames in general. As one example, she has mentioned that her teenage son is a semi-professional esports player in the game *Call of Duty*. Mrs. Kendra has specified that her perception of esports in her school is that it represents a positive option for students. In multiple conversations with me, she has mentioned individual cases where she has seen students who she described as being typically isolated and with few friends be able to make more and stronger friendships as a consequence of their involvement in this esports club.

Teacher 2: Mr. Andres at School A. Mr. Andres (pseudonym) is a male who has been teaching for five years, with less than one of those years at School A. He teaches Science and Physics classes. He joined the esports club at School A after I had made initial contact with Mrs. Kendra and has been serving as the esports club's co-sponsor alongside her. Mrs. Andres identified himself as a fighting game enthusiast and enjoys participating in related game tournaments and events.

School B: Game High. School B is one of seven schools in its district. It serves students in 9th through 12th grade and offers a college-prep curricular program for

students. It has a rating of B according to criteria mapped out in the state's accountability system. It is a Title I school. The school serves approximately 1,600 students of which 69.61% identify as Hispanic, 12.29% as African American, 7.69% as White, 4.48% as Native American, 2.3% as Pacific Islander and 1.94% identify as Asian.

Teacher 3: Mrs. Abel at School B. Mrs. Abel (pseudonym) is a female who has a 15-year teaching career, with 2 of these years at School B. She teaches Biotechnology, Computer Programming, and Integrated Science. I made initial contact with Mrs. Abel through her work email. In that email, I expressed my interest in helping contribute to this club as a volunteer while also making clear my interest in more closely studying this esports club for a later study (this current study). Later, I asked Mrs. Abel to provide her written agreement to take part in this study and she accepted. This teacher claims to play videogames herself and has expressed familiarity with video and analog games in general. As one example, she described herself as an avid player and collector of tabletop games and classifies them as a main hobby. This teacher has similarly specified that her perception of esports in her school is that it represents a positive option for students. The general profile of the teachers is laid out in table 1.

Table 1

Teacher Participants' General Profiles

Pseudonym	Gender	Subject	Self-estimated Videogame Familiarity
Mrs. Kendra	Female	History, Religion, and Psychology	Low
Mr. Andres	Male	Science and Physics	High
Mrs. Abel	Female	Biotechnology, Computer programming, and Science	High

Focal Student Participants at School B. The focal students for this study were all from School B. This is because School B was the only school in this study that regularly participated in esports activities in a consistent manner for the duration of this study. These focal participants (see Table 2) were all males who had joined the club in August 2020. They were between the ages of 14 and 17 and were in the 9th, 11th, and 12th grades. They held different responsibilities in the club and participated in varying ways, with two being general members, one being a substitute player for a main team, one being a primary player for a main team, and the last one being the treasurer of the club. They reported varying amounts of time spent playing videogames on a given day, ranging from 1-6 hours per day.

Table 2

Focal Student Participants' General Profiles

Pseudonym	Age	Gender	Grade	First Joined Club	Responsibility as Club Member	Self-reported hours/day playing videogames
Cristobal	15	Male	9th	August 2020	General Member	6
Juan	17	Male	12th	August 2020	Treasurer	1-3
Silvio	17	Male	12th	August 2020	Substitute Player	4-5
Jack	17	Male	11th	August 2020	Primary Player	4-5
Carmelo	14	Male	9th	August 2020	General Member	3-4

This qualitative research study is informed by a constructivist epistemology that understands meaning as constructed by human beings within particular social contexts (Crotty, 1998; Kamberelis & Dimitriades, 2005) such as the ones described above. I, therefore, recognize myself as both a research instrument and a constructor of knowledge and meaning (Lincoln & Guba, 1985). Although knowledge about the social world is constructed by and mediated through the researcher (Tracy, 2013), qualitative approaches to research aided me to design this study so that its key aspects (data collection, data analysis, and interpretation procedures) are used systematically and communicated in as transparent a way as possible. It is to these topics that the following section now elaborates on.

Detailed Research Design

To go about this exploration, this research project employed naturalistic (Lincoln & Guba, 1985) and interpretive (Erickson, 1986) methodologies that together prioritized the study of phenomena as they occurred. In doing so, the integrity (Blumer, 1979) of the phenomena under study was preserved as much as possible so that it would remain as it already was rather than altered to accommodate interventions or test "technical instruments" (Blumer, 1969, p. 152). As such, the research design was influenced by the work of scholars who have framed naturalistic inquiry as striving to "remain true to the nature of the phenomena under study" (Matza, 1969, p. 5) and valued getting "close to the people", thus understanding that "actions are best comprehended on the spot—in the natural, ongoing environment" (Schatzman & Strauss, 1973, p. 5). However, I acknowledge—as Athens (2010, 1984) and Matza (1969) have noted—that conducting a *perfectly* naturalistic study is impossible because, among other reasons, naturalistic inquiry is a matter of degree where one cannot completely "achieve" total naturalistic insight. In other words, such inquiry is not a duality where one can either completely succeed or otherwise completely fail at performing a naturalistic study.

This study is influenced by interpretive and naturalistic approaches to research, which refer to the family of research methods that includes, for example, ethnography and case study research but avoids the methodological specificities of either. Instead, such research speaks to the "family resemblance among the various approaches" (p. 119) when researchers seek to understand how humans make meaning within social and cultural contexts. According to Erickson (1986), interpretive research enables the researcher to construct an understanding of research contexts as social communities, as

well as gaining insight into the "meaning-perspectives" (p. 120) of the social actors. Additionally, according to Lincoln and Guba (1985) naturalistic inquiry stresses an emic approach to understanding that relies on in-situ methods to generating knowledge claims.

However, this study is also informed by the notion that "a 'correct' interpretation of meaning is forever elusive because an infinite number of interpretations, based on differing 'contextual assortments,' are possible" (Holt, 1991). This means that I acknowledge that there is neither an inherent "truth" that I am uncovering with these methods nor that the use of such methods alone is sufficient to claim total accuracy in my interpretations. Rather, because "the objective of all research is to produce … knowledge-*claims*" (Hunt, 1989, emphasis added), I layout my methodological approaches and methods to justify such claims to knowledge.

These methodological approaches are used not to claim "correct" insights but to bolster the trustworthiness of my knowledge-claims, where trustworthiness refers to the credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985) of findings. To build such trustworthiness, my methods employed tools such as sustained engagement with the context and its actors, persistent observation, use of several data to approximate triangulation across sources, regular interaction, member checks, and reflexive journals.

Thus, this project leveraged a combination of approaches that span across methodological specificities such as qualitative, ethnographical, and case study work that allow researchers to understand how humans make meaning within social and cultural contexts as social actors.

The social actors were the teacher-sponsors and student-members as they interact in the context of their extracurricular esports club as well as myself as the researcher as participant. This study leveraged observational, interview, and artifactual collection through multi-modal recordings (e.g., audio, video, and screen captures) of the goings-on of the associated activities in these contexts for approximately five months. The next section elaborates on the process of data collection.

Data Collection

Qualitative data collection is often iterative and inductive; for this reason, it is important to have a structured design approach to ensure collection of quality data that matches the goals, contexts, and realities that shape a given project (Ravitch & Carl, 2015). Data for this study were collected over the course of approximately 5 months, from September 2020 to February 2021. During this time, I joined the online meetings and play/practice sessions of the two participating esports clubs in my dual role of researcher and participant. These play/practice sessions were largely held on a regular basis, on predetermined days (either Mondays, Tuesdays, and/or Thursdays). This resulted in seven visits for School A and 25 visits for School B, for a grand total of 32 visits across both sites. I remained in each club's meetings and practice session for their entire durations, which usually ranged from roughly 30 minutes to 120 minutes. These resulted in roughly 53 hours of virtual presence across all visits to meetings. This was in addition to the in-game time spent as a volunteer coach, plus the semi-structured and unstructured interviews.

Data Sources

In order to provide insight into the research questions posed in this study on literacy practices, literacy demands, and literacy perspectives, I leveraged three main categories of qualitative data for collection and subsequent analysis. These data were in the form of observations, interviews, and collected artifacts (see Table 3).

Observational data. Observational data were collected during each club's meetings held through *Google Meet*. Observations were recorded by using an observational protocol (Appendix B) on my laptop computer. In addition, I recorded field logs for each visitation as part of these observations immediately after each meeting. I used in-session observations and notes as well as post-session annotations to compose sets of field notes that informed the development of analytical memos reflecting various "rich points" (Agar, 2006) that I identified throughout this process. I elaborate below on the most salient ways that I collected and made sense of observational data.

Table 3

Mapping Research Questions to Data Sources

Research Question	Data Sources
1. What digital-age multiliteracies **practices** are students and the sponsor-teacher enacting when participating in high school esports activities? **2.** How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies **demands** of participating in high school esports?	Observation - Reflexive Journal - Field Jottings/Notes - Analytic Memos Interview - Semi-structured - Unstructured/informal
3. How do students and the sponsor-teacher construct and characterize their respective literacy **perspectives** on their experiences as part of the high school esports club?	Interview - Semi-structured - Unstructured/informal Artifact Collection - Copies of printed materials (e.g., logos, schedules, rules)

Reflexive Journal. An important tool to aid my observational data construction was the use of the reflexive journal (Lincoln & Guba, 1985). This type of journal served as a way to conduct ongoing, real-time chronicling of my reflections, questions, and ideas over time and were useful for in-the-moment meaning making and charting of ideas, thoughts, emotions, and concerns. Following the advice of Emerson et al. (2011) and in line with Lincoln and Guba (1985), my reflexive journal contained in-process memos that I constructed to document my thinking, the ideas taking shape, and any connections or patterns I began to piece together. This journal also contained a section that detailed my daily schedule throughout the study, a summary of that day's visitation, and my research

activities (Lincoln & Guba, 1985). Some (e.g., Ravitch & Carl, 2015) state that such journals are a recommended qualitative research tool due their affordances for providing ongoing and structured opportunities to develop and deepen one's thinking in relation to many aspects of the research.

Field Jottings/Notes. During each practice session I observed and/or participated in, I recorded digital jottings (Emerson et al., 2011) on the observable (inter)actions of the participants, including the sponsor-teacher. These jottings were my written documentation on participant observation. This means that I captured fragments of what I observed transpire in the form of—for example—brief descriptive phrases, snatches of conversation, and brief verbal portraits of participants. Following the advice of Lincoln and Guba (1985) as well as Merriam and Tisdell (2016), the observation protocol contained space to record my thoughts, impressions, and ideas.

Analytic memos. A key aspect of my data collection and analysis was the composition of analytical memos. These memos are distinct from field notes in that field notes are the documentation of observation while memos are the researcher's written reflections on the study's codes/themes and other complex meaning patterns in the study (Saldaña, 2016). These memos are "sites of conversation with ourselves about our data" (Clarke, 2005, p. 202). I composed analytic memos iteratively during and after each visitation as well as for other types of data, such as interviews. This is because, while analytic memos are indeed a way to analyze collected data, these are also data unto themselves and, as such, can be coded (Saldaña, 2016, p. 44-45).

Interview data. Interview data was collected through unstructured and semi-structured forms. I created my interview instruments by adapting existing interview

questions offered by previous qualitative work in esports (e.g., Freeman & Wohn, 2017) as well as tailoring my own interview questions as they are relevant to my research questions.

Unstructured Interviews. These are also known as informal conversational interviews, non-standardized interviews, and ethnographic interviews (Wildemuth, 2017). I made the decision to employ unstructured interviews in my study because they are in-line with my interpretive paradigm and constructivist epistemology. Further, Patton (2002) described unstructured interviews as a natural extension of participant observation because they occur as part of any ongoing participant observation fieldwork. These unstructured interviews occurred informally in an impromptu fashion with students. These occurred, for instance, between practice matches while students were waiting for other members to arrive at practice, and during the regular meetings of the club. The topic of conversation in these unstructured interviews varied, but always focused on some occurrence that prompted interest in relation to a research question or a rich point such as when players analyzed a recording of a pivotal moment from a previously recorded match. These viewings, for example, could be of their own live stream on *Twitch* but it could also be of other videos on *YouTube*. Another example was when students were discussing an idea for a team logo and engaged in deliberations about justifying reasons to make and/or edit the logo. Each of these carried potential insights regarding students' literacy practices, demands, or perspectives. These interviews were not audio recorded due to their impromptu nature, but I took written notes that included brief descriptive phrases and snatches of conversation both during and after they occurred.

Semi-Structured Interviews. For semi-structured interviews, I prepared and used an interview guide for use with students (Appendix C) and teachers (Appendix D). In the course of such interviews, however, I was able to adjust the sequence of the questions and to add questions based on the context of the participants' responses (Wildemuth, 2017). I considered these semi-structured interviews as purposeful conversations (Skopec, 1986) and conducted them only with five focal students and each of the three sponsor-teachers on a pre-scheduled time and date. Each semi-structured interview lasted for roughly 35 minutes and included questions such as, "Tell me about your involvement in the esports club?". All of these interviews with focal students and sponsor-teachers were audio recorded through *Zoom's* cloud recording feature. I also recorded my immediate thoughts and reactions in the form of field notes and post-session annotations that comprised part of the sets of field notes and analytical memos. The focal students were from the same club for two main reasons: (a) they were part of the same team that played games together and (b) the other club encountered difficulties to form consistent teams and hold regular meetings. I chose to select focal students because collecting and analyzing in-depth data from each of the current and predicted incoming participants at each club would be unmanageable for this project's constraints and unrelated to its goals.

Original selection criteria for focal students included drawing a representative mixture of varying degrees of social positionalities that include their experiences/roles in the esports club, gender self-identifications, grade-level, and involvement in club leadership (i.e., club leaders such as a president as well as tangentially participating members). I originally intended to determine these criteria by using a brief survey that asked students for this information so that I would then make purposeful selections and

extend invitations to be focal participants. However, few students ultimately expressed interest in forming part of the study as a focal participant and, therefore, the five focal students represent the totality of all students who agreed to be focal participants so no further selection was made.

Artifactual Data. Artifactual data was collected whenever topics related to the esports club were discussed or visual elements shown during the club's meetings and/or practice sessions. Such moments primarily included times when someone "screen shared" a number of multimodal artifacts through *Google Meet*. These artifacts were collected as either a screen capture or as a separate file that the sponsor-teacher sent directly to me upon my request. Researchers who conduct studies in classroom contexts may benefit from collecting documents that include (but are not limited to) instructors' lesson plans, learning resources, and student assignments (Merriam & Tisdell, 2016). Due to the extracurricular nature of the esports activities, the artifacts did not include these mentioned by Merriam and Tisdell, but instead consisted of printed and/or digital materials relevant to the esports club such as team logos, practice schedules, codes of conduct (i.e., rules), strategy sheets, reaction time data, among others. Collecting such artifacts helped establish assertions regarding participants' digital-age literacy practices, demands, and perspectives as made visible by such artifacts.

I used my coding of the data to construct what some (e.g., Janzen, 2005) have called *ethnographic snapshots*—shorter-than-traditional ethnographic studies that nonetheless permit rich description and analysis of participants. These snapshots are gathered within a designated amount of time, unlike traditional ethnographies that take on a more anthropological approach and necessitate the "involvement of a researcher over a

lengthy period of time (typically unspecified)" (Van Maanen, 2011, p. 2). These snapshots reflected the multiliteracies of high school esports participants and were created through the simultaneous collection and analysis of data over the specified five-month period. Although this is a shorter time span than traditional ethnographies, specific components of this study's design such as including multiple research sites, combination of data collection processes (observations, interviews, artifacts) and analysis methods (phenomenological, constant-comparative) helped approximate the goal state of reaching saturation.

Data saturation is generally a criterion for discontinuing data collection and/or analysis in qualitative data (Saunders et al., 2018). In their critical overview of uses and conceptualization of saturation, Saunders et al. found that there are four models of saturation in much work that each employ the term in varying ways (theoretical saturation, inductive thematic saturation, a priori thematic saturation, and data saturation). In this work, I refer to saturation as meaning both data saturation where no new information continues to become apparent from collected data and inductive thematic saturation where identification of new codes or themes almost ceases. Fusch and Ness (2015) overview that saturation may be reached through multiple ways, such as having "enough information to replicate the study (O'Reilly & Parker, 2012; Walker, 2012), when the ability to obtain additional new information has been attained (Guest et al., 2006), and when further coding is no longer feasible (Guest et al., 2006)" (p. 1408).

I used ethnographic snapshots within a phenomenological approach to explore the engaged-in activities and their implications for participants' digital-age practices, demands, and perspectives.

Data Management

I constructed a network of password-protected folders on the cloud-based storage service provided to me by my university. Any data generated as part of these folders were automatically saved to the cloud-based, password protected service. I created a summary for each day as well as identified it with the date of data collection. This data organization strategy enabled me to access and view my data in chronological order while maintaining an always-updated version in the cloud, which safeguarded against any local hardware failure and ensured no loss of data under such potential failures.

I also collated my data (e.g., fieldnotes, observations) into a single document so they could be read uninterrupted in order and easily searched. This same document also contained the digital screen captures of artifacts taken throughout the study. Additionally, I collated the written interview transcripts into another chronologically sequenced document. I assembled the contents pages for each day so that my library of data could be accessed in one document. Following Bazeley's (2013) suggestion, I noted keywords or codes that identified important elements of each piece of data. These keywords represented the initial ways in which I started to link data segments and make my data more searchable.

The analysis of such rich qualitative data collected over a five-month period informed the resulting framework and helped expand my understanding of the digital-age literacies that are "in play" within the growingly popular phenomenon of high school esports. The following section details the analysis of the collected data.

Data Analysis

The notion of the "inseparability of methods and findings" discussed by Emerson et al. (1995) helps highlight how all aspects of the qualitative research process are connected. As such, I do not see data collection and analysis as two separate phases in the research process. Instead, I see them as iterative and integral to all aspects of my research design. This design involves simultaneous "collecting and analyzing data, developing and modifying theory, elaborating or refocusing the research questions, and identifying and addressing validity threats" (Maxwell, 2013, p. 2). As a result, I align this project with others' (e.g. Hammersley & Atkinson, 2007; Maxwell, 2013; Robson, 2011) notions of research as being designed (or pre-planned) but also acknowledging that this design remains fluid, flexible, interactive, and reflexive. As such, my data analysis connected (and reconnected) the dots between all of the intersecting data sources, inductively developing assertions from the corpus of data.

This study was grounded in an interpretive and naturalistic framework that constructed credible and trustworthy summary statements based on confirming and disconfirming evidence in the data corpus. To build such trustworthiness, my methods employed tools such as sustained engagement with the context and its actors, persistent observation, use of several data to approximate triangulation across sources, regular interaction, member checks, and reflexive journals.

Additionally, this analysis employed a phenomenological approach that helped describe "the common meaning for several individuals of their lived experiences of a concept or phenomenon" (Creswell, 2013, chap. 4, sect. 2). My analysis focused on cutting across and holistically leveraging the collected observational, interview, and

artifactual data to make claims about high school esports student-members' and teachers-sponsors' literacy practices, demands, and perspectives.

As suggested by Saldaña (2016, p. 21), I coded *as* I collected data as opposed to when all fieldwork had been completed. Regarding the amount of data to code, per Saldaña's recommendation, I began by coding "anything and everything" (p. 18) that was collected by way of observations, interviews, or artifacts. However, again following Saldaña's recommendation, through my continued (re)coding, I strived to "code smart, not hard" (Saldaña, 2016, p. 18) by discovering from experience and continued exposure "what matters and what does not in the data corpus" (p. 18). Similarly, I followed Emerson et al.'s (2011) list of questions to consider when coding that includes: "What are people doing? How do members talk about, characterize, and understand what is going on? How is what is going on here similar to or different from, other incidents or events recorded elsewhere in the fieldnotes?" (p. 177).

To these ends, the initial analytical process that guided this project was a constant-comparative approach to coding transcripts, field jottings, field notes, and analytic memos (Straus & Corbin, 1998). This served to construct in-process assertions about the collected and analyzed data that would later be re-examined and rephrased so that new and potentially disconfirming data was collected and analyzed. Thus, the in-process assertions were under constant revision spurred on by newly analyzed data.

Coding Procedures

As Tracy (2013) observed, data management and organization impact how qualitative researchers approach coding. I chose to organize my data chronologically to allow an analytical approach that followed the developing paths of the esports club's

meetings and events. I sequenced my data from the first day of field work to the last, engaging in first-cycle coding and then transitioning to second cycle coding.

First Cycle Coding

Miles et al. (2019) describe first cycle coding as codes that are initially assigned to the data. They describe four elemental methods that serve as a foundation for such first cycle coding: Descriptive, In Vivo, Process, and Concept Coding. I proceed to describe my two chosen methods from these four: Descriptive and In Vivo.

Descriptive Coding. I engaged in first cycle coding in the form of descriptive or open coding (Miles et al., 2019; Saldaña, 2016) to identify what I deemed as pertinent points of interest or "key moments" (Sullivan, 2012) within all data sources. Descriptive coding is used to summarize the basic topic of a passage or event in qualitative data (Miles et al., 2019, p. 65). Examples of such codes in this work are "Belonging", "Competition", and "Scholarship" (see Table 4). I chose descriptive coding as a first cycle approach because of its ability to provide a useful inventory of topics for indexing and categorizing, which, as Miles et al. (2019) describe, "is especially helpful for ethnographies and studies with a wide variety of data forms (field notes, documents, artifacts, etc.)" (p. 65).

Table 4

Examples of Descriptive Coding

Descriptive Code	**Data and Data Source**
Belonging	"I feel like having that will give us a sense of actually being part of a team because, like, how other school teams have like football jerseys or like baseball jerseys and I feel that makes them feel like a whole team. It makes them feel really good about being part of the team. And having something that represents that they're in the team" (***Interview—Juan***)
Competition	"We could have a little competition for reaction times, cause I know we're on the competitive side here" (***Conversational Snippet—Mrs. Abel***)
Scholarship	"...esports is a way to take your personal pastime of gaming and that interest that you have of gaming and turning it into a team sport in which you can earn college money (***Interview—Mrs. Kendra***)

In Vivo Coding. When coding direct speech (fieldnotes) or participants' transcribed words (interviews), I also used in vivo coding (Saldaña, 2016). In vivo coding helps "prioritize and honor the participant's voice" (Miles et al., 2019, p. 65), therefore preserving salient phrases that the participants used. I chose this as a first cycle coding method because it would help alert me to language that participants repeatedly used while offering insight into their values towards the topic at hand. Examples of such in vivo codes in this work included "safe space" and "critical thinking".

Second Cycle Coding

Miles et al. (2019) describe second cycle coding (or pattern codes) as a way of grouping the first cycle coding applications and grouping them into "smaller *categories, themes,* or *concepts*" (p. 79). As such, as I moved through the data sources and first cycle codes, I began to engage in pattern coding as a second cycle coding approach. The purpose of such second cycle coding is to "identify a 'bigger picture' configuration" in the data by summarizing it into categories or themes, causes or explanations, relationships among people, and/or concepts or theoretical constructs (Miles et al., 2019, p. 79).

These pattern codes largely revolved around my research questions' foci on digital-age literacy *practices*, *demands,* and *perspectives*. As such, I formed three larger conceptual bins (Tracy, 2013) based on these three words in MAXQDA into which I placed previously coded data. These conceptual bins form the basis of my findings and will be explored in greater detail in Chapter four, where I offer narrative descriptions of the results of my coding.

I engaged in this pattern coding to relate codes to each other, helping build a framework of relationships (Strauss & Corbin 1998) that relate concepts and fine-grained codes to one another into broader terms. This coding process was intended to, as Saldaña (2016, p. 14) illustrated, help me move from the "real" to the "abstract" or from the "particular" to the "general" regarding my research questions as they are mapped to the collected data. This process guided me in working through multiple data sources that could be coded with multiple labels, as it provided more of a focal point for developing further analysis. Throughout this process of second cycle coding, I organized broad

categories that formed the basis for my assertions with regards to high school esports participants' literacy practices, demands, and perspectives.

Constructing Assertions

Following Erickson (1986) and Miles et al. (2019), as my study progressed and as I analyzed my data, I began formulating and generating assertions that might later form the basis of my findings chapter. Miles et al. (2019) define an assertion as "a declarative statement of summative synthesis, supported by confirming evidence from the data and revised when disconfirming evidence or discrepant cases require modification of the assertion" (p. 93). These assertions indicated the findings likely to be generated through my study and spoke to the major patterns and themes I have constructed through data analysis. Analysis of all collected data was intended to cut across sources to meaningfully draw out potential areas for deeper inquiry while addressing the research questions. I formed and reformed these assertions during and after data collection and analysis. My assertions are organized around my three research questions that each focus on digital-age multiliteracies practices, demands, and perspectives.

Computer Assisted Qualitative Data Analysis Software

I used MAXQDA (VERBI Software, 2020) as a computer assisted qualitative data analysis software to help me code my data. As Bazeley (2013) argued, software enables the researcher to search for segments of coded data while maintaining access to the segment in the context of its original representational source. The software also offered me a range of ways to link, display, and play with the organization and categorization of the codes I generated. Additionally, MAXQDA provides code-memoing tools that permit researchers to create and maintain a codebook.

Researcher's Role and Positionality

Every person carries a simultaneous mixture of identities and positionalities. As a result, the individual researcher's point of view (i.e., these simultaneous identities and positionalities) has an impact on any produced knowledge, affecting *what* is known and *how* it is known. These points of view or "gazes" (Anderson et al., 2016) "work to construct meaning based on a number of simultaneous socially situated positions in time and space from which we make sense in relation to other positions, both embodied by others as well as imagined" (p. 398). In qualitative research, the relationship between the researcher and the researched is key (Creswell, 2013; Maxwell, 2013). For these reasons, and in line with Berger (2015), I proceed to examine some of my simultaneous identities and positionalities in the context of these esports clubs and my research.

Before my study began, and throughout its duration, I served as a district-approved volunteer at the clubs. When the clubs physically met in person before COVID-19 lockdowns, my visitations to the school esports clubs included helping prepare the rooms before and after the sessions and meetings as well as aiding the sponsor-teachers in their general club duties such as taking attendance. When these responsibilities shifted to online modalities after the COVID-19 lockdowns, my involvement similarly shifted to mostly serving as a coach to the students in some of the games they often played. Given my position as a district-approved volunteer, I also helped with general setting up and troubleshooting of participation issues, game sessions, as well as brainstorming sessions for club issues such as the design of funding activities.

As a result, my role was one of a *participant as observer*, which Kawulich (2005) describes as a stance in which

> the researcher is a member of the group being studied, and the group is aware of the research activity. In this stance, the researcher is a participant in the group who is observing others and who is interested more in observing than in participating, as his/her participation is a given, since he/she is a member of the group (n.p.)

Recognizing such a researcher role is crucial because, as qualitative researchers suggest (e.g., Merriam, 1998), the concern should not be *whether or not* the process of observing impacts the situation or participants, but *how* the researcher accounts for those effects in explaining the data. The combined roles of participant and observer is similarly important because simply observing without participating in the action may not lend itself to one's complete understanding of the activity (Merriam & Tisdell, 2016). My participation as a coach opened greater avenues for understanding of the activities associated with high school esports.

In addition to my researcher role, acknowledging my positionality is also important. I am myself an avid videogamer and have made this identity clear in each esports club. I consider myself knowledgeable in general matters of videogames and strived to make myself especially knowledgeable in the game titles that the esports clubs played and practiced. As such, students regularly consulted me “on the fly” about specific game topics such as character matchups for an upcoming match or game-related lore, curiosities, and debates. This positionality has helped boost and maintain my rapport with participants, especially the students.

Another relevant aspect of my positionality in relation to these clubs is that they are contexts predominantly occupied by males, exemplified by my focal student participants all self-identifying as male. Given my own identity as a videogaming male, I

believe my work benefitted from a general "normalness" of being "one more guy" as I participated in the club's goings-ons.

Given how the agile reflexes necessary for high-level esports competition is generally considered to diminish around the age of 25, "retiring in the mid-twenties is the norm in esports now–and has been for some time" (Sacco, 2015, np). Given how I am past the mid-twenties age range, I was likely perceived as being past my physical prime for competing in high levels of esports. Because of this, students likely did not perceive me as a player but more so as an advisor or mentor—one who was able to teach, but not as able to "do". This might have interacted with my earlier statement about being a participant as observer in the form of cementing my role as a verbal coach *around* the games more-so than a sparring opponent *within* the games.

Additionally, given my ethnic identification as latino and having my primary language as Spanish, I was likely better positioned than I would be otherwise have been to establish linguistic connections with many of the potential participants, as the clubs are located in schools with high percentages of latino/hispanic students. This same identity likely presented different interactional dynamics with those students whom I did not share these linguistic identities. To clarify, I initiated interactions with all participants in English and continued doing so with the intention of potentially switching to Spanish only if they requested me to respond in Spanish or if I knew they preferred to interact in Spanish. Such language shifts to Spanish did not occur at any moment in this study. However, suspecting that this linguistic switch could have helped some students "open up" more should they not be confident in communicating in English, I made it known that I also spoke Spanish in addition to English.

Surely there was a confluence of other positionalities playing out during my interactions with participants. Given the sample of relevant positionalities above, however, I acknowledge that the stories of those I studied represent an interpretation of myself as much as the subject and I have made an effort to bring this to bear on any resulting conclusions and analyses.

Ethical Considerations

This study was conducted under the written and expressed approval of multiple stakeholders such as an Institutional Review Board (IRB) (Appendix E), the school district office, and the participating teachers. Confidentiality of all participants was maintained by creating pseudonyms and masking identifiable information such as specific locations or school names. I also created a spreadsheet that held participant pseudonyms for use within the data analysis and reporting. This spreadsheet contained information indicating parental permissions and assent permissions and was stored on a password-protected cloud-based storage.

CHAPTER 4
FINDINGS

In this chapter, I lay out the results of my data analysis processes in the form of assertions (Miles et al., 2019), which are supported by evidence stemming from all sources of collected data. These assertions help address my overarching research question: *How are digital-age multiliteracies taking place in high school esports contexts?* by specifically forming assertions about my individual research questions: (1) *What digital-age multiliteracies **practices** are students and the sponsor-teacher enacting when participating in high school esports activities?* (2) *How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies **demands** of participating in high school esports?* (3) *How do students and the sponsor-teacher construct and characterize their respective literacy **perspectives** on their experiences as part of the high school esports club?*

By analyzing my corpus of data across two coding cycles, I developed six total assertions, two for each of my research questions. First, I explore the digital-age literacy ***practices*** with digital technologies, platforms, and programs in high school esports and how they (a) were used to engage in communal and competitive ways and (b) explain how these literacy practices were frame as contributing to scholastic (or academic) purposes, despite taking on a primarily social function. Second, I examine the digital-age literacy ***demands*** and how these centered around (c) timely and unambiguous multimodal communication and (d) the multidimensional fluencies between what is *on* and what is *around* the screen. Third, I describe the digital-age literacy ***perspectives*** and how these center on (e) multifaceted senses of belonging, building safe spaces, and engaging in

critical thinking and (f) how esports participation contributes to students' post-high school futures and health.

Literacy Practices

In the context of this study, a literacy *practice* (Lankshear & Knobel, 2011; Street, 1988) foregrounds the ways that participants appear to engage in multi- and digital-age literacies. In this regard, literacy practices, as Lankshear and Knobel explored, are the kinds of multimodal things people (can) do in the digital age with digital technologies of which a non-exhaustive list includes blogging, making or remixing music, editing wiki sites, photo or video sharing, and social networking of many kinds. In addition, these practices are, as Street elaborated, "aspects not only of 'culture' but also of power structures" (p. 60). That is, how these practices take on meaning for those who engage in them is always dependent on the (un)stated ideological conceptions and values of their societies.

To address my first research question: *What digital-age multiliteracies **practices** are students and the sponsor-teacher enacting when participating in high school esports activities?* I draw holistically from my data sources to develop two assertions:

Assertion 1: Amidst a period of online-only interactions resulting from the safety procedures associated with the COVID-19 pandemic, participants' literacy practices involving digital technologies (e.g., computers, mobile devices, videogame consoles), platforms (e.g., *YouTube*, *Twitch*), and programs (e.g., paint, specific videogames) were used to engage with each other in communal and competitive ways.

Assertion 2: Despite teachers framing and presenting the literacy practices of esports clubs to stakeholders (e.g., school administrators, parents) as contributing to

scholastic (or academic) purposes, students illustrate that the social functions of esports' literacy practices take precedence over scholastic goals.

Assertion 1: Engaging with each other in Competitive and Communal Practices

Drawing from frames of affinity spaces (Gee, 2004) that recognize that interest-driven endeavors have different routes to participation and ways of gaining repute, high school esports similarly allow for multiple forms of participation from those involved. These include participation that involves the principal activity of playing videogames, but also other observed activities such as organizing and managing team schedules, administering and raising funds, designing and revising team logos, coaching, and "hyping" (i.e., motivating) each other in different ways (***fieldnote***). Such varied ways of participating were observed daily as well as discussed during semi-structured and unstructured interviews with students and teachers. One teacher described the multiple ways in which they saw and encouraged students to participate as:

> at the beginning, it was a lot of official discussion of things, what kind of projects they wanted to take care of, how they were monitoring themselves and each other in order to improve because some of the kids were organizing outside of school to, like, play *League of Legends*. You would have the people who are a little more proficient at the game, kind of, give their own little lectures on what are some things that people could do to overcome certain boundaries. It was, like, 'Oh, I want you to be looking at your map a little more often. I want you to be living on this map. Try to focus on doing these many actions and clicking this many times. Always being aware of your positioning and discussing particular ways in which you can move your waves and particular ways in which you can do this or that' (***Interview—Mr. Andres***)

Similarly, other teachers commented on the varied ways students contributed to the team dynamics by "having team captains and helping them [other team members] learn how to communicate and interact" (***Interview—Mrs. Abel***). Additional ways of legitimate participation included general "moral support" as an audience member or spectator,

which was described as “hyping each other up” by one teacher: “If people were not playing and people would just be socializing or like watching games, kind of like hyping each other up, just a party in there, like, ‘Let's watch the game. Let's shout. Let's get hyped’” (***Interview—Mr. Andres***).

Due to COVID-19 health and safety restrictions, however, these “hype” activities and other ways of participating in high school esports were limited to those rendered possible by online interactions that exclusively took place through digital technologies (e.g., computers, mobile devices, videogame consoles), platforms (e.g., *YouTube*, *Twitch*, *Discord*), and programs (e.g., *paint*, specific videogames) to engage with each other. These different ways to engage with each other helped me interpret the phenomenological reality of high school esports as being a communally and competitively oriented collection of multiple digital-age literacy practices.

Communal. Participating in esports was consistently described by all participants—student-members and teacher-sponsors—as a community-oriented activity. Such activities varied in terms of their interactional form (i.e., different digital technologies, platforms, programs), but they all largely had the same purpose: to build community. For instance, ***Silvio***, a student, explained that participating in esports was:

> a good thing to do because now that other sports are gone, well, not completely gone but not as interactive as before because we have to social distance, it's a way of helping build community, in a way, because you're still having to talk to somebody and like basically plan stuff out together (***Interview—Silvio***).

Mrs. Abel, a sponsor-teacher, remarked that one of her major goals was to help students learn to switch from “the mindset of … ‘you against them’, at least when it comes to the team. It becomes more of a ‘let's build our skills together, you help me build my skill and

I'll help you build your skill'" through the esports team's interactions (***Interview*—*Mrs. Abel***).

These esports interactions involved practices that were largely "multimodal by default" (***fieldnote***) because of the nature and simultaneous interactional possibilities of the technologies used. For instance, interactions that were part of the esports club were oftentimes simultaneously carried out across platforms and technologies such as the party voice-chat feature of videogame consoles *while* playing specific videogames (e.g. *Tom Clancy's Rainbow Six Siege*) in addition to communication platforms such as *Discord* where text, images, and voice can be easily shared in groups or one-to-one interactions. The importance of the multimodal nature of these interactions was characterized by students as essential for the competitive purpose of the club but also for the communal goals of helping "socialize and interact with others" (***Interview*—*Jack***).

These communal engagements were also evident in other ways with platforms such as *YouTube*, which teachers encouraged students to leverage for both their portfolio construction as esports players (a topic I elaborate on in answering RQ3), but also for engaging with others outside the club and building "expanding communities" (***fieldnote***). For example, students uploaded videos to *YouTube* that contained their matches—sometimes in their entirety but other times were shorter highlight reels—and shared links to these videos on *Discord*. These videos served multiple purposes, such as being artifacts leveraged for attaining asynchronous feedback and criticism from other members and coaches in the club (see Figure 3), as well as serving as a way to connect with friends and other interested teachers (see Figure 4) in addition to people outside of the club

space, such as relatively famous personalities in the esports and gaming world (see Figure 5).

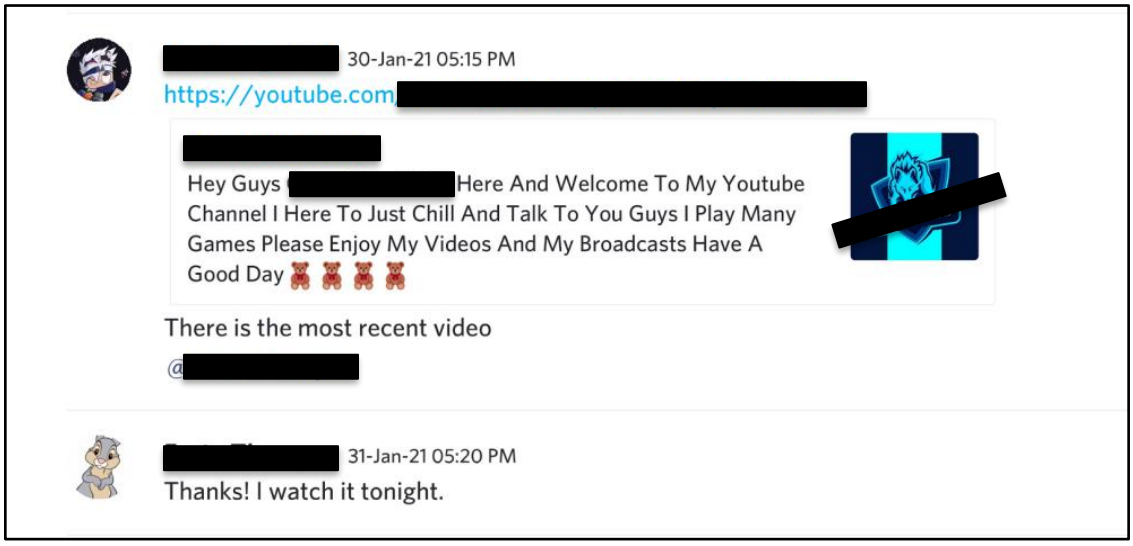

Figure 3. A student-member of the esports club shares links to their *YouTube* channel while a volunteer coach acknowledges the video and makes plans to watch it.

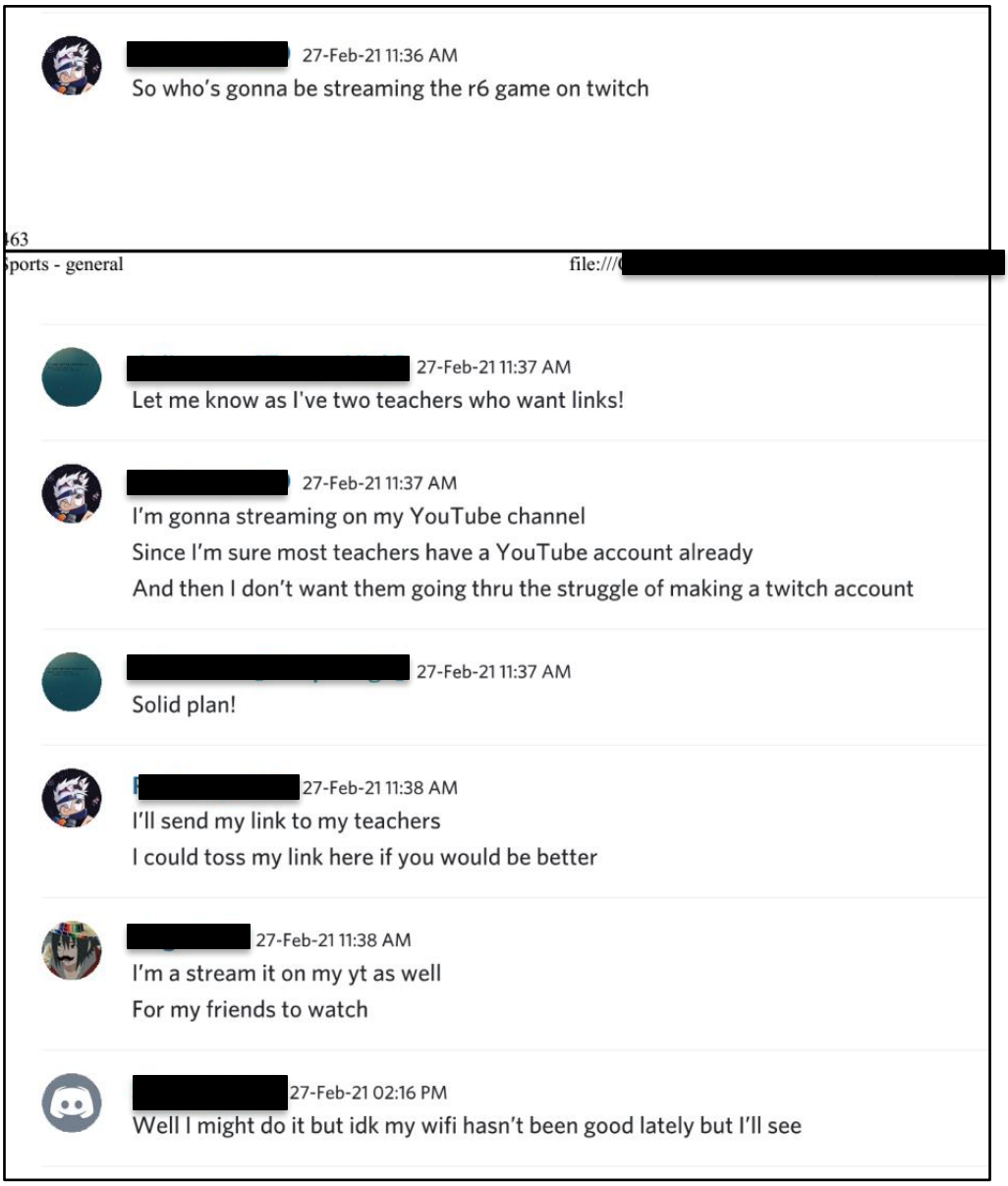

Figure 4. Student-members and the sponsor-teacher making plans to share upcoming matches over the internet by live-streaming so that other interested teachers can watch them

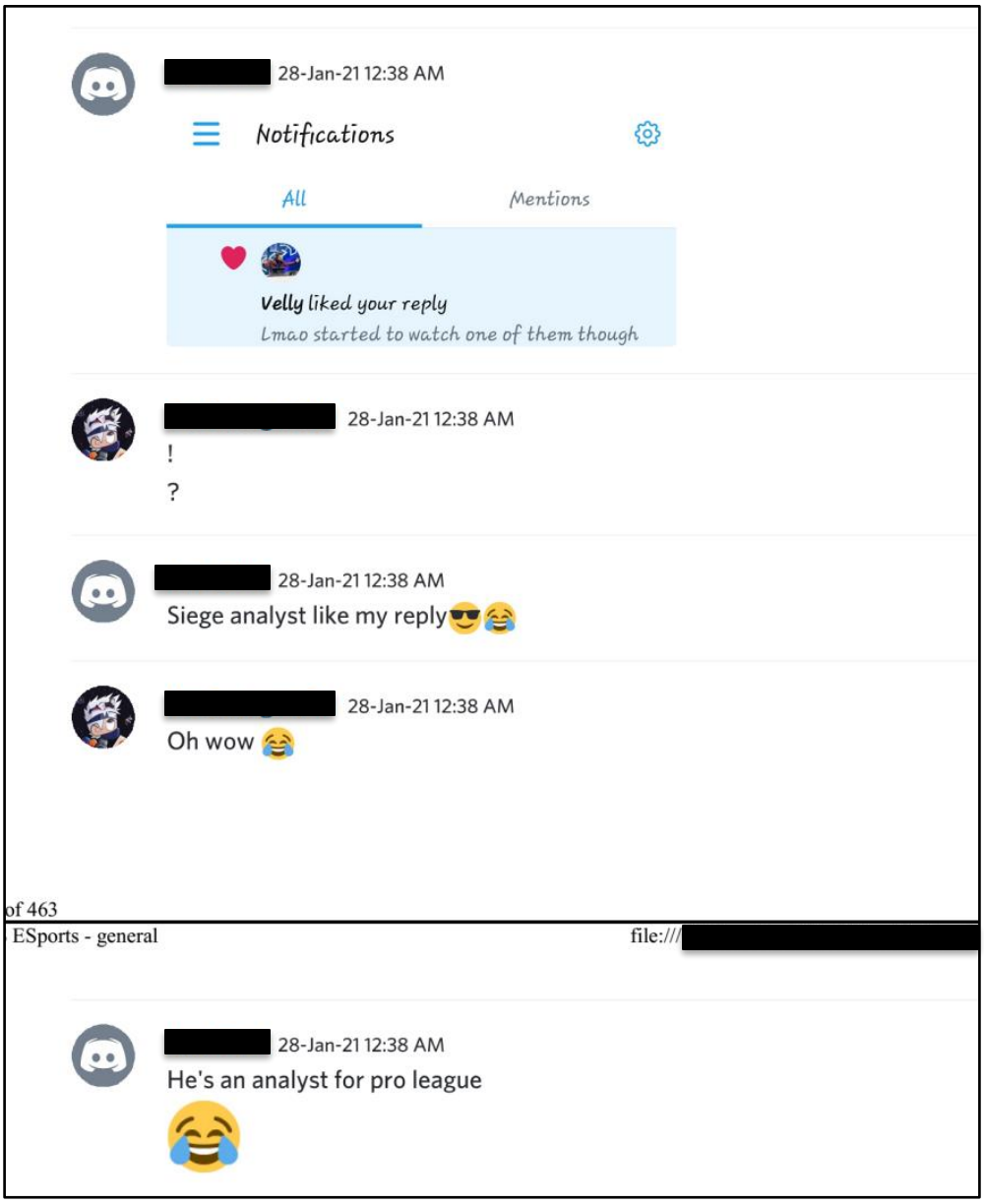

Figure 5. Screenshot of one student-member sharing news that a recognized analyst for the professional league of Rainbow Six Siege has interacted with their content.

Other students similarly described the richly multimodal nature of their interactions. One student remarked that "just the fact that you're interacting, like, it doesn't have to necessarily be talking. It could be like just movements in the game that

you do" (***Interview—Silvio***) while others justified the importance of these multimodal interactions as "you need to communicate, participate, and really work together, plus trust your teammates that they have your back" (***Interview—Juan***) and that "there's sometimes things that you do that could help somebody else out in the game and there's things that they could do to help you bond" (***Interview—Silvio***). Students expressed similar opinions about the community-building purpose of esports through varying means such as with videogame consoles: "typically I've been using my own [videogame] console to communicate with my friends when, you know, I can't get in touch…. I just turn on my console and see them there and I'm able to talk to them (***Interview—Juan***).

Such community-building goals and practices were important because, as teachers and students alike expressed, players need to build trust with each other in multiple ways (e.g., playing, communicating) in order to be effective when competing against other teams and schools: "Getting to know them personally … you can see how they are as a player because that can give away how they're going to be or how they're going to play" (***Interview—Juan***). On multiple occasions, students and teachers expressed that getting to know each other through scrimmages—which are simulated games—"reduces the pressure environment, while still learning how other people play….It's very coordinated and learning how to do that is something we're all building" (***Interview—Mrs. Abel***). Thus, multimodal interactions were crucial for building trust and communal relationships among high school esports participants.

Although building such trust was important, it was also an especially difficult goal to achieve because of the exclusively online nature of all interactions during the school year that was the result of COVID-19 safety protocols. These online interactions

were perceived to heavily constrain the opportunities to interact both *during* and *around* class and club time. As one student put it, building communal relationships with others during brief and informal interactions in face-to-face contexts were lost because "you can't really talk to others in your *Google Meet* or *Zoom* meeting, you know, because it's a classroom as a whole, so you can't really talk to anyone directly unless everybody else is listening to you" (***Interview***—***Silvio***). As this same student also elaborated, the esports club's multimodal and online interactions appeared to provide relief from such constraints of not being able to talk face-to-face with others during and around class time:

> here in the club, once we get out of the meeting, you're able to talk to the others personally if you want, through your console, through your PC, or however you're playing. Like even in-game, you could talk to them. And, well, that's something that's important and valuable because, I mean, it's also time that you can talk to others (***Interview***—***Silvio***)

The ability to engage with others consistently to build trust and community in multimodal ways was valuable because it served another of the club's primary purposes of engaging in competitively oriented activities.

Competitive. Participating in esports was consistently both observed and described to be a competitively oriented multimodal practice. Student-members credited such competitive ways of participating as underpinning many of their justifications for both joining and continuing to be a part of the esports club. As such, reasons for joining the club were often credited to an intention of "want[ing] to see how I compared to other students at my age, and the people at my own school" (***Interview***—***Silvio***). However, such ways of "being competitive" and engaging in competitively oriented activities were "manifested in more ways than the simple playing of videogames in a head-to-head participation structures" (***fieldnote***) and were instead a mixture of multimodal practices.

Participating in esports involved multimodal practices that included the use of digital technologies, platforms, and programs to engage in competitively driven goals. For instance, one club's regular activities included logging reaction time data in a shared spreadsheet created and maintained by the teacher (***Mrs. Abel***) (see Figure 6) to record multiple "rounds of data collection for reaction time" and regularly "introduced other reaction games" (***fieldnote***). This spreadsheet served as an artifact that helped club members participate in a competitively oriented activity in which they were drawing on multiple multimodal ways to interact with each other.

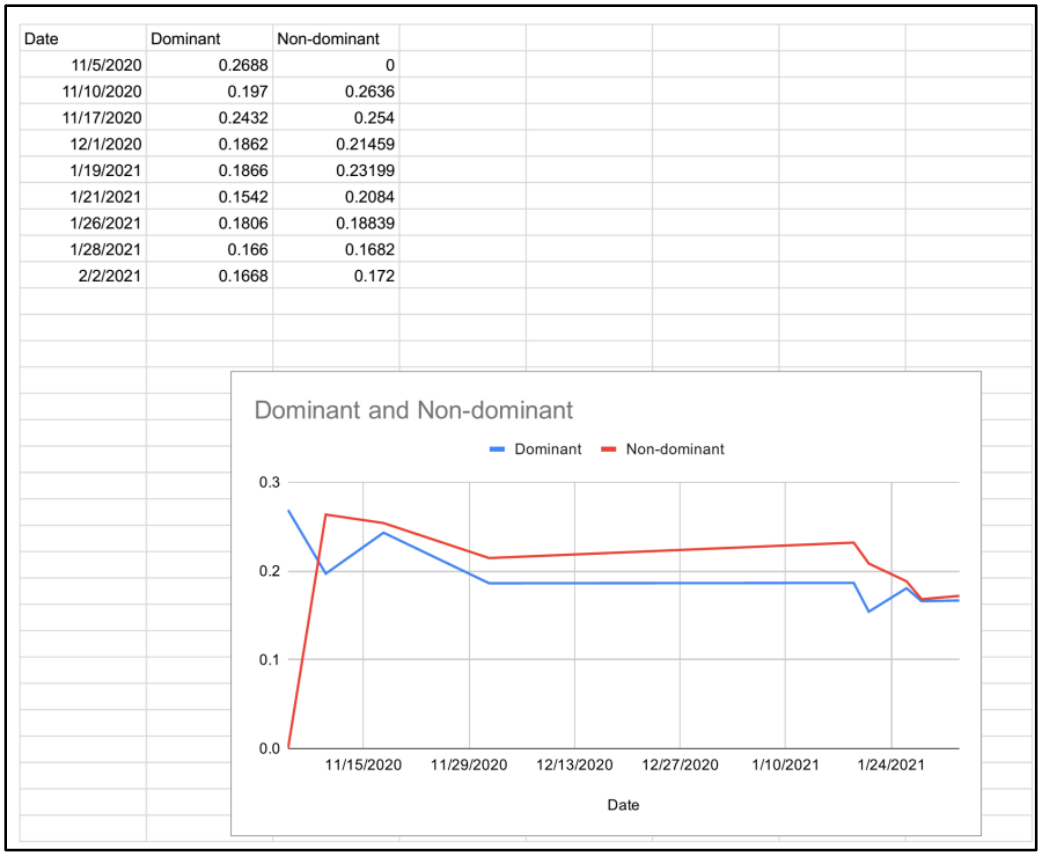

Figure 6. Screenshot of a spreadsheet of reaction time data for dominant and non-dominant hands logged for one student.

In the teacher's view, playing reaction games (see Figure 7) and keeping track of the data "make[s] it a little competitive as well in working on reaction time" and she justified this activity by saying that reaction time is "one of those things that are universal. It doesn't matter what game they're playing, that reaction time is still going to be a valuable thing" (***Interview—Mrs. Abel***).

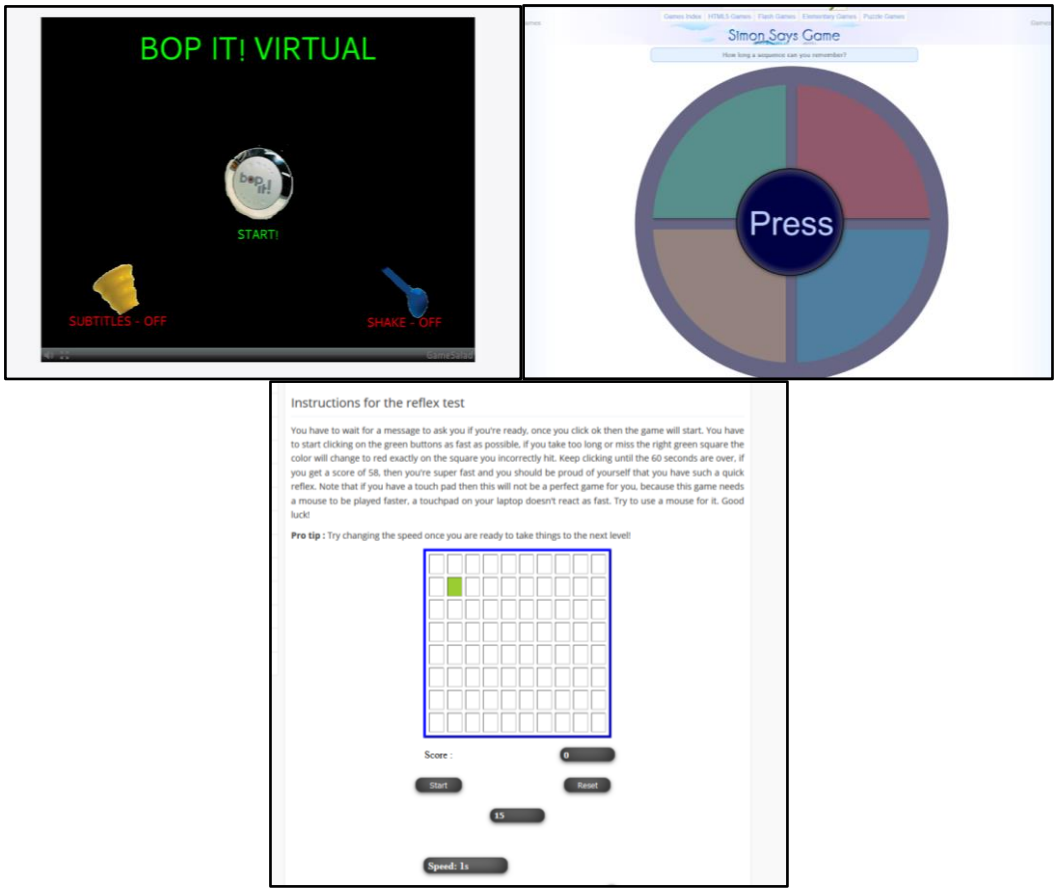

Figure 7. Screenshots of some of the reaction games used by ***Mrs. Abel***

Additionally, students described and characterized the competitive multimodal ways to participate in esports as being "fun" and contrasted these competitive activities with what they considered as less (or non) competitive approaches to participating in esports. For example, certain games (see Figure 8) were seen as falling short of being competitive and were therefore seen as boring or less serious: "when I think of, like, *Rocket League*, I see that as a fun game and everything, but I don't really see it as competitive" (***Interview—Jack***). When probed further as to why a game like *Rocket League*—which is indeed a highly popular game in esports competitions—was not competitive, ***Jack*** said that it was relatively simpler in comparison to other games that feature more factors to consider, such as *Tom Clancy's Rainbow Six Siege,* of which he said:

> For *Rainbow* [*Six Siege*], there's a lot to, like, think of because there's a lot of unique operators with special abilities. Then you also have to think about not guns, per se, but like, you have to focus on the recoil, on the attachments you might be using, the optics, the barrels. And then there's also, like, these objectives, you have to play like 'secure area' where you have to border up the [objective] sites and protect it from any hostiles. Then there's the bomb formats where you've gotta, like, plant the bomb or diffuse it and escort hostages. (***Interview—Jack***)

Figure 8. Two popular esports titles: Rocket League [left] and Rainbow Six Siege [right]

As ***Jack*** expressed, one way greater competitiveness, and therefore "fun", is manifested is through greater complexity. This complexity is achieved in games by having multiple in-game factors to consider. In *Rainbow Six,* these factors take the forms of mixing and matching their own—as well as then responding to opponents'—operator (or character) abilities, weapon attachments, and in-game objectives. This was contrasted with *Rocket League* which, according to ***Jack***, is comparably less complex and therefore less fun as well as less competitive.

These differences in competitiveness, complexity, and fun are inextricably tied to the multimodal digital-age practices involved with high school esports that include the primary activity of playing by means of digital technologies but also include practices with platforms such as *YouTube* and *Twitch* for both learning from other players and the larger game community. These games they play, however, must present challenging or complex yet enabling in-game constraints and affordances that require players to "start getting to know people and how they're playing [and get]...better at the game in general" (***Interview—Cristobal***). This apparent requirement for the games to be highly complex in order to be competitive and fun was consistent with how *all* participants summed up esports to be; when participants were prompted to describe esports with any five words of their choosing, "competitive" was one of the five words mentioned by every participant. In addition, I consistently observed and overheard during multimodal team interactions (e.g., in-game voice-chat, *Discord* text chat, *Google Meets* video chat) (see Figure 9) that esports is, in large part, "all about being competitive" (***fieldnote, interviews***).

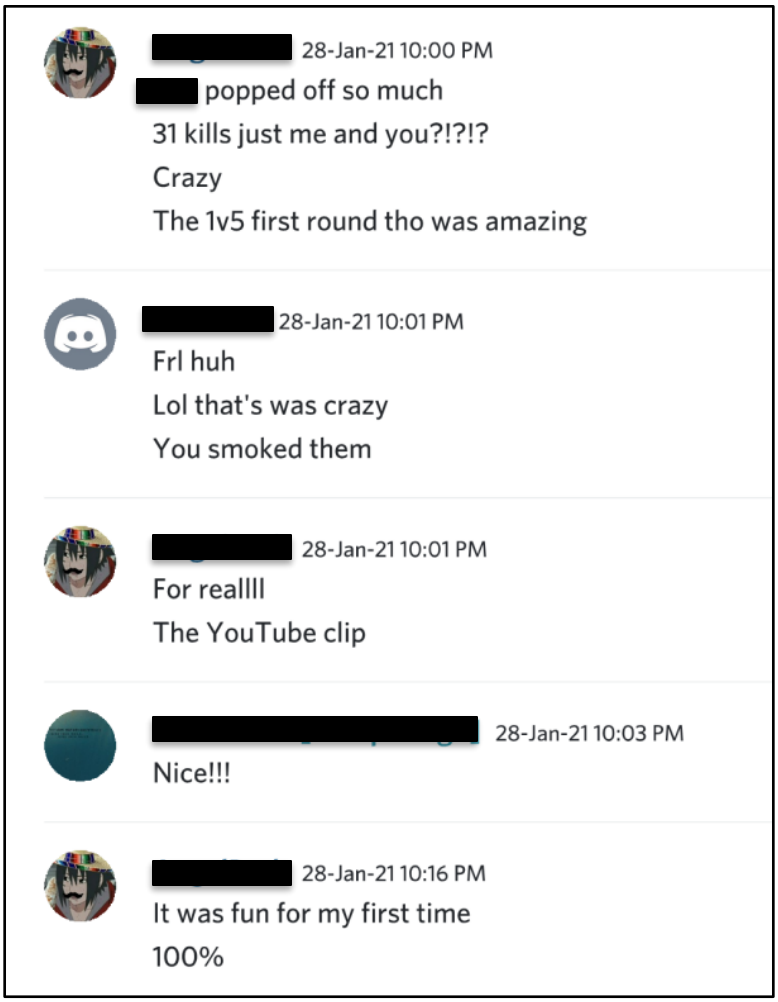

Figure 9. Screenshot of the Discord text chat. Notice the competitive hype and the word "fun" in the midst of the competitive excitement

Additionally, although all participants expressed that there are multiple ways to participate in the esports club (e.g., designing a logo, running a tournament, "hyping" teammates), with each involving their own practices with multimodal technologies, non-competitive approaches to participating were widely seen as lesser. For instance, in interviews, ***Juan*** described that a teammate who was a substitute (or a "sub") for the regular players was *just* a sub because "he doesn't actually want to play. I think he just enjoys to play but I don't think he wants to be, like, that competitive, you know?"

(***Interview—Juan***). Additionally, in the team's *Discord* chats, there were multiple instances where not playing competitively, which in this specific case meant playing in an official way in which the outcome of the match "counted" for their record and seasonal standing, was described as "*just* for fun" (see Figure 10).

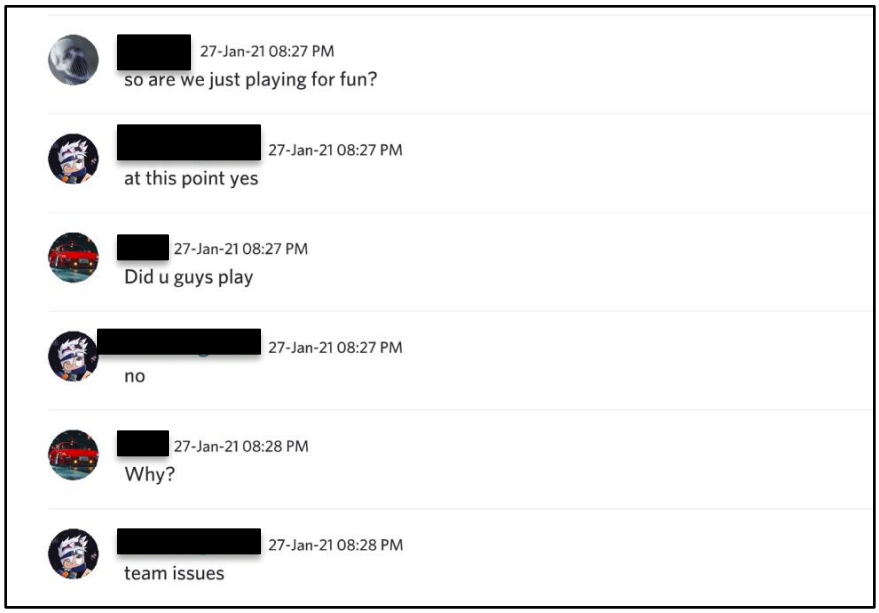

Figure 10. Screenshot of Discord text chat. Notice the use of "just" for fun when the match that was played did not count for official standings

This notion of non-competitive participation as somehow lesser was evident in other students' notions of the competitively oriented nature of the multimodal activities of the club and how they contrast with what would be more fun-oriented activities. For instance, one student described his approach and goal when playing as "when I play *[Rainbow Six] Siege* and everything, I become like this person who just wants to win….[and] have a good game" ***(Interview—Jack)*** while another student described playing as *"*when it starts getting to the actual game we have, we're focused and

everything. But like then when we're like on a Sunday or something, just playing for fun, no competition, I feel like we're just fun and funny (***Interview***—***Cristobal***). Throughout multiple observations and unstructured interviews during gameplay sessions, I was able to see this notion of competition come up repeatedly among students (***fieldnote***). However, student-members' characterizations of non-competitive ways of participating being lesser forms of participation stood in contrast with teacher-sponsors' characterizations of competition and its purposes.

Teacher-sponsors' characterizations of competitive practices in esports varied from those of the student-members. Largely, teachers described the varied competitive multimodal practices as valuable for building in-game discipline and in-game proficiencies because "you're not going to get to a high level where they're highly competitive and then see them just randomly button mashing (i.e., pressing buttons haphazardly). It's very coordinated and learning how to do that is something we're all building" (***Mrs Kendra***—***Interview***). However, such competitive tendencies were also cause for concern. This concern was rooted in the many ways in which students can choose to participate in interest-driven endeavors such as esports—which are competitively oriented—without needing to be competitive in order for those ways of participation to be valid and valuable. In fact, an overly competitive focus within esports was described as potentially *toxic*—being cruel and making somebody want to leave (***Interviews***—***Mrs. Abel, Mr. Andres, and Mrs. Kendra***). For this reason, teachers put in effort to have the multimodal esports practices (e.g., asynchronous interactions on *Discord*, synchronous in-person or in-game interactions) be

> constructively competitive rather than just...toxic...and…making sure to have an environment that is supportive in learning to be good players….where they can learn that you can compete, but it doesn't necessarily have to be an ‘us versus them’ thing which I think can sometimes be a challenge in that mental environment where, you know, you're competing against everybody. It's kind of switching the mindset of it's not ‘you against them’, at least when it comes to the team. It becomes more of a mentality of ‘let's build our skills together, you help me build my skill and I'll help you build your skill (***Interview—Mrs. Abel***)

Thus far, I have explored the literacy practices with digital technologies, platforms, and programs in high school esports and how they were used to engage in communal and competitive ways. In the following section, I will explore how these literacy practices were framed (primarily by teachers) to stakeholders and gatekeepers as contributing to scholastic purposes, despite students using these literacy practices for primarily social functions.

Assertion 2: Social Functions Over Scholastic Purposes

Scholastic focus by teachers. Consistent with research touting the positive impacts of extracurricular activities on aspects of school performance (Roeser & Peck 2003), esports in high schools were framed and presented as helping serve scholastic purposes. For instance, at multiple points in this study’s duration, the students and teachers expressed their perceptions that esports participation was valuable for multiple school-related goals. These included things such as “coding; compiling; data processing in science and math classes; vernier simulations; learning linux; arduino programming; engineering design; video, image, and sound editing” (***fieldnote***). This perception of esports’ positive scholastic purposes aligns with recent work that has adapted and integrated esports for explicit scholastic goals. For example, the work of Anderson et al. (2018) has explored how esports participation connects to science, technology,

engineering, and mathematics (STEM) careers, detailing a one-year course that integrates esports as part of the core curriculum of a high school class. However, for the duration of this study, the social functions of esports literacy practices carried out through digital technologies, platforms, and programs took precedence over its scholastic functions.

In early efforts to onboard stakeholders and gatekeepers (e.g., school administrators, parents) to support the formation of esports clubs in schools, teachers would rely on making clear and direct connections between esports participation and scholastic outcomes. To do so, they would rely on accounts and claims forwarded by entities such as the North American Scholastic Esports Federation (NASEF) that esports events, such as building a Rube Goldberg machine in *Minecraft,* "inspire[s] communication, problem-solving and teamwork while honing skills like math, physics, and chemistry" (see Figure 11).

In this contest, teams of students competed to create the most complex and creative Rube Goldberg machine they could build within *Minecraft*. Esports activities and events with explicitly stated connections to scholastic goals, such as the Rube Goldberg contest, were described as serving the purpose of attaining increased buy-in for supporting esports as a school club activity (***fieldnote***). For this reason, during club meetings that took place early in the academic year, one teacher heavily encouraged students to participate in such events and dedicated part of several of the club's meetings to overviewing Rube Goldberg machines with students (see Figure 12).

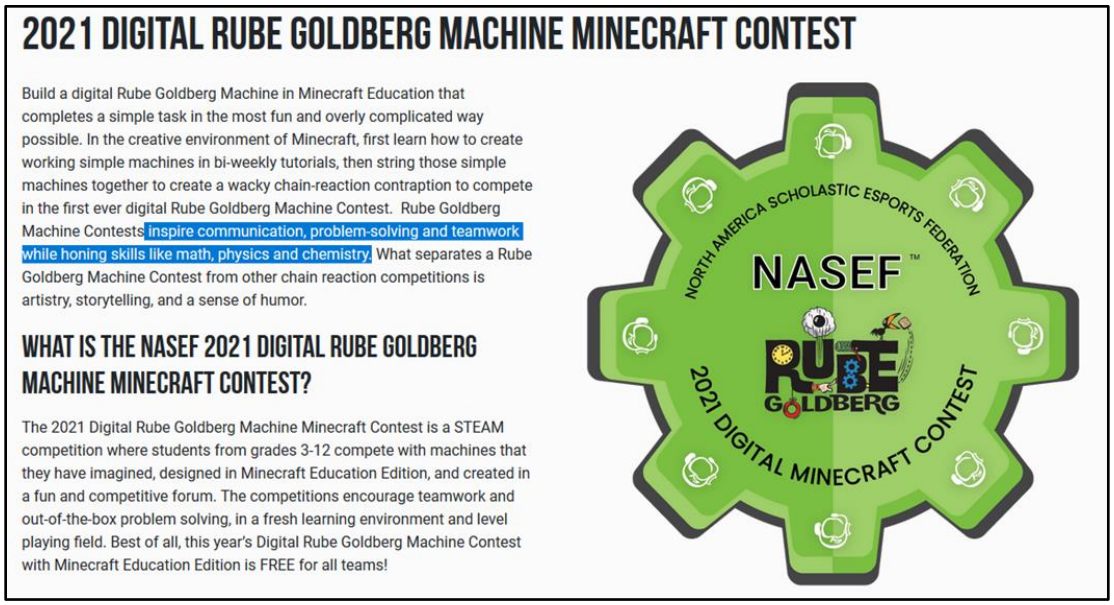

Figure 11. Screenshot of the description of the digital Rube Goldberg machine on NASEF's website. Highlighted text reads: "inspire communication, problem-solving and teamwork while honing skills like math, physics and chemistry"

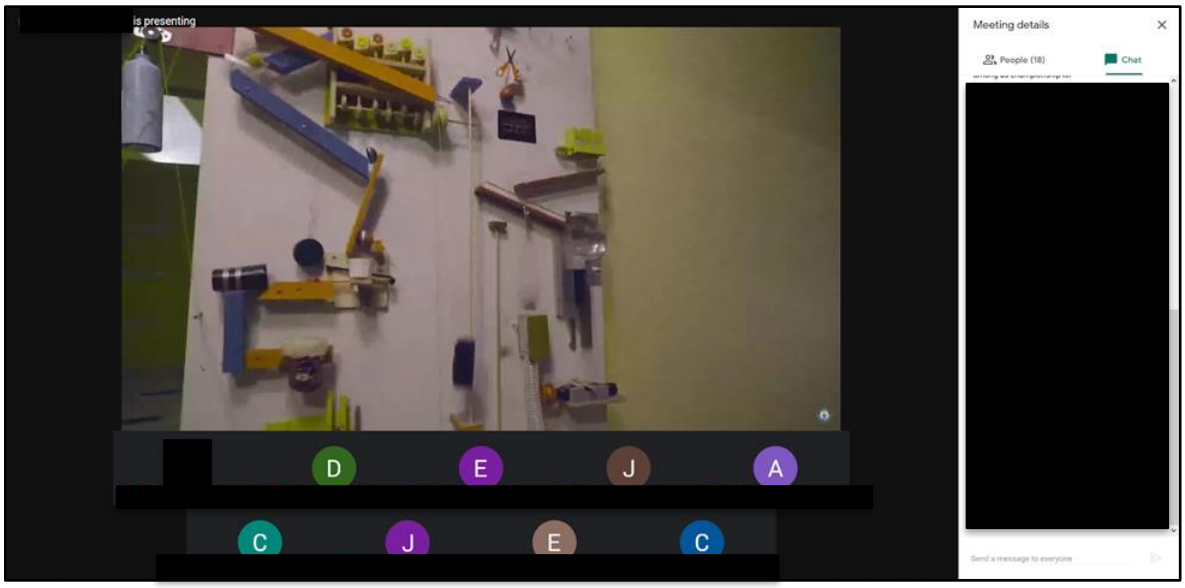

Figure 12. ***Mrs. Abel*** screensharing a video of a Rube Goldberg machine

During club meetings such as the one illustrated in Figure 12, the teacher relied on features of meeting platforms such as *Google Meet* to employ multimodal presentation methods so that students could better understand "the mathematics, the physics, and see their awesome wackiness when applied to Rube Goldberg machines" (***fieldnote—Mrs. Abel***). These types of meetings focused on the scholarly implications of esports and deviated from the more commonplace meeting purposes of discussing club business such as team performance, club finances, and upcoming match logistics (***fieldnote***). Additionally, the teacher encouraged the students to notify their parents or guardians that the club was going to participate in this competition and "emphasized that they should describe what participating would entail" (***fieldnote—Mrs. Abel***).

Additionally, later in the school year, both of this study's participating esports clubs were finalists for a contest hosted by the High School Esports League (HSEL) which would award six top-of-the-line gaming computers along with all relevant accessories in order to help build a complete esports arena at the winning school. As part of this process, finalists were interviewed by the contest hosts, who encouraged the clubs to include as many members as possible but also made it clear they would welcome other concerned parties such as parents, other teachers, and administrators of the particular school. As part of preparing for this finalist interview, one of the club's sponsor teachers hosted a meeting with club members, school counselors, other teachers, coaches, and the school's assistant principal. I was also invited to this preparatory meeting.

During this meeting, we prepared to answer a range of expected interview questions, one of which was "how would winning these esports computers impact the school and/or the students?" During this meeting, the potential uses of the computers as

well as participating in esports were discussed and brainstormed. Among the most discussed topics were how students could benefit academically. These topics were most accurately captured in the meeting summary email sent by the sponsor-teacher. In that email, she synthesized the highlights of what was discussed, including "social emotional, equity to advanced computer systems, AP [advanced placement] classes, Team building, Community building, streaming ability, access to additional scholarships, advanced assignments in Math, Science, Engineering, Business, Computer Science Classes, World Museum and Park tours, etc." (***Artifact—email Feb 20, 2021—Mrs. Kendra***). The topics discussed during this meeting, especially when seen as potential responses to the particular question of impact on the school and students, help make evident that the teachers, administrators, and counselors who seek to convey the impact and importance of esports do so by framing the associated literacy practices of esports clubs as contributing to scholastic purposes.

The written application that the sponsor teachers submitted for this same contest lends further evidence for the importance of framing esports literacy practices as possessing scholastic implications. In this written application, teachers expressed the many ways in which they perceived esports as connecting to scholastic goals by writing, for instance, that "by supporting esports, an interest in computer science has started to grow as students learn how to apply their gaming interests to real life" (***Artifact—Mrs. Abel***), while other teachers emphasized the potential for securing scholarship opportunities.

The potential to earn scholarships, as a related manifestation of the scholastic importance of esports, was also another way that teachers framed the literacy practices

involved with this space. For teachers, esports were one way of "helping students who may not fit typical extracurricular molds [to] train and compete" (***Artifact—HSEL app—Mrs. Abel***) in ways that could lead to opportunities beyond a high school education and club participation. As teachers explained, the kinds of multimodal literacy practices that students do as part of esports such as "streaming content, researching strategies, and connecting with peers" (***Artifact—HSEL app—Mrs. Abel***), as well as "strategizing and coaching each other" ***(Interview—Mrs. Kendra)***, either within or around the digital technologies, platforms, and programs they were using as part of the club all had the ultimate goal of having them improve at a range of activities (e.g., streaming, coaching). These activities were framed as important because "when those streams are available, those become evidence for your college scholarships. Those become your interviews, and so it needs to be done in a way that we can learn the right skills to transfer" ***(Interview—Mrs. Kendra).*** These kinds of activities were described as useful for taking:

> something that's a real-life thing that they enjoy and show them how they can use that to build their own character, their own skill set, their college portfolio, whatever it is. How they can take something that they like for fun and turn it into a job, especially when you have the [college] recruiters out (***Interview—Mrs. Kendra***)

The targeted focus on building opportunities post-high school was so strong with this same teacher, that she made sure to communicate to potential student members that—before they selected her to be the sponsor-teacher—they knew that she would be "engaged in the club on a social *and* academic way, not just a social club" (***Interview—Mrs. Kendra***). To her, focusing on the academic goals was important because of "the great amount of potential—the dollars—that keep coming across the emails that these kids can earn". As she elaborated:

> esports is a way to take your personal pastime of gaming … and turn it into a team sport in which you can earn college money. It's using those online games in a way that builds team camaraderie, team skills, and making money. Scholarship money is the ultimate goal. (***Interview—Mrs. Kendra***).

Despite the focus on scholastic goals that esports literacy practices hold, teachers also made it clear that the social aspects of esports literacy practices were important as well. Amidst COVID-19 social distancing procedures set in place, one teacher said that "with hybrid and virtual learning, I have students engaging with our esports programs from home...which has given my students a sense of purpose" (***Interview—Mrs. Abel***). This implies that, in the middle of hybrid and distance learning, the club's social goals were rendered perhaps more important than they were before. Nevertheless, overall, they were not *as* important in teachers' eyes in the long run because some teachers still communicated to the students that in addition to being a social club, "as long as we were playing to earn scholarship money too, I was onboard" (***Interview—Mrs. Kendra***).

However, during the sustained club interactions that I consistently attended and participated in, the social purposes of esports literacy practices took precedence over its scholarly purposes. In this regard, it was students who often acted and conversed with me and with each other in ways that illustrated their conception of the literacy practices in esports with digital technologies, platforms, and programs as valuable primarily for its social rather than scholastic impacts. This, therefore, stood in contrast to (or at least added to) the view that teachers often advocated.

Social focus by students. Despite teachers framing esports literacy practices as serving scholastic purposes, students often oriented differently towards esports' worth and function. In contrast to teachers' views that the ultimate goals of esports included

earning money and securing opportunities through scholarships, students viewed their literacy practices with digital technologies, platforms, and programs in esports as being more aligned with social functions.

When discussing the worth of esports, many students mentioned that, although they are aware of esports scholarships, they do not count these as important factors for deciding to participate in the high school's esports club. In interviews, one student mentioned that "the reason I joined the club was just to have fun and participate and compete with others, not necessarily for scholarships. It's just all for fun" (***Interview—Silvio)*** while another said that although they "would like one [esports scholarship], … getting a math scholarship or something will be better" because they "don't really think it's important" (***Interview—Cristobal***). Despite not seeing scholarships as the main reason for joining esports, students also frame and present esports to stakeholders (e.g., parents) as teachers do: by emphasizing how the literacy practices with digital technologies, platforms, and programs have implications for securing opportunities such as scholarships (***fieldnote***).

For instance, one student spoke about how they told their parents about the opportunity to secure college scholarships through esports. He spoke about how this was met with skepticism that made him show the parents evidence in the form of news articles. He mentioned that he had to do so as a way to help convince the parents to let him fully participate in the club (***Interview—Cristobal***). When this same point came up during an in-game party chat, other members of the club also confirmed they had to do the same to onboard their own parents at some point (***fieldnote***). In addition, during the one-on-one interviews that occurred after this in-game party chat, one student mentioned

that while he does, in fact, “see how I could get scholarships or money to help”, he ultimately thinks that esports scholarships are not as important as securing a scholarship based on “good grades” (***Interview—Carmelo***). In a more surprising exchange, another student commented that they know scholarships are “important for sure, but I actually don't know what a scholarship is. I keep hearing it's, like, oh, it's like this big thing you could get and it's really beneficial for you, but I don't really know what it is” (***Interview—Jack***). In all, these insights from students indicate that, although students may largely not be interested in (and in at least one case, not know about) esports for its post-high school opportunities, they do leverage these opportunities as a way to justify and attain permission to either begin or expand their participation in esports spaces. It appears students’ literacy practices with digital technologies, platforms, and programs in esports have a primary goal of meeting their social(ization) needs and helping them seek senses of belonging.

The social functions of the high school esports club were evident across a range of collected data. These data highlighted the literacy practices with digital technologies, platforms, and programs that students and teachers carried out to meet social purposes of the club and help members feel as if they belong and are welcomed in this space.

For instance, playing competitive multiplayer videogames with each other was unsurprisingly a primary and highly visible form of interacting in social and competitive ways. However, the games that were often played extended beyond the highly competitive videogame titles that are typically used as esports games, such as *Rainbow Six Siege* and *Rocket League*. During the timeframe of this study, the game called *Among Us* (see Figure 13) was one of the most popular videogames in the world, with 60 million

daily active users playing on mobile devices, gaming consoles, and computers around Fall of 2020 (Curry, 2021). *Among Us* is a social deduction game with two teams—crewmates and imposters. Only the imposters know who else is on their team while the crewmates are kept in the dark as to which player is on what team. The goal of the crewmates is to uncover the imposters and complete repairs on a spaceship while the goal of the imposters is to sabotage the completion of the repairs and neutralize the crewmates. Despite not being an esports title, *Among Us* was a highly played game as part of the esports club at one high school, being played after nearly every regular meeting and occasionally on days the club did not meet.

Figure 13. Screenshot of the trailer video for the game *Among Us*

The sponsor-teacher of this club and myself joined in and participated in these game sessions too. She remarked later in our one-on-one interview that she saw *Among Us* as good for team building, collaboration, and communication. She justified this by saying that "*Among Us* does not need the fast motor skills you need to play other games such as *Rainbow Six.* It's a game that anyone can literally pick up and play because it's

also free". She also expanded that "even with casually playing with the students in games that require some communication like *Among Us*" can help with learning how to make efficient use of limited time to communicate with teammates. She compared it to how, when she plays the game with adults, adults "use up all the time, we're communicating the whole time and really using every second of that communication period. And I've noticed with the students, there's not that period of time. Often, it's just, you know, random guessing" (***Interview. Mrs. Abel***). Students, however, viewed their time playing and interacting in *Among Us* differently.

The purpose of interactions in and around *Among Us* seemed to be highly social and the students described these interactions as such in verbal game-chat and club meetings as well as textual exchanges on *Discord* (***fieldnote***). As one student put it, interacting through *Among Us* was good for "exercising some of our creativity" by making house rules and implementing them through the game's modifiable rules (***fieldnote***) while another student mentioned that "even if someone who wants to join the club doesn't have some of the games or the consoles they need to play, they probably can play some games of *Among Us* with us because it's on phones and that can maybe help them feel like they belong here too" (***Interview—Juan***).

Creative changes to the game were done by proposing changes to team abilities, such as changing imposters' field of visibility or their movement speed. These and other changes allowed for variations of the game's objectives to be possible through the game's new mechanical affordances or constraints. For instance, one common variation was named "hide and seek", in which the imposters would identify themselves as imposters and the objective of the game then became for the crewmates to run and keep away from

them instead of the original goal of deducing who the imposters are. Additionally, interactions in and around *Among Us* included the simultaneous use of multiple technological devices (e.g., mobile devices, computers, consoles) because the game is playable across and between each of these devices. Due to most games occurring immediately after the regular club meeting had adjourned, the players remained on the *Google Meet* web call for the club in order to use it as their voice-channel and speak at appropriate times during gameplay (under default rules, players are supposed to remain silent until the end of each round). Because these organically took place right after club meeting times, the teacher and the students agreed to keep *Among Us* sessions in this time slot because it was a good activity to help welcome potential new members of the club and make them feel like they can participate sooner rather than later and "get their feet wet with the club" (***fieldnote***).

Independent of whether activities like playing *Among Us* were helping students learn to team-build, collaborate, and communicate—as the sponsor-teacher mentioned she believed they were—it was clear that students were engaging in digital-age multimodal literacy practices as part of their esports club by engaging with each other through digital technologies, platforms, and programs to meet social goals rather than scholastic ones. Another example of these literacy practices involved the creation of the team logo and the design of the club shirt (or uniform).

An activity with high student interest that also had them engage with digital technologies, platforms, and programs was the creation of the team logo. This involved a creation phase and voting process once submissions were in. As part of the logo creation process, those who participated spoke about using programs like *Microsoft Paint* in

addition to pen and paper drawings (***Interview—Carmelo***). As part of the voting process, students would share their creations on the team *Discord* channel to both get feedback as well as for others to decide which logo they preferred (see Figure 14).

Figure 14. Some of the logo drafts designed by students as shared on Discord

Ways to use the winning logo were brainstormed for over 2 weeks, both synchronously and asynchronously, and included ideas such as placing it on school-issued student IDs, printing stickers, and creating general "swag" that showed "school spirit" such as whistles, phone cases, and shirts (***fieldnote***) (see Figure 15).

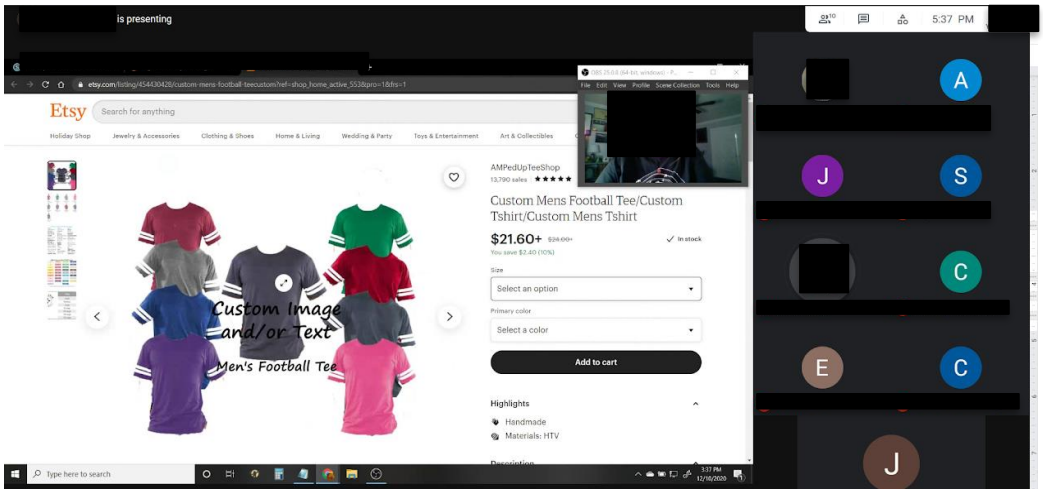

Figure 15. ***Mrs. Abel*** screen sharing several websites for designing and purchasing team shirts

However, the only use of the logo that was seen through to the end was placing it on shirts that would serve as team uniforms (see Figure 16).

Figure 16. Pictures of the final team shirt with the winning logo printed on the front [left] and the gamertag and number printed on the back [right]

One student summed up the combinations of practices in esports with digital technologies, platforms, and programs overviewed thus far (making of the logo, buying

the shirts, and playing *Among Us*) as being "not maybe just games, but also teamwork" (***Interview—Carmelo***). In all, these interactions and practices in esports point to the important social functions that esports practices played in contrast to its framed scholastic purposes when leveraged for onboarding purposes with those who may function as gatekeepers, such as school administrators and parents. This pointed to multiple multimodal literacy practices occurring with social goals even though they were not being firmly grounded in the literacy practices deemed scholastically valuable within this environment.

Summary

In this section, I have explored two assertions to my first research question on literacy practices. My first assertion explored how these practices with digital technologies, platforms, and programs were used to engage in communal and competitive ways. My second assertion explored how these literacy practices in esports were framed to stakeholders and gatekeepers as contributing to scholastic purposes, despite taking on a primarily social function. In the following section, I move to explore my second research question on the literacy demands of high school esports.

Literacy Demands

In this section, I explore two assertions to my second research question: *How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies **demands** of participating in high school esports?* This research question draws on Lemke's (1998) examination of the multimedia literacy demands of a high school science curriculum. In my use of the word "demand", I adapt the multimodal nature Lemke described of scientific and mathematical literacy. These fields, as Lemke

explained, make use of not only verbal language, but also of mathematical, graphical, diagrammatic, pictorial, and a host of other modalities of representation. Thus, important concepts are articulated *across* these media of representation. In this respect, a literacy demand involves being able to fluently juggle multimodal representations and/or interactions between whichever is most appropriate in the moment and freely translating back and forth among them.

Similarly, in the context of this study, a literacy demand in an esports club would require its members to "translate back and forth" among multimodal forms of engagement across the digital and physical environments of the esports club. For example, literacy demands in a high school esports club could range from verbal language used in strategy guides or in-game instructions, but also extend to visual and spatial navigation of digital in-game spaces, or the creation and management of team representations such as those seen in team logos or team social networking spaces in *Discord*, *Steam*, or *Facebook*.

To address my second research question: *How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies* ***demands*** *of participating in high school esports?,* I draw holistically from my data sources to develop two assertions:

Assertion 3: The literacy demands of using digital technologies (e.g., computers, mobile devices, videogame consoles), platforms (e.g., *Discord, YouTube, Twitch*), and programs (e.g., *Paint*, specific videogames) emphasize unambiguous and timely multimodal communication for managing the team and scheduling events.

Assertion 4: The literacy demands of high school esports focus on multidimensional fluencies between what is *on* and what is *around* the screens of the digital technologies, platforms, and programs.

Assertion 3: Demands of timely and unambiguous multimodal communication

> The only thing is that, you know, you spend more time in front of a screen and you sit down even longer now, since you know, we're not returning to hybrid anymore (***Interview***—***Silvio***).

A literacy demand involves the need to fluently juggle between multimodal representations and/or interactions using whichever is most appropriate in the moment and freely translating back and forth among them. As ***Silvio*** pointed out in the above quote, the interactional circumstances that the esports club were engaged in during the timeframe of this study were carried out using screens. These "on-the-screen" interactions had an undeniable impact on the literacy demands of these participants and their views of the club and its purpose.

> I think now we, as a whole, communicate more through virtually because back then, when we were in school, we would only talk to each other once we saw each other, which could only be, like, a couple of minutes while passing periods, in class, or during lunch. And now, if you just need something, we basically just send a message, get on, talk to each other, and we basically spend more time talking to each other now that we're here. And the only reason we're here is basically because of the pandemic and everything since, you know, we have to social distance. And now that we're returning virtually, that's basically the only way we have to, like, talk to each other now. Which is more time, and that's a good thing, you know, you talk to your friends even more when, back then, when we were doing all this normally, we wouldn't really talk to each other unless we saw each other (***Interview***—***Silvio***)

As implied by ***Silvio***, the exclusively online interactions of the esports club during the timeframe of this study, which were caused by the safety protocols during the COVID-19 pandemic, revealed the importance—or the *demand*—of communicating in multimodal

ways with other club members. In contrast to what were referred to as “normal” in-person interactions, virtual ways of engaging with each other were described as demanding unambiguous multimodal communication between all those involved. This was because, although members used a range of communication media (e.g., *Discord*, *Twitch*, *Google Meets*) and modalities (e.g., text, audio, video) for varying purposes, using any of these in isolation—especially modalities that more heavily relied on one form over others, such as textual messages on *Discord*—were characterized as having issues with inherent ambiguity.

For instance, because *Discord* was such a commonly used platform to communicate between club members, I asked students about *if* and *how Discord* helps their club. All students shared the same sentiment that *Discord* serves some social and interactional functions and goals: “it [*Discord*] helps me socialize and interact with others here and there” (***Interview***—***Jack***). However, ***Juan*** explained that “it’s [*Discord*] not the same because you don't actually get to see their face and talk to them and, you know, build off of that. Not just, like, texts because you can never know what a person means or what the real message is behind the text” (***Interview***—***Juan***). As seen thus far in comments from ***Silvio***, ***Jack***, and ***Juan***, the ways club members communicated on the screen required unambiguous multimodal communications in order to be most useful, and this was also expressed by other students across data sources such as in-game party chats, club meetings, and one-on-one interviews (***fieldnote***). One example of this was in ***Juan’s*** notion of the *Discord* interactions and how these were helpful but limited. Meanwhile, other examples were seen in teachers’ general opinions that it “has been quite challenging to get things going because students aren't really meeting in person” (***Mr. Andres***). Such

comments point to the need to fluently juggle between multimodal representations and interactions that were “on-the-screen” and how these might contrast with in person interactions, especially when meeting demands associated with managing the team and scheduling club events.

Managing and Scheduling

Managing the clubs through online modalities was one of the major demands among both teachers and students. Managing involved the general coordination between all club participants on several fronts. Oftentimes, this took the form of teacher-sponsors making sure that student-members were aware of general club rules as well as specific game rules in order to ensure successful student participation in esports events and compliance with any and all rules.

Teachers as managers. Teachers hosted the regular club meetings, which were teachers’ primary way of interacting with all other members. They did so through synchronous video-enhanced multimodal communication (see Figure 17) on a regular, but differing, basis (i.e., one club met weekly while another met much less often).

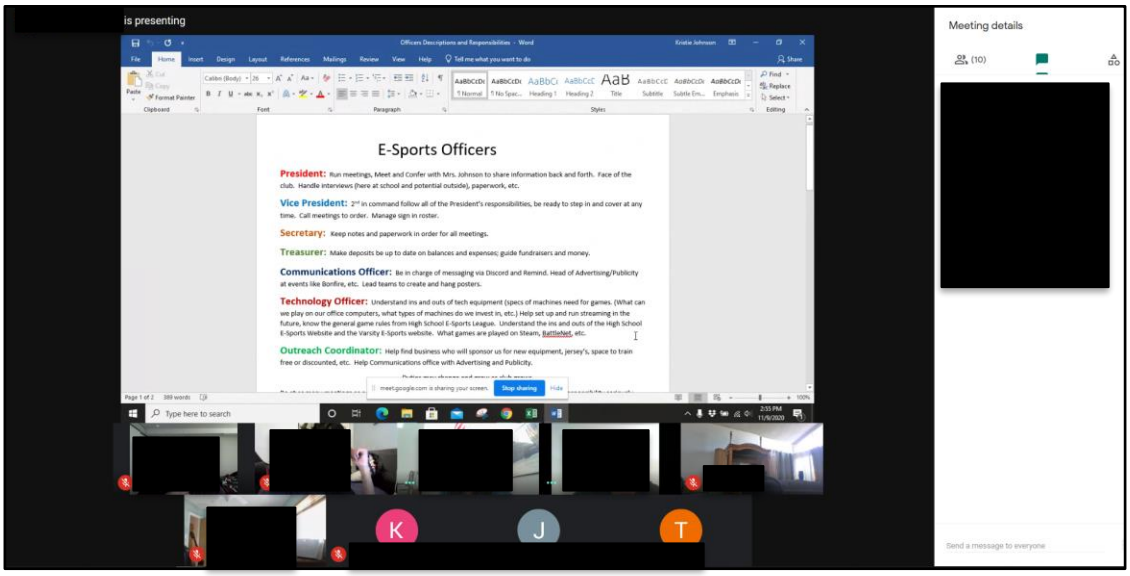

Figure 17. Screenshot of a meeting held at the end of the Fall 2020 term to discuss the esports club's student officers and their roles for the upcoming Spring 2021 term.

It was during these regular meetings that teachers most prominently engaged in managing the club's members. This management included tasks and goals such as clarifying what the club must do and any rules they must abide by in order to continue their participation. For example, early in the school year, when most students still were not clear on the reasons why they were not allowed to play specific videogame titles, ***Mrs. Abel*** clarified that the club is allowed to play *Rocket League* and *League of Legends* in official events because these were the only games permitted in the league they had registered in. She clarified also that, to remain in "good standing" with the league, they must also abide by any other rules, such as playing only on mouse and keyboard instead of using a console controller to "maintain an even playing field" (***fieldnote***). When students asked questions such as whether or not they would be allowed to participate in specific games such as *Rainbow Six*, ***Mrs. Abel*** clarified that they could in the future

because they "just need to play what they [the host league] need us to play" (***fieldnote***).

Other aspects of managing on the part of the teacher-sponsors involved ensuring that students complied with the requirements for participation, which often included in-game behaviors and complying with a minimum number of players per team. ***Mrs. Abel*** emphasized on several occasions that she wanted to "make sure that students know the rules and what are the grounds for disqualification because I ***[Mrs. Abel]*** don't want you to lose or be disqualified because of something you didn't know you had to do" (***fieldnote***).

To get these kinds of information across and comply with their managerial roles, teachers used multimodal visual, audio, and textual ways of communicating during the synchronous regular meetings (see Figure 18). In this instance on Figure 18, ***Mrs. Abel*** is clarifying in multimodal (i.e., visual, textual, auditory) ways the rules for participation as they are stated on the league's website.

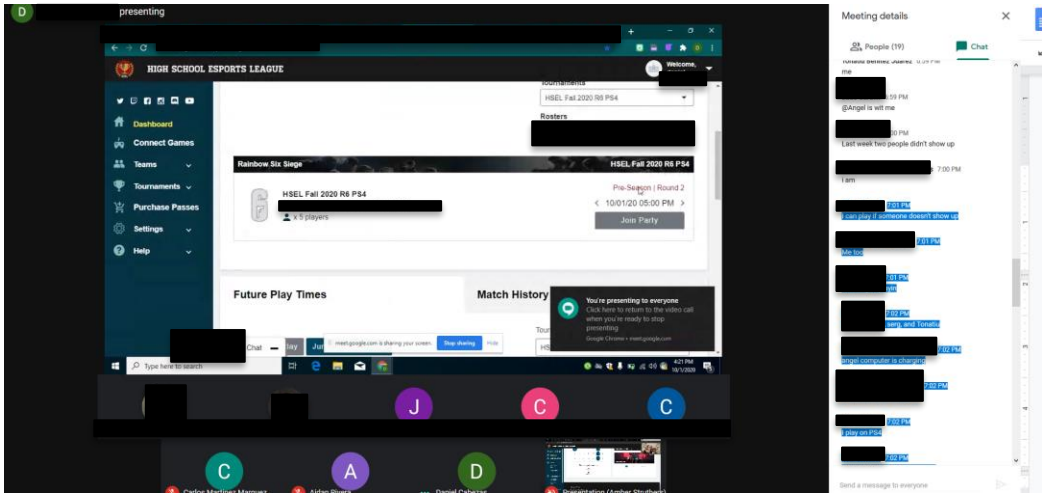

Figure 18. ***Mrs. Abel*** is sharing her screen while talking through synchronous voice chat and answering text-chat questions from students.

These included the scheduled match date and time as well as rules for the game such as specific settings that included lists of what in-game abilities, maps, and modes were permitted and which were banned from competitive play (see Figure 19).

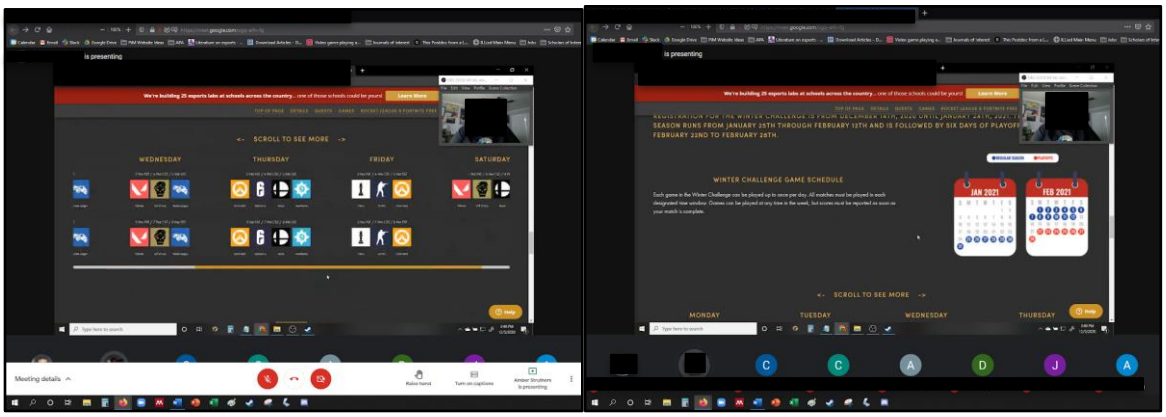

Figure 19. ***Mrs. Abel*** shares her screen to clarify scheduled match dates and times as well as rules for each game.

Additionally, early in my observations (October, 2020), I noted that a major component of the synchronous regular meetings was dedicated to the sponsor-teacher having to engage in a "constant scramble to figure team set ups" (***fieldnote***) for the upcoming days they would be competing in official league matches. In addition to teachers posting constant schedule reminders and asynchronously managing team members on the club's *Discord* chat (see Figure 20) and emails (see Figure 21), during the synchronous meetings, I also captured brief conversational snippets from ***Mrs. Abel*** that illustrated this point: "Do I have three people who can play *Rocket League*, even for just a few minutes?"; "Are we playing? I have five people but only three can play today and it has to be a PlayStation 4, no other option"; and "Please remember there are still

matches next week" (***fieldnote***).

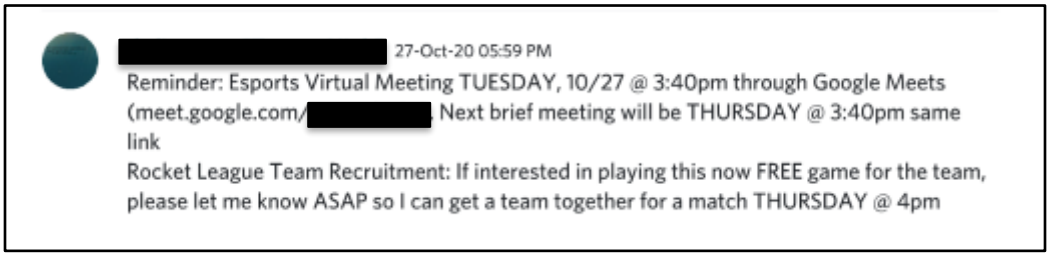

Figure 20. ***Mrs. Abel*** posting reminders for upcoming matches to the club's Discord chat as well as attempting to complete the team composition for an upcoming Rocket League match.

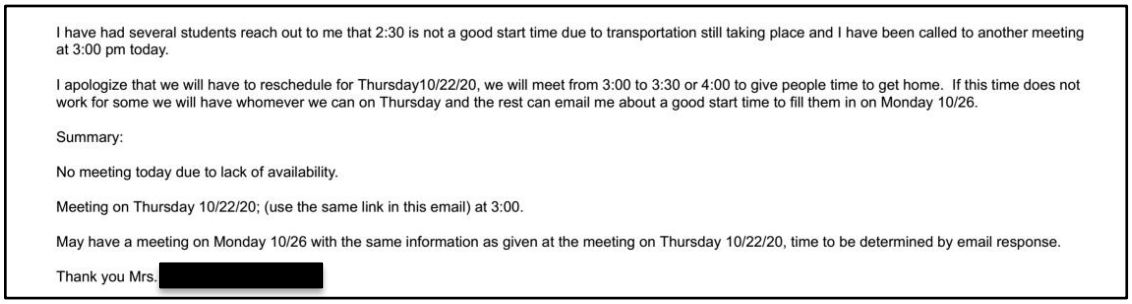

Figure 21. Mrs. Kendra's email communicating a change of upcoming scheduled meetings

These snippets, combined with the relevant figures (Figures 17; 18; 19; 20; 21), help illustrate that a major component of the digital-age literacy demands of teachers included that of managing team schedules and communicating those unambiguously through multimodal means.

These managerial demands, however, were described by other teachers as somewhat surprising because, as ***Mr. Andres*** put it, "you would figure that since most of the games that they play seem to be online games, that it [organizing] wouldn't be an

issue. But it doesn't seem like there's much of a push for students to be organizing in the first place" (***Interview—Mr. Andres***). These managerial roles that teachers took on were described as a mixture of surprising and unsurprising during interviews by all teachers. For example, ***Mrs. Abel*** mentioned that she has experience being the sponsor-teacher of other school clubs. As a club, she mentioned that "a lot of the logistical stuff are fairly parallel" as well as the processes of "learning the expectations of the organizations" while "one of the things that's noticeably different between being a chess coach and sponsor and an esports sponsor is that chess has a lot of very formulaic things" (***Interview—Mrs. Abel***). These formulaic things were in reference to the opening moves that are taught in beginner chess, many of which are formulaic in the sense that specific pieces must be moved in a predetermined order. On the other hand, "esports doesn't have that kind of formula" (***Interview—Mrs. Abel***). In addition to this comparatively less formulaic approach, teachers mentioned that esports are composed of many different videogames, each of which has their own distinct ways of playing and required skills: "managing esports is way different than managing another traditional sport" (***conversational snippet***). Despite being somewhat surprising, these managerial demands were deemed as important by teachers for several reasons. One of the most prominent reasons was an awareness that, for students, this esports club was—especially during the online only interactions of the COVID 19 safety lockdowns—largely "one more online meeting to attend after being in online classes all day" (***Interview—Mrs. Kendra***).

For this reason, teachers described their managerial roles as "more important compared to years with more regular circumstances" so that students were "not as burnt out by being online so much" (***Interview—Mrs. Kendra***). This sentiment was also

expressed and expanded upon by other teachers in their interviews too. One reason for the importance of their managerial role that stood out to teachers was an awareness that many student-members had other responsibilities outside of the esports club that were either scholastic or personal in nature. For instance, ***Mrs. Abel*** expressed that "It's challenging, you know, I've got several players who work. So sometimes they come and go. I get it. I exchanged emails with at least four players a week who can't come to meetings (***Interview***—***Abel***). When I asked ***Mrs. Abel*** what those emails were usually about, she mentioned that "they're about making sure they know what's happening with the club and what they need to do to keep participating in the future, so I just repeat in writing a lot of what we talk about during the meetings" (***Interview***—***Mrs. Abel***). Through insights such as these, teachers made it clear that they understood the demands on them to manage the club's members and their importance across several modalities.

However, managing was a demand that was also placed on the student-members in addition to the teacher-sponsors. Some student-members, especially those who took on more sustained leadership roles by being elected as club officers, often engaged in multimodal ways with others to ensure that they were aware of and adhered to general rules that ensure uninterrupted participation in high school esports.

Students as managers. In addition to participating in matches and attending club meetings, some of the students also took on managerial roles similar to those of teachers. They did this in their efforts to meet the demands of communicating in unambiguous and timely ways with the goal of managing the team and scheduling events. These students, for the most part, were also part of the club's officers (e.g., president, treasurer), but also included general and new members. The students' efforts to meet these demands,

however, were carried out primarily through the asynchronous *Discord* chats and, to a lesser degree, through the synchronous in-game party voice chats.

Over the in-game party voice chat, students would often remind each other about upcoming events and would ask about their availability for such events. These conversations, though "helpful for getting a heads up on what we need to do next" (***Interview***—***Jack***), were also described to be somewhat fleeting, especially in relation to the discussed dates and times. That is, unless the discussed events were followed up on in other forms of communication, such as in writing through email reminders or *Discord* messages, they would forget this information. This is part of the reason why communicating in multimodal ways, such as through *Discord*, was an important demand of the esports club.

Students described their use of the *Discord* app as multifunctional. These functions included a general sense that *Discord* helped them to communicate, but it was also described as a way to immediately save information, work, or images. For instance, ***Jack***—who was the designer of the winning logo discussed earlier—mentioned that he used *Discord* because he "wasn't sure how to save it. So that's why I had to, like, put in the *Discord* and say that I, like, made this design" (***Interview***—***Jack***). But overwhelmingly, aside from the general affordances for communication, *Discord* for students was a place to manage themselves. Even though all students described *Discord* as a way to interact, these interactions were also classified as limited, as illustrated earlier in the example of ***Juan*** saying that *Discord* "is not the same because you don't actually get to see their face and talk to them" (***Interview***—***Juan***), which was consistent with how other students described *Discord*.

It was perhaps due to this described limit of *Discord* that students used it primarily as a tool for managing and coordinating events and responsibilities rather than as a socialization tool itself. As students said, “in our *Discord*, we try to get everyone for *Siege* on Mondays to just practice” (***Interview—Jack***), which shows that *Discord* was used “for ... [making] sure who is going to play, or if we're going to need subs, or anything” (***Interview—Juan***). In addition to these and other functional descriptions of *Discord* during interviews, the scheduling purpose was also evident in the messages sent on the platform, many of which were centered on students managing other students in the club and planning upcoming events. These messages oftentimes took a primarily textual modality (see Figure 22), but also included a mixture of more visual messages that contained screenshots, even if these screenshots sometimes were of other written text (see Figure 23). Regardless, the important commonality between these *Discord* messages is their goal—to manage other members and coordinate for upcoming events.

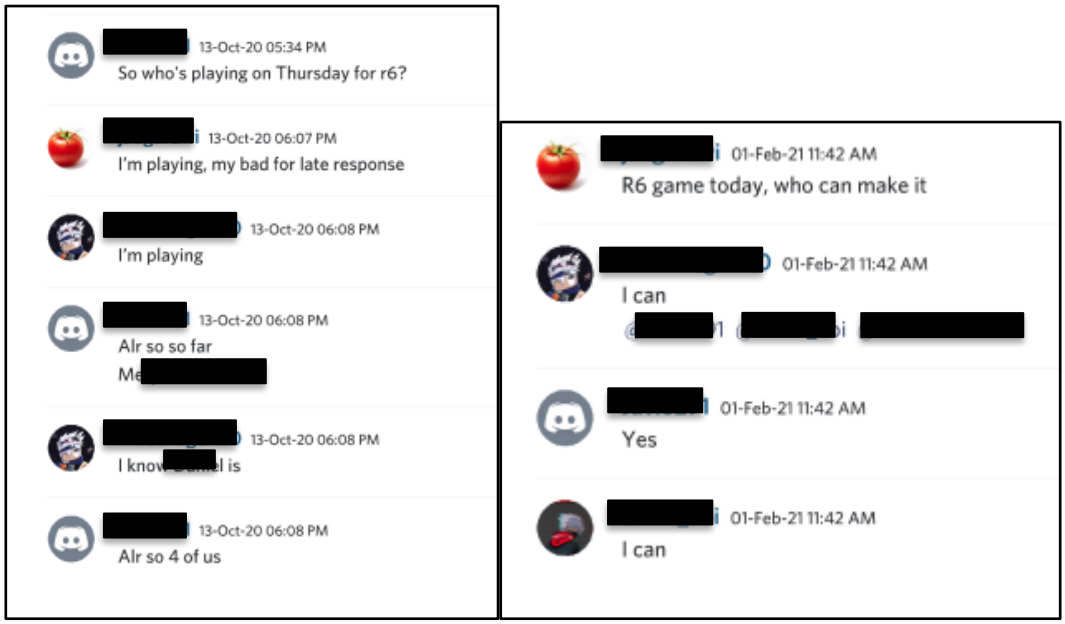

*Figure 22.*Textual messages sent over Discord by students intending to manage and coordinate each other.

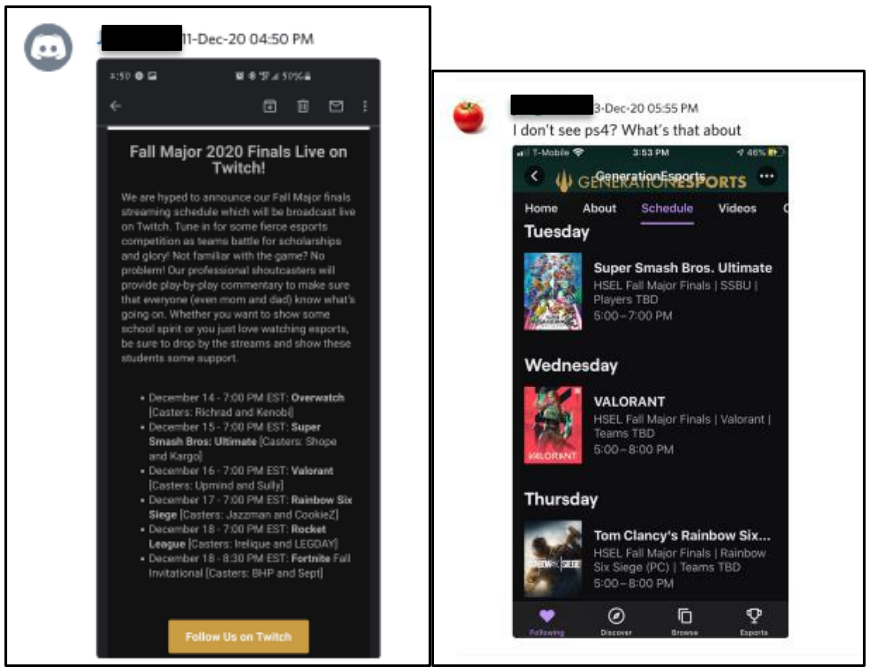

Figure 23. Visual messages sent over Discord by students intending to manage and coordinate each other.

These managing and scheduling interactions were, of course, not exclusively happening between students or between teachers in isolation from the other. Rather, these were often done in cohesion, with the student-members and the sponsor-teacher managing and communicating with each other iteratively through different technologies, platforms, and programs (see Figure 24). Students also expanded on this in interviews, wherein students generally agreed that *Discord* serves largely as a reference tool, with one student in particular saying that they keep it in "standby just in case something's wrong" and that "it's good to have to stay in touch with the intel I could have for, like, *Rainbow Six Siege* or *Rocket League"* (***Interview—Carmelo***) to quickly reference information that has been shared by others, including the teacher-sponsor.

Figure 24. The sponsor-teacher and a student-member both managing and scheduling upcoming events with other students through mentions.

These technologies, platforms, and programs facilitated student-member and teacher-sponsor interactions and also demanded these interactions to be unambiguous and timely in order to manage each other and schedule esports events. The literacy demands discussed thus far were focused on those that take place on the screen. In the following section, I explore the literacy demands as they relate to what is around the screen.

Assertion 4: Multidimensional fluencies between what is *on* and what is *around* screen

As I explored in the previous assertion, all interactions of this study's participants occurred on screens. As such, engaging in timely and unambiguous multimodal

communications by using digital technologies, platforms, and programs was a prominent literacy demand of this context. However, this demand did not remain purely on the screen, it also extended to what can be described as "beneath" the screen (Aguilera et al. 2020). This is because to engage in the competitive and communal practices of high school esports, participants had to meet the demands of understanding the technologies, platforms, and programs themselves, but also of understanding the people as well, both teammates and opponents.

Understanding the Programs and Platforms. Students needed to understand the technologies, platforms, and programs used in high school esports. In particular, they needed to understand the specific programs (i.e., the specific videogames) that were being played at deeper, more competitive levels. For instance, ***Jack*** listed and described some of the aspects that players must account for and understand while playing *Rainbow Six Siege*, among which were the different "special abilities...recoil, … attachments ... optics, barrels... objectives… [and game] formats" (***Interview***—***Jack***). These aspects, however, are not exclusive to one videogame. In addition to *Rainbow Six Siege*, there were other videogames that had similar components (e.g., recoil, optics, barrels). *Call of Duty: Black Ops Cold War* was one such videogame. In this game, the intricacies of these components can be communicated both on the screen as well as beneath the screen. That is, the specific information that is offered to players and the impacts that each of these components has on gameplay are laid out in one of two ways: (a) on the screen in ways that are intended to be easily understood by users (see Figure 25) and (b) beneath the screen, kept hidden from players in ways that cause their impacts on the game to be unstated and secret.

These unstated impacts on the game are largely uncovered by player communities in distributed ways. It is well-known in competitive communities that the information provided (e.g., Figure 25) about weapon attachments in *Call of Duty* are often incomplete, if not inaccurate. For this reason, the high school esports players in this study were interested in, and were required to become familiar with, the information that is left unstated and kept beneath the screen in addition to what is offered in the upfront breakdown of information seen above.

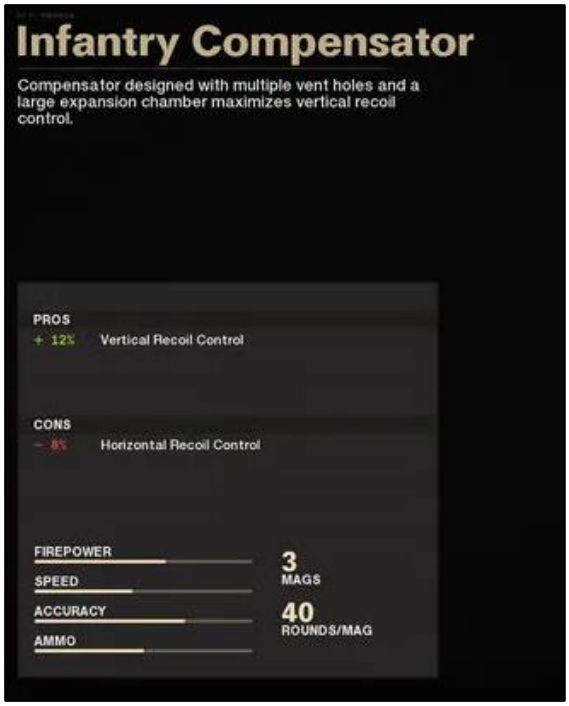

Figure 25. Screenshot of the positive and negative impacts of a weapon attachment in *Call of Duty Black Ops: Cold War*. These impacts are clearly laid out on the screen through specific percentage changes to aspects of the weapon and displayed in easily understood

To become familiar with the information kept hidden beneath the screen, the student-members of one of the esports clubs of this study leveraged several sources from the internet, tapping into larger communities of players that uncover, document, and

share their experimental findings through websites such as *YouTube*. For instance, one of the resources leveraged by this club was a *YouTube* channel that is run by a content creator by the screen name of JGOD. This channel specializes in *Call of Duty* videos with information, news, and advice for playing and improving at the game. In one of his series of videos, JGOD demonstrates the results of extensive tests that he runs on many game components such as weapon attachments, looking for the information that is kept hidden beneath the screen. Through his tests, he often uncovers and shares some combination of impacts to the game that are left unstated in the upfront breakdown that the game developers offer to players (see Figure 26). It is by leveraging online sources such as this and translating that knowledge back to their own gameplay that the esports players of this study gained deeper understanding of the specific videogames to meet the demand of improving as part of the club.

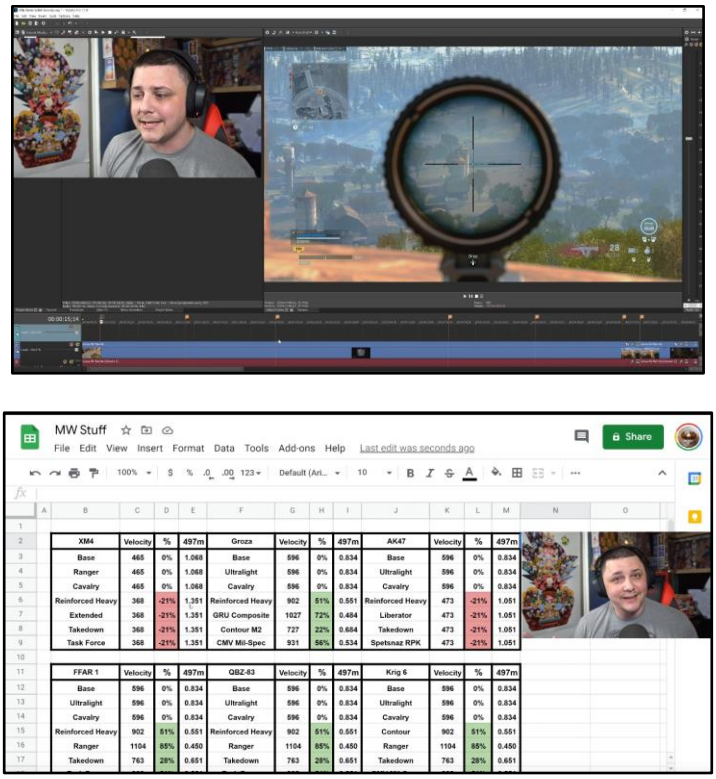

Figure 26. Screenshots from JGOD's YouTube videos that the high school esports players of this study leveraged to gain deeper understanding and improve in *Call of Duty Black Ops: Cold War*.

The need to improve at specific videogames came about for several related reasons. For instance, as discussed before, a large part of how the club's activities are described by its members is "competitive". To them, this means improving at the game and seeing "how good other people were" (***Interview—Silvio***). In addition to working on their own physical reaction time—as discussed earlier—to improve at the game requires them to understand the inner workings of each game as best as they can. This demands that players make efforts to understand the game to go beneath the screen. To achieve this, the club members engaged with multiple sources that would help them do so, including *YouTube* channels discussed above, but also other sources such as (a) fan-run

wiki websites that contain in-depth explanations of game-related topics, (b) official game developer press releases that usually include explanations of gameplay changes that are part of regular game updates, and (c) spectating broadcasted esports events at the professional level that showcase highly skilled players executing strategies and plays as well as in-depth commentary on those plays that inform the viewer. In combination, these represented the major sources students used to further understand the games they were playing in ways that went beneath the screen, helping players translate this multifaceted information to their own gameplay. However, club members also used platforms to go beneath the screen in ways that more readily relied on each other rather than external sources of information such as these fan-run wikis, press releases, and spectating matches.

Understanding People. As discussed above, one of the literacy demands was to translate to and from multimodal sources that offered in-depth information of aspects that lay beneath the screen of the games they played. This literacy demand occurred in different ways for different videogames. However, it also occurred on streaming platforms in ways that involved other student-members more directly. One of the multimodal activities that members engaged in was that of live streaming their gameplay. To stream, club members used platforms such as *Twitch* and *YouTube*. Doing so was largely voluntary, but teachers often framed such activities as helpful along lines of developing familiarity with the technologies and activities of streaming while also serving as a way of building a digital portfolio of themselves as players. Such portfolios were described by teachers as potentially later serving students if they decided to pursue a post-high school future in esports. One conversational snippet on this topic included ***Mrs.***

Abel asking students to capture videos of their gameplay and stream it so that these serve as "an example of their play for college recruiters to look at."

Students consistently streamed some of their practice and league matches on *Twitch* or *YouTube*. These streams are viewable by anyone on the internet, but they were specifically intended to be available to other members of the club and teachers outside of the club who might be interested in watching their matches. As such, students regularly shared links to these streams on *Discord* so that others could spectate them (see Figure 27). Despite being viewable by anyone on the internet, these streams have relatively few views and served more as a means to record and share gameplay for portfolio building purposes, as discussed above. A more practical use of these streams, however, was as content that could be reviewed for gaining deeper understanding of the game and of their in-game performance and decision-making process.

Using these recordings for the purpose of discussing them to acquire greater understanding of each other's performance and decision-making represented another prominent way in which participants went beyond the content that was rendered on their screen to instead illustrate the demands of going beneath the screen. In such instances, participants went beneath the screen to understand not just the underlying game rules that can either be clearly stated or well hidden, but to understand their own performance in relation to these game rules. A meaningful difference between the use of their own match recordings when compared to using sources such as the *YouTube* channels, wiki websites, developer press releases, and esports broadcasts discussed above is that here, they are relying on other club members to collectively meet similar goals as those other sources but in more locally oriented ways.

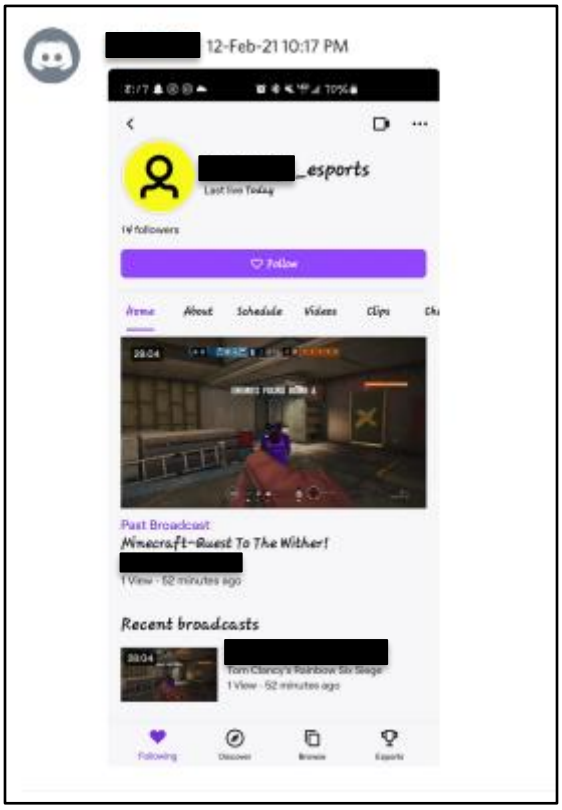

Figure 27. A student sharing a link on Discord to the school club's Twitch channel where the regular streams can be spectated live and rewatched later.

Meeting these demands of going beneath and beyond the screen was important because, as I have explored in previous sections, these activities, though competitive, are also communal and social. As partly social activities, it is important to the participants to understand not only the technologies, platforms, and programs they use, but also each other. Several students pointed to this importance during their one-on-one interviews with me by saying, for example, that "you need to communicate, participate, and really work together, plus trust your teammates that they have your back" (***Interview—Juan***) and that "there's sometimes things that you do that could help somebody else out in the game and

there's things that they could do to help you bond" (***Interview*—*Silvio***). The importance of this communal aspect of their demands is further illustrated in other related practices the members engaged in, such as activities that bolstered their senses of belonging that included, for instance, the processes of making the team logo and of playing specific videogames that were *not* esports titles, such as *Among Us*. Additionally, as partly competitive activities, it was important for participants to understand not only each other but understand their opponents as well (see Figure 28). To understand their opponents, participants engaged similar activities that would have them reach beyond the screen through skirmishes.

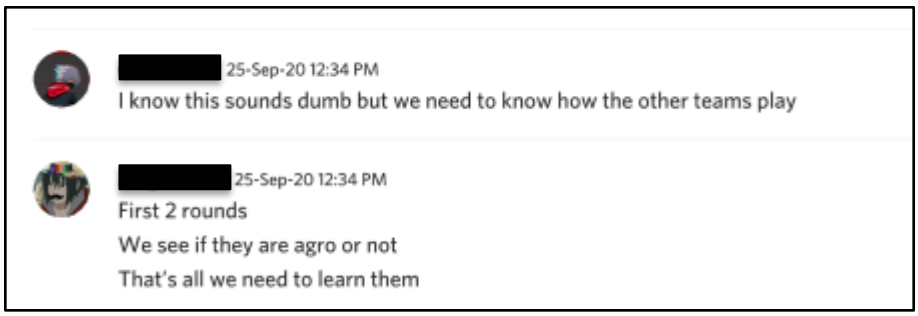

Figure 28. Students saying that they should focus on understanding how the opposing team plays as a way to gain a competitive advantage and identifying a strategy to do so.

To understand their opponents, participants engaged in skirmishes that were coordinated in part by the sponsor-teacher and in part by the official host league. Skirmishes are practice matches against opposing teams that do not impact either team's official placement or scoring metrics; they are purely exhibition matches. These skirmishes were framed by teachers and approached by students as "opportunities to better understand other players and teams" (***Conversation snippet*—*Mrs. Abel***) they will

be competing against in upcoming matches. These were, in other words, opportunities to gain better understanding not only of the programs, and not only of each other as teammates, but also of their opponents. To understand their opponents, participants needed to go beyond the screen to situate their knowledge in the context of the game and each other in relation to what their opponents would do. In this case, going beyond the screen involves similarly uncovering how all related interactions (i.e., in-game components such as weapon attachments; teammates and their "communications" [***Interview***—***Juan***] and "bonds" [***Interview***—***Silvio***]) function under the added dimension of facing actual opponents. The importance of understanding opponents relates to the topic of going beyond the screen in ways that incorporate more information than what can be purely gleaned from content as it is rendered on the screen and represents an important literacy demand in this context.

Summary

In this section, I have explored two assertions to my second research question on literacy demands. My first assertion explored how the high school esports literacy demands of digital technologies, platforms, and programs required timely and unambiguous multimodal communication between all those involved. My second assertion explored how these literacy demands in high school esports were composed of multidimensional fluencies between what is *on* and what is *around* screens. In the following section, I move to explore my third research question on the literacy perspectives of high school esports teacher-sponsors and student-members.

Literacy Perspectives

In this section, I explore two assertions to my third research question: *How do students and the sponsor-teacher construct and characterize their respective literacy* ***perspectives*** *on their experiences as part of the esports club?* This research question is informed by Perry's (2012) sociocultural framing of literacy perspectives. Sociocultural perspectives containing influential notions of language as instantiating culture (e.g., Gee, 1996; Halliday, 1973) help us see language as dependent on the social world, always occurring within and being shaped by a cultural context. As Gee (1996) noted, language "always comes fully attached to 'other stuff': to social relations, cultural models, power and politics, perspectives on experience, values and attitudes, as well as things and places in the world" (p. vii). Gee called this "big 'D' Discourses" and referred to them as an "identity kit" that can reflect all of this "other stuff". As such, it is this other stuff—the big 'D' Discourses—which I refer to when I say "perspectives". In exploring student and teacher perspectives, I look to examine a combination of their actions and conversations as part of the esports club, examining how these can lend insight to understanding their views about their esports practices and demands.

To address my third research question: *How do students and the sponsor-teacher construct and characterize their respective literacy* ***perspectives*** *on their experiences as part of the esports club?,* I draw holistically from my data sources to develop two assertions:

Assertion 5: Student-members and sponsor-teachers characterize the engagement with the digital technologies, platforms, and programs involved in high school esports as

positively contributing to develop multifaceted senses of "belonging", of a "safe space", and of opportunities for "critical thinking".

Assertion 6: Student-members and sponsor-teachers characterize their engagement with the digital technologies, platforms, and programs involved in high school esports as positively contributing to future occupational or educational preparedness and health.

Assertion 5: Multifaceted senses of belonging, building a safe space, and engaging in critical thinking

A literacy perspective involves exploring how participants characterize their own involvement and actions as shaped by cultural and social contexts. In the context of this study, these literacy perspectives focus on the multimodal engagements with the digital technologies, platforms, and programs involved in high school esports. It is important to note that the main activity of actually playing the videogames (i.e., the programs) competitively, though important and prominent, was not the only activity that inspired insight into participant perspectives. By holistically examining their talk and interactions, it appears this study's participants characterize their involvement in high school esports as a novel and effective option for satisfying their desires to "belong" to, and be valued in, an affinity-driven "safe space" (words in quotation marks were used by participants and thus represent emic terms instead of etic terms). In every one-on-one interview with participants, when asked to describe any of the benefits of high school esports, the topic of "belonging" was directly brought up multiple times. The participants conveyed how becoming involved in high school esports through multiple ways of participation helped give them "an opportunity to be a part of something at school" (***Interview***—***Silvio***). They

described being able to fulfill these desires to belong through multifaceted ways that included the design and use of the team logo and jersey, playing "their way", and seeking and getting recognition from other teachers.

Belonging: Design and use of team logo and jersey. Designing the club's logo and being able to place it on the club jerseys was a primary activity that students described as increasing their senses of belonging. As a collectively created artifact, iteratively designing—and later on using—these jerseys represented an important indicator for students' senses of belonging. The jerseys in particular came to be characterized as "bring[ing] people in" (***Interview—Silvio***), providing "a sense of being part of a team" ***(Interview—Juan***), feeling "like a reward" (***Interview—Jack)***, representing a way to "get to actually be recognized by someone" (***Interview—Cristobal***), and "doing a good job of promoting teamwork" (***Interview—Carmelo***). These jerseys were so important to students that they would regularly show concern for, and put effort in, making progress in creating them through synchronous and asynchronous ways. For example, throughout the study's duration, across both esports clubs, not a single synchronous meeting concluded without students checking on the progress and status of the jerseys. Whether it was early in the term when they were still figuring out what kind of shirt (e.g., expensive or cheap) the club could realistically afford, or whether it was later in the term when they asked about the delivery date and method (e.g., in-person pick-up at school or household shipping) for the finalized jersey, students clearly placed high importance on these artifacts.

Although this study took place during a period of online-only interactions, the club members described the importance the jersey would serve once the school was fully

in-person. The finalized artifact itself, as an unchanging object, was described as important for identifying who, among the many other students at the school, shares club members' own affiliation and affinity for high school esports. Having a finalized jersey that they could wear was characterized as useful for "getting to know who exactly is in the club and what you guys might have in common" (***Interview—Silvio***). This function was described as important by all participants because the jerseys provided "a sense of being part of a team" (***Interview—Juan***) and represented a way to "actually be recognized by someone" (***Interview—Cristobal***). These perspectives of promoting senses of belonging were echoed by the teacher-sponsors of the clubs.

Teacher-sponsors of these high school esports clubs similarly characterized the importance of designing and using a team logo and a jersey as contributing to increasing senses of belonging for the students. As one example, ***Mrs. Abel*** repeatedly said during regular meetings that she "wants everybody who wants a shirt to be able to get a shirt because that way we can feel more like a team" (***Conversation snippet—Mrs. Abel***). To this end, ***Mrs. Abel*** repeatedly dedicated portions of the regular synchronous meetings and used the asynchronous *Discord* chat to follow up on (see Figure 29) and brainstorm ideas for the design, funding options, and usage of the logo and the jersey.

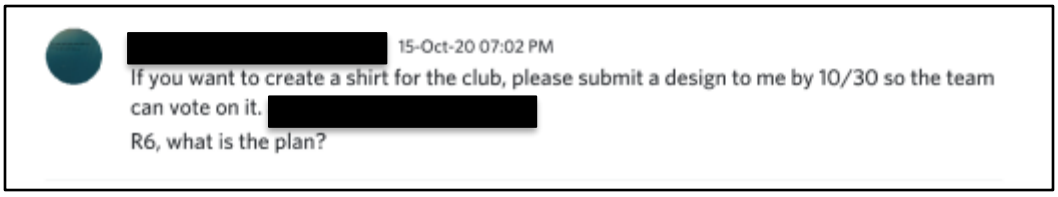

Figure 29. ***Mrs. Abel*** encourages students to participate in the creation of a team logo that will later be used on the team's jersey.

However, not all clubs were successful in designing and using the logo and jersey. One of the clubs struggled to meet regularly. The sponsor-teacher of this club described their struggle to design a logo and jersey as being rooted in not being able to regularly meet and participate in-person due to COVID-19 safety restrictions. To ***Mrs. Kendra,*** the club she was sponsoring did not "want to meet right after school and be on *another Google Meet* after being on these [Google] *Meets* for six hours a day" (***Interview—Mrs. Kendra***). As a result, this club managed to meet only seven times during the five-month timeframe of this study. ***Mrs. Kendra*** described that she originally saw students who "wanted to design their own t-shirts, they wanted to sell t-shirts, they wanted to super promote esports, they were willing to interview with the news team on campus, and they wanted to do all of it" (***Interview—Mrs. Kendra)***, but because of the low levels of participation of this particular club during this study's timeframe, these activities were not followed through on. Despite these low levels of participation, during the few times that students did meet and interact in synchronous meetings, I noticed that their conversations involved some discussion of a potential logo and jersey. Even though this club was struggling to meet and carry out the necessary tasks to be a functioning club within the constraints of fully online interactions, their conversations still gravitated towards topics such as jersey and logo design. This suggests that participants hold a perspective in which designing a team logo and jersey holds high importance because such forms of engagement with high school esports activities develop participant identities and help members feel like they belong. Additionally, the literacy perspectives of student-members and teacher-sponsors that participate engage with the technologies,

platforms, and programs of high school esports in ways that foster a sense of belonging seemed to also extend to building what were described by teacher-sponsors as “safe spaces”.

Safe Spaces: Playing “their way”. As a videogame-oriented space, one prominent activity in the esports club was playing videogames. The teacher-sponsors involved in this study had unique experiences with videogames, gaming, and esports in general. For example, ***Mrs. Abel*** described herself as a gamer since childhood, ***Mrs. Kendra*** described herself not as a gamer but as someone with experience in esports because her son participates at the professional level, and ***Mr. Andres*** described himself as a long-time enthusiast of fighting games specifically. Every teacher had experiences with videogaming and the positive impacts and inclusionary effects these can have on players. However, they also had experiences of the negative and exclusionary behaviors that are also part of videogame affinity spaces described by Gee (2004). As such, every teacher drew from their backgrounds in gaming and esports to clarify how they have seen or experienced forms of harassment, toxic behavior, and general negative interactions between players. They used these experiences to communicate their perspectives that high school esports should represent an option to building what they called “safe spaces” within the school’s club setting.

Not being inclusive of players who play certain games in a high school esports club was identified as an issue. Teachers described this as an issue of being a safe space. To them, safe spaces in high school esports invites those who join to feel included and not judged for what games they enjoy nor how they play them because “people can like what they like, they can be who they are, and there's absolutely nothing wrong with that”

(***Interview—Mrs. Abel***). For example, esports can be “a place for the other kid, the kid that wants to participate in something but are not the football player and are not that particular type and gives them a place to participate and to do something they enjoy with others” (***Interview—Mrs. Abel***). ***Mrs. Abel*** explained that she has had to actively try to shift student perspectives that she summarized as: "if I'm an esports person, I play these games and I don't touch any other games because if I touched any other games, that would make me lame" (***Interview—Mrs. Abel***). Building and fostering such spaces were described as important because it helps student-members recognize that “each member can have their own way of playing” (***Interview—Mrs. Kendra***) and helping students “learn that perspective is important because I have concerns that there are, you know, the ‘real’ esports games and then there's the lame esports games and I want to kind of crush that mentality” (***Interview—Mr. Andres).*** In short, for teacher-sponsors, high school esports clubs should be places to get away from the harassment, toxic behavior, and general negative interactions that the teachers have witnessed. Consistent with this, teachers and students both characterized their literacy perspectives in such a way that sought to extend belongingness and safe spaces by disseminating player performance to other members of the school who were not members of the club.

Building wider belongingness and larger safe spaces: Seeking and getting recognition from other teachers. As discussed in the previous sections, the literacy perspectives of teachers and students about their engagement with the technologies, platforms, and programs involved with high school esports focus on being inclusive. This focus on inclusivity is seen through their perspectives that high school esports should strive to develop senses of belongingness and build safe spaces. In the second half of the

school year, one way that teacher-sponsors emphasized the importance of these inclusive goals and of building wider belongingness and larger safe spaces was by disseminating and highlighting some of the positive results of the club members in their competitions. In one case, ***Mrs. Abel*** began to share with other teachers at the school the performance results of club members who were students in those teachers' classes. She shared with them updates that specific students had recently won an important match and notified the students through *Discord* that she had sent the teachers what she called a "bragging email" (see Figure 30)

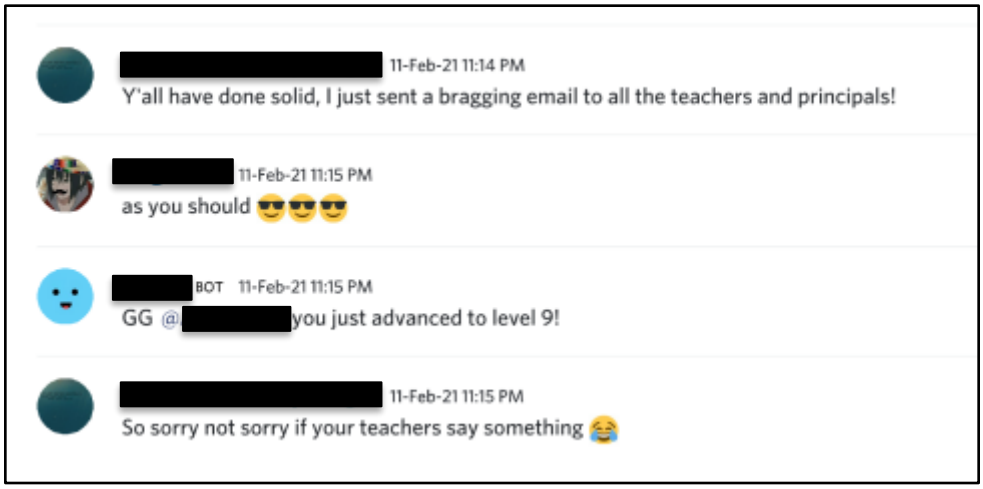

Figure 30. ***Mrs. Abel*** notifying the student members that she had sent a "bragging email" to other teachers and principals.

Soon afterwards, students replied on *Discord* that they had received a "mention" from their teachers during their class with those notified teachers (see Figure 31).

This act of disseminating player performance and making other teachers aware of club outcomes was intended to bring players some form of recognition and acknowledgement for their efforts. It was described as an effort "to help them and

potential new members of the club see that what they do here matters by showing that other people care" (***Interview—Mrs. Abel***). Overall, students appeared to enjoy such acknowledgements and described this as "I just feel like now we get to actually be recognized by someone. Now we actually have—we're getting recognized not just by our parents, but the school in general" ***(Interview—Cristobal).***

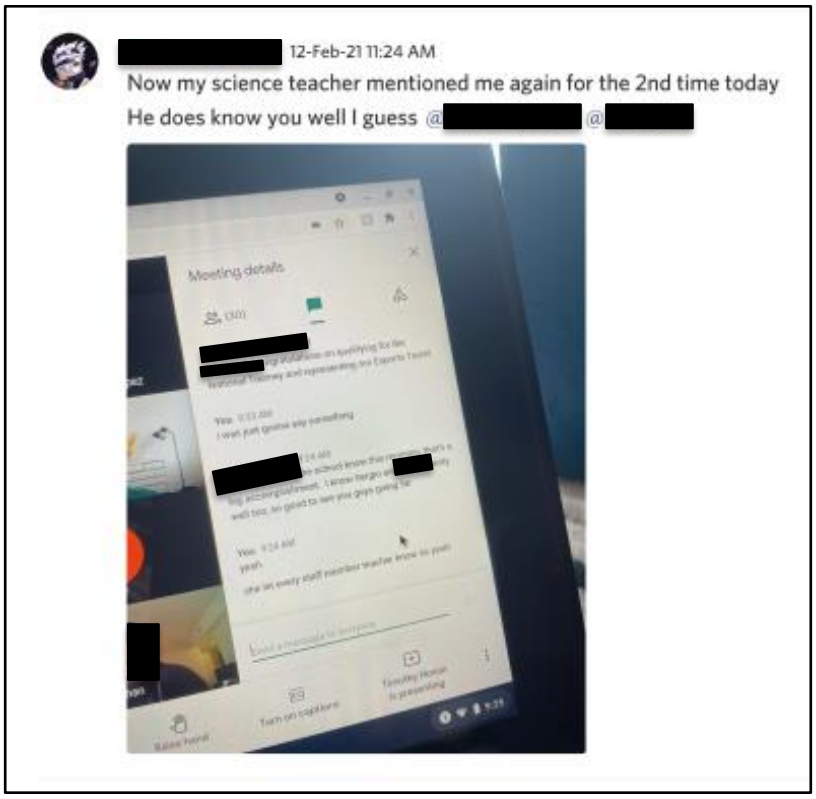

Figure 31. Student shares the moment when their science teacher acknowledged their performance for the high school esports club during class.

The examples discussed above of the design and use of the team logo and jersey, playing "their way", and seeking and getting recognition from other teachers all suggest that the literacy perspectives from teacher-sponsors and student members largely revolves around how engaging with the technologies, platforms, and programs in high school

esports positively contribute to developing multifaceted senses of inclusivity. In addition to these senses, teachers also expressed the perspective that engaging with these technologies, platforms, and programs also holds important opportunities for engaging in critical thinking.

Critical thinking opportunities. One sponsor-teacher in particular, ***Mr. Andres***, characterized the engagement with digital technologies, platforms, and programs involved in high school esports as offering opportunities to have student-members participate in critical thinking. These opportunities were directly relevant to and came about from activities and events in high school esports as witnessed by ***Mr. Andres.*** For instance, in my interview with him, we talked about esports leagues and tournaments and how these are financially supported by different entities. One of the examples ***Mr. Andres*** emphasized was that of esports tournaments that have a military sponsor. Such sponsors usually prominently display their logo and tend to advertise images that resemble many of the games that the students play as esports. ***Mr. Andres*** explained that, as he becomes more heavily involved with the esports club at his school in the future (this was his first year at the school), he hopes to incorporate conversations with the students about these esports realities that they will continue to be exposed to but might not overtly notice. Some questions and conversations that he mentioned he hopes to bring up in the future as club-related activities stemmed directly from his participation in esports over his first year at this school. This is because, during this time, he explained that he "came in into the esports club here pretty excited about these scholarships that the students can get" but then noticed who the financial backers of those scholarships were and what potential ulterior motives those entities, such as military branches, might have with

students. As such, he hopes to be able to discuss these and other topics that include, as he described them: (a) issues with schools, particularly schools with low resources, and how institutions like the military will try to get students in pipelines to the military in general and in esports specifically, (b) how students, particularly those from low income households, can find themselves very vulnerable to promises and images of such military institutions, and (c) how low academic performance can exacerbate students' decisions to pursue a military position. This impact and potential preparedness for different future opportunities forms the basis for my next assertion: that sponsor-teachers and student-members display a perspective that the esports practices and demands help prepare students for the future.

Assertion 6: Contributions to students' post-high school futures and health

> I'd say esports is an opportunity that you might be able to get. Basically you do something that you might love doing, playing videogames a lot, and maybe since you have a very great skill in some games, you might actually do it for something that can actually help you succeed better in life like the scholarships or the money that you possibly save up for college or maybe a car in the future ***(Interview—Carmelo)***

As I explored in the previous section, sponsor-teachers and student-members display literacy perspectives that high school esports foster multifaceted senses of belonging, should build safe spaces, and have the potential to engage students in critical thinking opportunities. In addition to these perspectives about the present impacts of esports on students, participants also illustrated their literacy perspectives about the future impacts of high school esports on students. Mainly, both teacher-sponsors and student-members expressed the perspective that the practices and demands of high school esports were serving students to prepare them for improved opportunities to secure a higher education

through scholarships or for future occupational success, or in other words, to be better at their future jobs.

Esports scholarships. In our conversations about esports, students often mentioned the college and university scholarship opportunities that are becoming increasingly available across the United States. However, as I have already explored in a previous section, many students mentioned that the promise of such esports scholarships were not overly important when deciding to participate in high school's esports. For instance, one student mentioned that "the reason I joined the club was just to have fun and participate and compete with others, not necessarily for scholarships. It's just all for fun" ***(Interview—Silvio)***, which was a sentiment that was similarly expressed by other student-members in the club, in addition to the one student who mentioned not knowing what scholarships were nor how they functioned.

Despite not representing an important justification for participation in esports to these student-member participants, scholarships were still largely seen as a potential opportunity worth pursuing for anyone who would want to continue on to tertiary education after their high school experience. These scholarships were described as "if you did really good, and you were to get it [an esports scholarship], you could be like, 'oh, look how much my hard work in gaming took me'". Similarly, the importance of getting such scholarships were consistently described as helping prove that "their efforts aren't just a waste and that they can actually go somewhere or get money for it [for esports] (***Interview—Silvio***) and as "having an actual future playing the game" (***Interview—Juan)***. In all, students generally expressed their literacy perspectives about the engagement with the technologies, platforms, and programs of high school esports

as—for those who wished to pursue esports for potential scholarships—important to "keep in mind that you're doing this for hopefully yourself in the future" (***Interview—Carmelo).*** This future-oriented literacy perspective for what the engagements with high school esports can do is a common thread shared between sponsor-teachers and student-members of the club.

Similarly to student-members, the sponsor-teachers all agreed that the engagements with the platforms, programs, and technologies in high school esports can serve as a source for earning scholarships that can assist in attaining a college or university education. As ***Mrs. Kendra*** succinctly put it, "scholarship money is the ultimate goal" in high school esports (***Interview—Mrs. Kendra***). This perspective was also evident in other teachers' actions and words. For example, the encouragement from ***Mrs. Abel*** and ***Mrs. Kendra*** to have their respective club's student-members build up a player portfolios by compiling gameplay highlights and live streams as "an example of their play for college recruiters to look at", show that teachers hold a literacy perspective of the practices and demands of high school esports as being helpful along lines of developing future educational attainment opportunities. As ***Mrs. Abel*** put it, "you can put that [the fact they played on esports teams] on scholarship applications" ***(Mrs. Abel).***

Combined, the student-members' and the teacher-sponsors' esports literacy perspectives seem to align or overlap. That is to say, despite any misalignments between students and teachers' conceptualizations about the function of esports in high school (e.g. Assertion 2: Social functions over scholastic purposes), they hold a literacy perspective that agrees that esports contributes to future preparedness not only along

academic pathways such as those made available through scholarships, but also through professional occupations.

Professional occupations. The practices and demands of engaging with high school esports were described by student-members and teacher-sponsors as useful for building certain skills and experiences that can help ensure success in future occupations. For instance, students often spoke about how, by needing to work on and develop improved clear communication with teammates for their esports responsibilities, they were perhaps better prepared to have valued abilities in many jobs such as "heightened patience" for dealing with high pressure jobs. Examples of such jobs that were mentioned by students were retail-oriented occupations where they "might be working with multiple potentially annoyed or inconvenienced customers" (***Interview***—***Juan***) or "keeping an office running" thanks to improved communication with coworkers "because they're going to remind you of, like, your [esports] teammates" (***Interview***—***Carmelo***). Teachers similarly showed their own literacy perspectives in regard to the occupational preparedness that esports could have on students.

For example, ***Mrs. Kendra***, much like students, spoke about how high school esports participation "can organize and build team leadership, team camaraderie, the skills that we need to be a better employee, the skills that we need to be a better communicator" (***Interview***—***Mrs. Kendra***). She went on to also say that "we can take something that's a real-life thing that they enjoy and show them how they can use that to build their own character, their own skill set, their college portfolio...they can take something that they like for fun and turn it into a job". These comments from my one-on-one interview with ***Mrs. Kendra*** are consistent with her actions. For instance, she

repeatedly framed esports during the meetings that the club was able to have as having an ultimate goal that was more than "just a social club". Throughout the duration of this study, ***Mrs. Kendra*** would encourage students to more fully participate in the club and hold and attend regular meetings more often than what they ultimately were able to have (they had seven meetings over five months). She would do so by talking about how esports could positively impact their future job prospects and college scholarship money (***fieldnotes***) by saying things such as "these are...skills that can be transferred over into real life experiences and used to find jobs and to get into college and careers (***Mrs. Kendra***). One such skill that was often emphasized was communication.

Communication was a prevalent focus of teachers' perspectives of the high school esports practices and demands. For example, ***Mrs. Abel*** explained that "learning how to communicate thoroughly, learning how to communicate quickly, making decisions and having everybody understand exactly what that means, that's all definitely something that I'm working towards" (***Interview***—***Mrs. Abel***). The importance of clear communication was repeatedly addressed across multimodal sources such as the *Discord* chats in addition to the synchronous regular meetings in ***Mrs. Abel'***s club (***fieldnote***) (see Assertion 3: Demands of timely and unambiguous multimodal communication). However, emphasizing the development of abilities in communication along with other skills were literacy perspectives that were held by more than just the sponsor-teachers of the clubs.

Other teachers, administrators, and counselors at a school also expressed a literacy perspective that engaging with the platforms, programs, and technologies of high school esports can develop student abilities in "...advanced computer systems, AP [advanced placement] classes, Team building, Community building, streaming ability,

access to additional scholarships, advanced assignments in Math, Science, Engineering, Business, Computer Science Classes, World Museum and Park tours, etc." (***Artifact—email Feb 20, 2021—Mrs. Kendra***). In addition to these skills and experiences that other teachers, administrators, and counselors mentioned, all sponsor-teachers demonstrated a perspective that high school esports was about current and future health.

Health. Esports as a way for current and future health was an important perspective among all sponsor-teachers because of a hyper awareness of the more widespread general perception that videogames are a sedentary activity that runs contrary to healthy and active lifestyles (***fieldnote***). As one sponsor-teacher summarized it, "healthy includes social-emotional, right. Absolutely if I'm going to run a gaming club, and I mention it to the kids all the time, it's about nutrition, it's about food, and it's about exercise, and it's about balance" (***Interview—Mrs. Kendra***). Such descriptions illustrate that teachers think that high school esports is, or at least should be, sets of activities that promote general health and not risks taken at the expense of such health.

Summary

In this section, I have explored two assertions to my third research question on literacy perspectives of engaging in high school esports through digital technologies, platforms, and programs. A literacy perspective includes social relations, cultural models, power and politics, perspectives on experience, values and attitudes, as well as things and places in the world. My first assertion explored the literacy perspectives on the multifaceted senses of belonging, building a safe space, and engaging in critical thinking. My second assertion explored perspectives of how participating in high school esports contributes to students' post-high school futures and health.

In chapter five, I elaborate on the implications of the six assertions I have laid out in chapter four, discuss this work's significance to future research on this topic, lay out the limitations of this research, and describe how this work will contribute to my future research.

CHAPTER 5
DISCUSSION AND SIGNIFICANCE

The purpose of this study was to explore and describe, through a lens that focused on multiliteracies (Cope & Kalantzis, 2000; New London Group, 1996) and digital-age literacies (Aguilera, 2018, Aguilera, et al. 2020), what happens in the dedicated places, spaces, and interactions within and around high school esports. Guided by interpretive (Erickson, 1986), naturalistic (Lincoln & Guba, 1985) ethnographic (Hammersley & Atkinson, 2007), and case study (Stake, 1995) research designs, this study focused on exploring three specific literacy topics that are the core of this study's research questions: practices, demands, and perspectives. To explore these topics, I assumed the role of a *participant as observer* (Kawlich, 2005) for 22 weeks (Sep 23, 2020 to Feb 28, 2021) as a volunteer coach in two high school esports clubs in the American Southwest. During this time, I generated and collected data through participant observations, semi-structured and unstructured interviews, and artifact collection. To answer my research questions, I analyzed my data corpus across two coding cycles (Saldaña, 2016) and constructed three conceptual bins (Tracy, 2013) of practices, demands, and perspectives. From this, I then developed six total assertions—two for each research question—that I elaborated in the previous chapter.

In this chapter, I develop a discussion of these six assertions, point to implications on future related work in this area of study, lay out the limitations of this research, and describe how this work will contribute to my own future research.

Literacy Practices

My first research question explored the literacy *practices* (Lankshear & Knobel, 2011; Street, 1988) participants engaged in through the lenses of multi- and digital-age literacies. Literacy practices are the kinds of multimodal things people (can) do in the digital age with digital technologies. As such my first research question asked: *What digital-age multiliteracies **practices** are students and the sponsor-teacher enacting when participating in high school esports activities?*

My assertions to this first research question are based on evidence from my data corpus. These assertions go beyond stating the multimodal *whats* behind student and teacher actions and extend into exploring their reasons *why*—their purposes. Analysis of the data suggested that the multimodal practices involved in high school esports (a) served communal and competitive purposes and also (b) served social functions rather than scholastic ones. At face value, both sets of purposes appear to be at odds with each other, but the background literature and the gathered evidence suggest that they are not only integrated but integral to fueling the multimodal and digital-age literacy practices that participants engaged in.

Frames of affinity spaces (Gee, 2004) recognize that interest-driven endeavors have, for example, different routes to participation, multiple routes to status, and leadership is porous. Drawing on these frames help to see how high school esports allow for multiple forms of participation. In affinity spaces, there are *portals* and *generators* (Gee, 2004). A portal is some form through which a person can enter the affinity space (e.g. a web forum, an in-person event). A generator is what the affinity space is about, as it creates the content of the space and how people interact with it and with each other.

Due to COVID-19 safety measures, all the interactions took place through online resources and platforms. This means that the only portals to participation were web-based (though these portals were dispersed across different platforms and programs) for the duration of this study. The generators, however, were more diverse. Chief among these were how people interacted in competitive and communal ways as well as engaged in social rather than scholastic goals.

Digital-age literacies (Aguilera, 2018; Aguilera, et. al. 2020) highlight the ways that contemporary literacy practices are becoming increasingly dispersed across virtual and physical contexts (Aguilera & Pandya, 2018). These are, then, not focused on a proficiency with any set of digital technologies by themselves. Rather, digital-age literacies is a term "meant to emphasize the multi-dimensional nature of literacy demands, practices, and discourses in the rapidly changing, digitally connected contexts through which we exchange meaning in the modern world" (Aguilera, et. al. 2019, p. 3).

Having overviewed the frames of affinity spaces and digital-age literacies, below I discuss the implications of these communal and competitive practices as well as the social rather than scholastic goals through these frames.

Summary of Assertion 1: Communal and Competitive Goals of High School Esports Practices

To summarize, one answer to this first research question comes in the form of my first assertion: *Amidst a period of online-only interactions resulting from the safety procedures associated with the COVID-19 pandemic, participants' literacy practices involving digital technologies, platforms, and programs were used to engage with each other in communal and competitive ways.*

The literacy practices involved in these high school esports clubs were described by participants and observed by the researcher to serve communal and competitive goals. Such goals took place as socially situated and context dependent, which are in line with similar research on multimodal literacies and social practices (Rowsell et al., 2013). These practices were carried out through a mixture of digital technologies that, when seen through affinity space frames, illustrate how participants sought multiple ways to engage with each other to build community and compete. For instance, when—through text, video, images, and audio—participants sought feedback, invited potentially interested teachers to watch upcoming matches, interacted with a well-known esports analyst, logged and compared reaction times, described the specific game components to consider (e.g., barrels, optics, character abilities), and generally played and participated with other members of the club, they were engaged in multimodal practices that leveraged available technologies, platforms, and programs to build community and compete.

Significance of Assertion 1: Communal and Competitive Goals of High School Esports Practices

To extend on this summary I will now discuss how, in line with digital-age literacies, the multimodal practices of building community and competing are not focused on proficiencies with the technologies themselves. Rather, these practices should be seen as multi-dimensional, taking place across varying platforms, programs, and technologies for meeting crosscutting objectives such as complying with the social goals (Rowsell et al., 2013) that participants emphasized as crucial for their continued participation in high school esports. Thus, these high school esports contexts were ones through which participants exchanged meaning in the modern technology-enhanced world which was

rather abruptly thrust into online-only interactions due to the ongoing COVID-19 safety protocols. However, despite such abrupt changes, as many participants remarked, high school esports were "a way of helping build community, in a way, because you're still having to talk to somebody" (***Interview***—***Silvio***) over online modalities in competitive and collaborative ways.

As Street (1995) explained, the ways in which literacy practices take on meaning for those who engage in them is always dependent on the (un)stated ideological conceptions and values of their societies. It is beyond the scope of this study to make societal claims because this study looked at a specific context of esports as an extracurricular activity. However, on the scale of the esports clubs and its participants, it appears that the ideological conceptions and values associated with these spaces are strongly aligned to building communal relationships amongst its participants in ways that inherently involve competing through diverse digital technologies employed in multiple ways (e.g., sharing matches, comparing reaction times).

To honor such conceptions and values, potential gatekeepers (e.g., administrators, parents, teachers) to high school esports can strive to create opportunities for interested students to enter esports affinity spaces and engage in these competitive and communal goals. Doing so can be a way to encourage continued participation in competitive and community-building endeavors that are evidently valued by interested students. Additionally, part of the importance of creating and encouraging opportunities to participate in such esports affinity spaces centers on its evident agreeableness to transitioning from in-person *and* online ways of interacting to *exclusively* online forms of interaction. Although in-person interactions continue to steadily make their safe societal

return, maintaining an option that can relatively easily adapt to exclusively online interactions may prove useful and adaptable in the future. This usefulness would center on maintaining a portal through which students may enter affinity spaces that generate the valued competitive and community building activities in schools into the near future, when physical health might still be jeopardized during in-person interactions.

The current study may suggest that creating and encouraging such high school esports affinity spaces builds pathways for members to leverage their current and potential future social ecosystems. These ecosystems may form communal connections among those who are inside (e.g., fellow student-members) and adjacent to their affinity (e.g., teachers, parents). The communal and competitive foci of this first assertion ties to notions of "morphing literacies" (Blair & Sanford, 2004) and the potential influence or "power" of literacies through playing videogames (Sanford & Madill, 2007) and interacting through other platforms and technologies. Here, esports and videogames can both be viewed as access points into a particular culture and to the social spaces in which they reside. Engaging with others through platforms, programs, and technologies to build community and compete are activities that are inextricably tied to the multimodal digital-age practices of high school esports. Competing and building community appears to aid participants' meaning making processes and help motivate them to engage with diverse platforms, programs, and technologies. Furthermore, the descriptions of "competitive fun" seen in participants' descriptions of specific games (e.g., Rainbow Six Siege) but not other games (e.g., Rocket League) and how specific players (e.g., those who take it "seriously") but not other players (e.g., those who do not take it "seriously") approach

their gameplay each communicate the need for challenging and productive engagement not only with the technologies themselves but also with other people too.

These findings on competitive and community building goals as part of literacy practices in this study align with that of Beck and Wade (2006) who, with a focus on the current and future impact on business, described videogamers as committed, team-oriented people who "play to win". These findings may also lend support to other work that has pointed to the outcomes of competing in popular esports games such as those in the *Call of Duty* franchise, where critical thinking skills, strategic thinking, leapfrog learning, and grit development were evident (Engerman, 2016).

Summary of Assertion 2: Social Functions over Scholastic Purposes

Here, I summarize another answer to the first research question, which is my second assertion: *Despite teachers framing and presenting the literacy practices of esports clubs to stakeholders as contributing to scholastic (or academic) purposes, students illustrate that the social functions of esports' literacy practices take precedence over scholastic goals.*

My second assertion of participants' literacy practices focuses on contrasting what teacher felt high school esports were expected to accomplish versus what it was actually used for by students. In other words, this assertion explores what was expected versus what occurred. In this vein, this assertion highlights how teachers framed high school esports to potential gatekeepers (e.g., parents, administrators) versus for what purposes students actually participated in it. This assertion is based on the multidimensional observations of and remarks from participants that positioned high school esports as sets of activities that would help serve scholastic purposes but that appeared to serve social

functions instead. For instance, when teachers used multimodal forms of communication that highlighted the ways that engaging in esports could hone skills in mathematics, physics, and chemistry, they were trying to convey that esports in high school were beneficial because it could help further prepare students along scholastic goals. However, the ways students engaged with esports (and with each other) illustrated a different goal. To students, it was not the scholastic goals but the social goals that made high school esports worthwhile. When students used platforms, programs, and technologies to play socially focused games, collaborate to create a team logo and jersey, and downplay, for example, the importance of earning scholarships for higher education through esports, students were demonstrating that the literacy practices they engaged in most were those that were socially oriented instead of scholastically oriented.

Significance of Assertion 2: Social Function over Scholastic Purposes

To extend on this summary, I will now discuss how, consistent with research on the positive impacts of extracurricular activities on aspects of school performance (Roeser & Peck 2003), esports in high schools were framed and presented as helping serve scholastic purposes. This perception of esports' positive scholastic purposes aligns with recent work that has adapted and integrated esports for explicit scholastic goals. For example, the work of Anderson et al. (2018) has explored how esports participation connects to STEM careers, and developed a one-year course that integrates esports as part of the core curriculum of a high school class. Such scholastic purposes have been attributed as a potential impact of videogame play in general. There is an extensive sample of previous work now on the forms of learning from games-based curricula and environments (Plass et. al, 2019). Learning in and around games-based spaces and

curricula has long been characterized as fostering, for example, scientific expertise such as the ability to explore diffusion and osmosis at molecular levels (e.g., Meir et al., 2005), helping students make sense of advanced science content and alleviate commonly held misconceptions in, for instance, electricity (Sengupta & Wilensky, 2009), and fostering scientific approaches to game-specific problems (Steinkuehler & Duncan, 2008). Furthermore, such work often argues how this learning can extend well beyond just playing the specific videogames (Gee, 2003; Steinkuehler, 2006b).

Despite the existing literature on game-based learning and of teachers' original framings of esports, the activities within the contexts of this study's clubs were not engaged in with an emphasis on such scholarly purposes. Rather, it was their social functions that took precedence. I argue that this is perhaps due to three factors: students wanting to exercise their autonomy in determining esports' functions, social distancing measures caused by the COVID-19 pandemic, and web-meeting fatigue.

A focus on autonomy, which Deci and Ryan (2002) described as the ability to make meaningful choices about one's own environment, seemed to have played an important part in esports becomingly primarily a source for social interactions. Autonomy here is part of Social Determination Theory (SDT) and refers to people having "weight in decision-making" (Deci & Ryan, 2002, p. 303). Such autonomy often found in videogames has been identified as a "good" design to mimic in learning and literacy (Gee, 2003). This weight in decision making has thus taken the form of allowing students to select, for example, the order in which class work is to be completed and has formed a basis for work such as *gameful learning* (Hayward & Fishman, 2020). Although here I am speaking about how scholastic purposes (or learning) was *not* a focus of these esports

contexts, aspects of theories of human motivation, such as SDT (Deci & Ryan, 2002) and how they are applicable to understanding learning and literacy (Gee, 2003), are still relevant for understanding what occurred in these esports contexts and the reasons why. The gathered evidence, informed by frames such as SDT, thus suggests that students exercised their autonomy to engage in esports practices not for scholastic purposes, as was originally framed and intended by teachers, but for social ones instead. This decision was, in turn, fueled by the other two factors I listed earlier: social distancing measures caused by the COVID-19 pandemic and web-meeting fatigue.

For the duration of this study, all school and club interactions were constrained to occur exclusively online due to safety and health measures as part of the COVID-19 pandemic. As part of these measures, social distancing came into and remained in effect. This is important to note, as one student put it, "because we have to social distance, [esports] is a way of...still having to talk to somebody" (***Interview—Silvio***). This meant that students recognized that the social distancing measures put in effect took away opportunities for what students classified as important in-person social interactions. Because esports was the only school club activity to remain active amidst these measures, student-members leveraged this space and the associated engagements with each other through programs, platforms, and technologies, as their missing opportunity to interact with each other. Doing so was described by student-members and teacher-sponsors as helping students achieve their articulated needs of socializing with others outside of their class' web-meetings. Participants described these class web-meetings, in comparison to in-person classes, as having much more limited opportunities to interact in the way they would have interacted in the hallways while they were walking from one classroom to

another or during recess. Related to this was the third factor I listed earlier: participants did not want to engage with esports as a "requirement" through web meetings because they would be doing so at the end of the school day, at a point in the day that was immediately after they had already engaged with their schoolwork as a requirement through web-meetings.

Due to the exclusively online interactions, participating in schoolwork and extracurricular activities such as esports occurred through screens. This was something that participants of one club in particular saw as detrimental to continue engaging with the club's responsibilities. Due to this, their club met rarely and did not officially participate in any esports leagues during this study. Similarly, the other club participated in official esports leagues, but did so with the primary intention of having esports serve their social needs, as is evident in the multimodal evidence discussed in the previous chapter.

For literacy and esports research, this means that the games that esports clubs play and the numerous multimodal activities that involve programs, platforms, and technologies, in addition to presenting competitive ways to participate, must also provide opportunities to socialize and engage with each other. This is evident in one student's comments that they enjoy "getting to know people and how they're playing [and get]...better at the game in general" (***Interview***—***Cristobal***). Additionally, this becomes especially salient amidst a time when social interactions were exclusively carried out online, as these were described to be imperfect remedies to the relatively sudden lack of in-person interactions. This, in turn, becomes an important implication because, as research of the impact of COVID-19 has shown, children as well as young adults are

particularly at risk of developing symptoms of anxiety due to such social restrictions (Orgilés et al., 2020).

This is important because we collectively expect and entrust formal learning environments such as schools to prepare younger generations for the future. Given societal expectations of formal educational structures, the need for schools to adapt and leverage emerging technical and creative uses of digital technologies in productive ways is rendered important. In schools, one such emerging way that the technologies are being used by students as a platform for engaging in digital-age literacies is esports. This is especially important because esports relates to literacies in the digital age's rapidly changing, globalized, and technologically mediated society. As esports in high schools continues to exhibit consistent growth and expansion, resulting in more widespread impacts on our youth, the importance of continued understanding of esports in schools will be a worthwhile endeavor.

Literacy Demands

My second research question explored the multimodal and digital-age literacy *demands* (Lemke, 1998) of engaging in high school esports through platforms, programs, and technologies. Literacy demands involve being able to fluently juggle multimodal representations and/or interactions between whichever is most appropriate in the moment and freely translating back and forth among them. As such, my second research question asked: *How do students draw on literacy resources and enacted practices to meet the digital-age multiliteracies* ***demands*** *of participating in high school esports?*

My assertions to this second research question explores literacy demands as extended notions of *text complexity* (Pearson & Hiebert, 2014) that go beyond a purely

language-based literacy. In other words, I look not just at what participants "*say*" and where (e.g., modality, technology, platform) they say it, but at what they *achieve* with what is said and what is required for this achievement to occur. This is because the ways in which participants interacted, and made meaning of those interactions, were inherently multimodal, requiring them to leverage different platforms, programs, and technologies for differing, though sometimes overlapping, purposes.

Similarly, as in my discussion of the first two assertions in the previous section, my following two assertions to this second research question also draw from frames of digital-age literacies and multimodal literacies in my discussion.

Summary of Assertion 3: Demands of timely and unambiguous multimodal communication

To summarize, one answer to this second research question comes in the form of my third assertion: *The literacy demands of using digital technologies (e.g., computers, mobile devices, videogame consoles), platforms (e.g., Discord, YouTube, Twitch), and programs (e.g., Paint, specific videogames) emphasize unambiguous and timely multimodal communication for managing the team and scheduling events.*

The literacy demands of these high school esports contexts were focused on using the platforms, programs, and technologies to primarily (a) manage members and (b) organize schedules. Engaging in multimodal forms of web-based communication (e.g., email, *Discord*, *Google Meets*) required that participants accurately and efficiently communicate in multimodal ways. For example, when teachers and students shared their screens during *Google Meets*, then tagged each other on *Discord* messages, and later coordinated with each other through game-chat, they were fluently juggling between

multimodal representations and interactions, sometimes in synchronous and other times in asynchronous ways. Managing members included, among others, managing the people (e.g., players, parents) and money (e.g., funding activities, use of funds). Organizing schedules included ensuring that practice times and official match times were known and adhered to by those involved.

Significance of Assertion 3: Demands of timely and unambiguous multimodal communication

To extend on this summary, I will now discuss how needing to communicate unambiguously and in a timely manner are both relatively universal demands of any communication attempt, regardless of modality. However, researchers have emphasized the importance of supporting students' literacy experiences in the context of their everyday lives (Lankshear & Knobel, 2011). Such everyday literacy experiences involve multiple modalities of meaning making and sharing. At present, when many facets of our life are digital, the everyday life experiences of a growing number of students involves online ways of communicating in clear ways for specific purposes. In this study, such ways of communication involved digital technologies (e.g., computers, mobile devices, videogame consoles), platforms (e.g., *Discord*, *YouTube*, *Twitch*), and programs (e.g., *Paint*, specific videogames). Although textual forms of communication are a primary "currency" of much communication, the everyday ways in which these technologies, platforms, and programs are used involve more than just text; they involve symbols, voices, and images, among others.

This is important to note because, as digital technologies change to include more communicational tools as options, such as verbal and nonverbal tools, so too do our uses of these tools change as well as what we (can) achieve with them. As one example, ever since

emojis—visual icons that often represent emotions—became standard communicational options on the web, which themselves evolved from smileys and emoticons, work in wide varieties of disciplines has documented how our uses and what we can achieve with them have changed (Bai et al., 2019). These can, for example, be used to help clarify intentions in ambiguous contexts (Thompson et al., 2016) where useful multimodal markers such as intonation, are missing. Similarly, the uses of multimodal forms of communication that are now used daily by those who participated in this study include platforms such as *Discord* and other forms of communication that employ differing tools, such as emojis, "hashtags", "mentions", and graphics interchange format (or GIFs), among others. In addition, different combinational uses of these are often leveraged simultaneously, such as when participants described having a web meeting open while playing *Rainbow Six Siege* and using *Discord*.

As I mentioned earlier, needing to communicate clearly and quickly are relatively universal demands of communication, regardless of modality. However, within the physical and temporal boundaries of this study of high school esports clubs, each of the employed forms of communication and their specific tools demand that users fluently translate back and forth between them in familiar and new ways, for existing and emerging goals and needs. For instance, communicating for social and competitive ways on *Discord* may be familiar, but doing so exclusively through online forms of communication in what otherwise would have been in-person interactions, with the intention of, for example, "try[ing] to get everyone for *Siege* on Mondays to just practice" (***Interview***—***Jack***) represents emerging goals and needs.

For literacy research, this means that the shift toward a more digitized culture has given rise to new social practices, artifacts, identities, spaces, and relationships (Gee, 2010;

Jenkins et al., 2009), an observation that has been the impetus behind the New Literacy Studies (New London Group, 1996) and Multiliteracies (Cope & Kalantzis, 2000), that will continue to be relevant into the future. Esports in general (and esports in high schools specifically) represents but one of the many recent permutations that involve the multimodal uses of technologies, platforms, and programs in relation to videogames in the digital-age. For esports research in high schools, it means that one potential direction for future work can be a focus exploring the communicational demands, along with associated goals of these communications, in more robust ways that take into account the fast-evolving and highly digital nature of these interactions.

Summary of Assertion 4: Multidimensional fluencies between what is *on* and what is *around* screen

To summarize, another answer to this second research question comes in the form of my fourth assertion: *The literacy demands of high school esports focus on multidimensional fluencies between what is on and what is around the screens of the digital technologies, platforms, and programs.*

All interactions of this study's participants occurred on screens. As such, engaging in timely and unambiguous multimodal communications by using digital technologies, platforms, and programs was a prominent literacy demand of this context. However, this demand did not remain purely *on* the screen, it also extended to what can be described as *beneath* the screen (Aguilera, 2018; Aguilera et al. 2020). This is because to engage in the competitive and communal practices of high school esports, participants had to meet the demands of understanding the technologies, platforms, and programs themselves, but also of understanding the people, both teammates and opponents, as well.

For example, when participants needed to understand the programs—the specific videogames—that were being played at deeper, more competitive levels, they leveraged information that was easily provided on screens. However, they also had to leverage other ways to understand what was happening beneath the screen with the information that was not provided to them in upfront ways. To do so, they consumed content by drawing from others who share their esports affinity space in a mixture of online sources such as *YouTube* videos where others shared deep explanations and breakdowns of game-related information. Not only did they consume such content, but they also produced their own content by streaming their gameplay on *Twitch* and sharing it with others, in particular, with other members of the club, to draw constructive criticisms on their gameplay and decision-making process. They translated this knowledge back and forth through different sources (e.g., *YouTube*, *Twitch*) and used it during their own matches, implementing the lessons learned in their gameplay as gleaned from their multidimensional communications on *Discord* and in-game chat, descriptions of their general game approaches during interviews, and their in-game actions. They also engaged in ways to understand not only the videogames themselves, but also the people who they would be playing with and against. Many described how they could gain useful understanding of how teammates would behave during crucial in-game situations. They were also seen coordinating with each other as teammates to develop ways to understand how opponents would behave during practice matches called scrimmages. As a whole, part of the literacy demands of these high school esports contexts were composed of multidimensional fluencies between what is *on* and what is *around* screens.

Significance of Assertion 4: Multidimensional fluencies between what is *on* and what is *around* screen

To extend on this summary, I will now discuss how I found that the literacy demands of these high school esports contexts, despite occurring exclusively through web-based modalities, extended to require participants to understand both what is on the screen as well as what and who is underneath it by producing as well as consuming digital content in multiple ways. This can be contrasted with the issues with traditional literacy pedagogy that the work of the New London Group (1996) and others have responded to, which describe teaching and learning literacy "in page-bound, official, standard forms" (p. 61). These approaches to language and literacy education are reflected in state standards that emphasize literacy development by hinging on interdependent yet separate "passive" competencies, such as reading and listening, and the "active" competencies, such as speaking and writing (Common Core State Standards Initiative, 2010), a significant portion of which are often "page-bound." However, as studies of "traditional" and "new media" literacy practices and demands over the past decades have argued, there are multiple intertwined linguistic and cultural differences in our society that are central to the lives of students yet cannot be usefully leveraged from just one source or one modality due to the "plurality of texts" (New London Group, 1996, p. 61) that exists in our world. In other words, this means that there are not only numerous things to do and learn from, but there are also numerous and distinct people who do those things and learn from them.

The literacy demands of the participants in this study along the lines of fluencies between what is on and around the screen illustrate only one of the most recent iterations

of a long-standing line of work in videogame studies. For over two decades, videogames and videogame players have steadily seen increased scholarly attention in endeavors that have sought to understand the myriad of activities that gamers engage in and what they might learn from those activities (e.g., Shaffer et al., 2005; Squire, 2011). These have included topics such as the impact of designing games on science learning (Kahlili et al., 2011) and playing games and its impact on mathematics (Mahmoudi et al., 2015) and language (Sykes & Reinhardt, 2012), among many other topics. Similarly, videogaming in general has been shown to spark interests in new domains. Squire (2011), for example, explored how videogames catalyze interest-driven learning among students and teachers alike. Such work has illustrated that establishing new interests that students then use to further explore can inspire them to engage with interesting questions and seek out answers in multiple ways. For instance, videogame players have been observed to build community and pursue activities outside of specific games to accomplish benevolent goals (McGonigal, 2011). In this vein, one prominent finding in the field of game studies has been that engaging with videogames helps set the stage for intrinsically motivated explorations of game-related topics. This is because videogames are not primarily about their content in the way that books are. They are instead about the interactions and choices that players have and make as well as the reactions the game and other people take to those choices (Rigby & Ryan, 2011). In other words, videogames are not page-bound. Instead, they are about what people do with them—what happens on, around, and beneath the screen, including interactions with the specific videogames but also with other people, which is an important part of what multiliteracy studies (Kope & Kalantzis, 2000) and digital-age literacies (Aguilera, 2018; Aguilera et al., 2020) seek to explore.

Lastly, while videogame studies in general are a mature field, studies on esports—and esports in high school specifically—represent a more nascent facet of videogame studies. The High School Esports League (HSEL) increased its total partnered schools, from 500 in 2018 across all 50 U.S. states (personal communication, April 10, 2019) to over 3,100 schools across multiple countries in 2020 (HSEL, 2020). Despite a growing body of multidisciplinary research on esports (Reitman et al., 2019), esports in high schools remains relatively understudied. With the Entertainment Software Association (2020) reporting that 70% of children (under 18) in the United States play videogames, it appears that high school esports' rising popularity and its impacts are converging to reveal an ecosystem where students are drawing from and building on their everyday literacy practices and demands in non-trivial ways. This, in turn, is creating a uniquely dynamic rapidly accelerating high school esports context that merits in-depth study as a way to continue our deeper understanding of converging topics in the fields of literacies, game studies, and esports.

Literacy Perspectives

My third research question explored the literacy *perspectives* (Perry, 2012) of the teacher-sponsors and student-members of the high school esports clubs. Literacy perspectives contain language and actions as instantiating culture in social contexts (e.g., Gee, 1996; Halliday, 1973) that offer insight into how people interpret and conceive of their actions and identities as these are shaped by specific contexts. In exploring student and teacher literacy perspectives, I looked to examine a combination of their actions and

conversations as part of the esports club, looking at how these can lend insight to understanding their views about their esports practices and demands. As such, my third research question asked: *How do students and the sponsor-teacher construct and characterize their respective literacy **perspectives** on their experiences as part of the esports club?*

I drew holistically from my data sources to develop two assertions related to high school esports participants characterizing their practices and demands as positively contributing to the development of "belonging", of being a "safe space", and providing opportunities for "critical thinking" while also positively contributing to future occupational or educational preparedness and health (words in quotation marks here signify these were used by participants and thus represent emic terms instead of etic terms used by the researcher).

Summary of Assertion 5: Multifaceted senses of belonging, building a safe space, and engaging in critical thinking

To summarize, one answer to this third research question is in my fifth assertion: *Student-members and sponsor-teachers characterize the engagement with the digital technologies, platforms, and programs involved in high school esports as positively contributing to develop multifaceted senses of "belonging", of a "safe space", and of opportunities for "critical thinking".*

A salient perspective that was evident from a combination of gathered evidence is that participants characterize what they do in their high school esports spaces as contributing to strong senses of "belonging". That is, that by participating in these esports activities, they develop what was described as "an opportunity to be a part of something

at school" (***Interview—Silvio***). They were able to fulfill these desires to belong through multifaceted ways that included the design and use of the team logo and jersey, playing "their way", and seeking and getting recognition from other teachers.

Another salient perspective was that high school esports provide what was described as a "safe space." All teacher-sponsors explicitly drew on their specific experiences with videogame affinity spaces to highlight the positive and negative impacts they have perceived videogame to have on those who participate in them. They used this as the basis for how they characterize the purpose of their specific high school esports spaces to hold. For instance, they described how high school esports club spaces contrast with other less safe spaces for diverse students along lines of game interest, physical abilities, and (dis)comfort with socializing. They described how these esports spaces create an experience of value for students. This was echoed in multiple ways by students who, for example, enjoyed recognition from others outside of the club and described this in overall positive ways**.**

Additionally, the activities that are carried out as part of high school esports, such as participating in military-sponsored tournaments, represent one of multiple unexamined topics that were described by one teacher in particular as rich future opportunities to develop "critical thinking" in ways that are closely tied to an existing esports interest already held by students.

Significance of Assertion 5: Multifaceted senses of "belonging", building a "safe space", and engaging in "critical thinking"

Before I continue this discussion section, I would like to offer a clarifying note: the words in quotation marks signify that these were terms used by participants and were

not terms used by the researcher. As such, my discussion does not deeply draw from the extensive literature on these terms. Rather, I treat these as words used by participants and use them to more accurately represent their conceptualizations by using their own words.

To extend on the summary above, I will now discuss how a primary practice and demand of high school esports included creating and designing team jerseys and logos. The sustained and involved nature of this activity suggests that there was high importance in crafting tangible representations of a group identity. However, it appears that it was neither the act of engaging with the necessary technologies and programs to create these tangible representations, nor the end-products themselves that was of most importance here. Rather, it was the processes—the "back-and-forth"—and the fact that these tangibles were student-designed that contributed to senses of belonging. The processes of such forms of engagement with technologies, programs, and people in high school esports are perceived to develop participant identities and help members feel like they belong. This means that such engagements with the technologies, programs, and people of high school esports, in order to foster senses of belonging, were perceived as the primary purpose of all the club's associated activities. The fact that even though one club was not meeting regularly nor participating in the league structures it had set out to do initially, yet this same club's members still emphasized building their identities through jersey and logo design, helps lend more evidence for this claim. This "belonging" theme that was manifested clearly in logo and jersey design echoes other findings on esports and belonging (Kauweloa & Winter, 2019) as well as studies into the importance of extracurricular activities that show, for instance, that belonging to artistic or sports groups is an important factor in adolescence (Ruvalcaba et al., 2017), impacts identity

development (Dworkin et al., 2003), and is also in keeping with Gee's description of affinity spaces and how people organize and operate in such out-of-school, interest-driven contexts where sharing a common endeavor and identity takes precedence over other variables such as race, class, gender, or (dis)ability.

The characterizations of esports clubs in high schools serving as safe spaces was another primary perspective from participants. The sponsor-teachers involved in this study held the perspective that engaging with the technologies, platforms, and programs of high school esports should be conducive to creating and fostering safe spaces in which diverse students, regardless of their game interest, physical abilities, and comfort with socializing could all participate successfully in unjudged ways. They held this perspective because they have seen in their school clubs, as well as experienced in their own gaming lives, that videogaming spaces have pervasive tendencies to exclude, to harass, and display general toxicity towards some players. To combat this, they explicitly dedicated effort to making esports an inclusive and safe space in their schools. This is important for several reasons. Among these reasons are the disproportionate participation of racially minoritized students, economically disadvantaged students, and non-male identifying students in activities that involve traditionally white, well-off, and male dominated spaces such as videogames. Tying back to the earlier point on belonging, where it is the common endeavor and identity that takes precedence over other variables such as race, class, gender, or (dis)ability, helps to see that this was the kind of focus and social interactions that teachers directly tried to foster among esports participants. However, this does not mean that such variables neither *can be* nor *were* ignored in these spaces.

In the context of what has been described as the "overdue awakening to systemic racism" (Worland, 2020) that has played out in the United States in 2020, issues of (in)access and privilege of certain racial groups but not others made its way into seemingly every organizational-level conversation in 2020 and beyond. Conversations in and around high school esports clubs were no exception to this. As teacher-sponsors remarked, gaming has been known to be a breeding ground for toxic and exclusionary behaviors based on how people look and what they prefer. To combat such negative behaviors, teachers emphasized multiple occasions that their clubs would not tolerate these exclusionary attitudes and approaches. Although this study cannot make claims on the success or failure of such goals, it is clear that the perspectives held by those who participated, which were evident in what they did and what they said, aligned with these inclusionary values.

Along similar lines, the topic of being inclusionary of potential members that have financial hardships was also a main concern and represents an extension of this inclusionary literacy perspective of teachers. According to teachers, they intend to make their esports club spaces ones that are welcoming of those who might, for example, not have the financial resources to own the technological equipment required to participate in esports. The instances where teachers would excuse without penalty any members who could no longer continue participating due to newly found occupational responsibilities lends evidence of how teachers' actions reflected their inclusionary goals for the club. Adding to this how "the doors to the clubs will always be open" (***Conversational snippet—Mrs. Abel***) should they later be able to participate again helps paint the picture

for what actions were taken (and not taken, such as not welcoming these students back) to foster financial inclusivity.

Additionally, gender identities were another source for the inclusionary perspective that teachers attempted to foster in these clubs. Despite the number of female videogamers increasing over recent years, currently accounting for roughly 40% of the gaming population in the United States (Entertainment Software Association, 2020), research shows that women and girls are still "less encouraged to play videogames due to negative expectations based on gender and/or experiences during game play" (Lopez-Fernandez et al., 2019, np). This is especially relevant in this study because the student-members that made up the self-selected focal participants of this study were all males, even though the club did have female identifying members that were much less active in the club for the duration of this study.

Lastly, the perspective that esports possess opportunities to engage in critical thinking exercises that are closely related to already-held interests in esports was salient in one teacher in particular. These opportunities for critical thinking that were described by ***Mr. Andres*** illustrate a literacy perspective about who holds power (Fairclough, 2014) and exercises influence—even if subtly—in esports contexts, especially institutional power, given the emphasis on military organizations financing esports tournaments in high schools. This critically oriented literacy perspective expressed by ***Mr. Andres*** is related to the inclusionary perspectives discussed above because, as ***Mr. Andres*** put it, these kinds of institutions usually "seek to take advantage of specific kinds of students, usually those from low financial resources". This is done in exchange for some promise of future financial security such as the potential futures that students in esports may go on

to have post-high school, whether they pursue higher education, go into the workforce, or join the military. As such, this opportunity identified by ***Mr. Andres*** is aligned with work in developing critical discourse analysis and critical literacies that seek to analyze power relations, ideologies, institutions, and social identities (Fairclough, 2012; Gee, 1990; Lankshear & Knobel, 1998; Luke, 2012). In all, the importance of these literacy perspectives rests ultimately on broader senses of community that make up large parts of the literacy practices discussed earlier, in assertions one and two. These literacy practices reflect the literacy perspectives thus far discussed because communities tend to develop values of their participatory culture and can also develop intentional efforts that integrate what is done in these communities with what is (or can be) learned into broader contexts.

Summary of Assertion 6: Contributions to students' post-high school futures and health

To summarize, another answer to this third research question takes the form of my sixth assertion: *Student-members and sponsor-teachers characterize their engagement with the digital technologies, platforms, and programs involved in high school esports as positively contributing to future occupational or educational preparedness and health.*

A salient perspective was that teacher-sponsors and student-members characterized the practices and demands of high school esports as helping students be better prepared for improved opportunities to either secure a higher education through scholarships or to be better prepared for future occupational success. For instance, participants described that by building player portfolios, these could serve as a valuable tool for helping college recruiters take notice of their gaming abilities. As such, this could

heighten their chances of receiving invitations to form part of collegiate esports teams with accompanying scholarship support and access to higher education. Additionally, engagement with the practices and demands of high school esports was characterized as contributing to better occupational preparedness by providing experiences with several skills such as improved communication. Another important perspective was that esports could contribute to multiple aspects of "health", such as social-emotional and general physical health, by providing opportunities to learn about and practice the importance of maintaining, among others, proper nutrition and participating in regular moderate exercise.

Significance of Assertion 6: Contributions to students' post-high school futures and health

To extend on this summary, I will now discuss how recent work in esports has pointed to the different forms and options of participation that exist in addition to being the competing player. For instance, Anderson et al (2018) described the esports ecosystem as having four general groups that encompass different ways to participate. These groups are strategists (e.g., coaches, analysts), organizers (e.g., event organizers, technology support), content creators (e.g., streamers, journalists), and entrepreneurs (e.g., corporate sponsors, marketing). Anderson and colleagues describe these roles as having ties to entrepreneurship as well as STEM content and careers. In line with these notions of how esports ecosystems may help prepare for multiple careers, the participants of this study held perspectives that, by participating in high school esports, they were developing abilities that could serve them in future employment. Such perspectives are important to explore because they reveal that those who participate in and have an

affinity for esports pursue such participation, at least in part, because they believe it contributes something of worth to their futures after high school, whether it is skills for specific careers or opportunities to attain an education.

When students mentioned some of the ways they believed participating in esports contributed to their career preparedness, such as improving communication with coworkers, "working with multiple potentially annoyed or inconvenienced customer" (***Interview—Juan***), or "keeping an office running" (***Interview—Carmelo***), they were revealing their notions for the kinds of career opportunities that esports could provide. It is important to explore in greater focus what kinds of abilities and proficiencies—which can also be seen as part of their fluencies in a discourse (Gee, 1990)—that esports participants in high schools believe they are (and should be) developing given their specific career aspirations. This is because, from this study's results, it appears the jobs described by students were administrative and retail types of jobs, which are not strongly tied to the STEM and entrepreneurship focus that Anderson et al. have described. Given this recent work that explores STEM career readiness combined with an evidently popular perception that videogaming in general has transferable skills to certain jobs and careers (Page, 2021), future work could explore what high school esports participants believe they would be prepared to do and investigate if and how those perspectives have played out in their participant's careers. This will become an increasingly important endeavor to pursue, as students and teachers in this study evidently concur that esports activities present potential opportunities for learning career-relevant abilities combined with the expectation that esports participation in high schools (and other levels) will continue increasing into the near future (Rietkerk, 2020).

Additionally, participants of this study were, in general, aware of esports scholarships as opportunities to attain higher education. This is unsurprising because, for several years, an increasing number of colleges and universities have been offering scholarship opportunities in esports (Keiper et al., 2017). For instance, the first university to offer financial support for esports athletes did so in 2014 and as of 2019, 200 schools had some type of financial support for esports (Heilweil, 2019). However, the student participants of this study did not seem to consider such scholarships as strong justifications or motivators for their esports participation. Despite this, participants described such scholarship opportunities as legitimate options for those who wanted to pursue them as a way to attain access to higher education after their high school education. This is significant because, although the quick expansion is an indication of the success of such collegiate scholarship programs, and these surely attract the attention of many diverse potential players, it is also evidently not a main draw for all high school student esports enthusiasts who would like to pursue college educations.

Perspectives that esports provided opportunities to work on overall health were also evident from participants. Primarily, these were expressed by teachers and included socioemotional well-being in addition to physical health. The descriptions and actions from teachers illustrated their perspectives that esports is (or at the least *should be*) a set of activities that foster present and future health along several dimensions in addition to providing experiences and opportunities to gain useful abilities for future occupation and/or scholarships for higher education. These perspectives seem to be consistent with an emerging research focus specifically on health management and injury prevention in esports athletes (e.g., Di-Francisco-Donoghue et al., 2019). Doubtless, as made evident

from teachers' practices and demands of framing esports as beneficial for students in general, also showing intentionality with using esports as a way to address—and showing an awareness, too, of the potential ways it can jeopardize—high school students' general health was an important tool in teachers' repertoires. This, in turn, was an evident perspective for how the practices and demands of engaging with the platforms, programs, and technologies of high school esports.

Juxtaposing student perspectives with those of teachers that more strongly described esports as pathways for securing these kinds of funding and educational opportunities, some relevant questions to pursue become: why, and in what ways, are esports scholarships perceived differently by students and teachers? In what ways are college scholarships impacting student academic access and eventual success? These questions are in line with previous work by scholars who have questioned expected positive effects of extracurricular activities (Eccles & Gootman, 2002) and others who have pointed to multiple benefits such as increases in interpersonal competence, self-concept, grade point average, school engagement, peer belonging, and mental health, and higher rates of college attendance (Elder & Conger, 2000; Marsh & Kleitman, 2003; Oberle et al., 2019; St-Amand et al., 2017). Given that extracurriculars are seen as a way of "saving" adolescents from too much leisure time (Larson & Verma, 1999), and given how esports in high school is one of the newest such extracurricular options for many students, the discrepant viewpoints between teachers and students as to the worth and expected results of such a rapidly expanding extracurricular activity will continue to be a topic worth more in-depth research. This is because if one crucial set of participants in esports (e.g., students) are fundamentally conceptualizing the purpose and worth of their

main activity when compared to another crucial set of participants (e.g., teachers), there is a fragile/delicate but important nuance that must be worked out to perhaps, temper (un)realistic expectations on both sides. Having such clearer understandings could, in turn, yield more productive uses of time, resources, and social relationships.

As digital-age literacies (Aguilera et al., 2019) are "meant to emphasize the multi-dimensional nature of literacy demands, practices, and discourses in the rapidly changing, digitally connected contexts through which we exchange meaning in the modern world" (p. 3), it is evident that continuing to explore the ways in which these activities impact students in the present as well as the future is an unignorable aspect that continued work must explore more in-depth.

Limitations

While I employed multiple systematic methodological decisions to increase the credibility and trustworthiness of this study's results and discussions, there are limitations to the work that has been herein described. Among the most prominent of these limitations is that this study took place during the worldwide COVID-19 pandemic. This means that, for the most part, any data collected during this period might represent stark departures from what would be considered business as usual during pre- and post-pandemic times. This could include, but not be limited to, alterations in the kinds of students and teachers that were able to participate in high school esports during a time with such widespread turmoil. This means that any conclusions drawn from this work may represent the literacy demands, practices, and perspectives that are relevant only during such pandemic-induced constraints. As such, this work must be carefully evaluated and considered for how it describes the research focus of literacy practices,

demands, and perspectives as these are manifested during such a pandemic as well as how these findings' accuracy may change in the future under different research contexts. As such, once the pandemic-induced constraints are lifted, future use of this study must account for how this study accurately captured the constraints of its time frame and context.

Other limitations include the (non)transferability of findings. While this study does not aim to apply directly to other contexts in generalizable ways, it does seek to contribute increased understandings that might inform other similar contexts of esports and literacy research. Lincoln and Guba (1985) described transferability as a matter of trustworthiness in naturalistic inquiry, but this does not mean the ability to transfer precisely or neatly. Rather, the findings from this work are better used by recognizing its particularity to its context and as potentially useful (but not prescriptive) to other similar research contexts. For instance, the participants of this study largely had access to the technologies, platforms, and programs necessary for esports participation. This may not be the case in all high school esports contexts, as schools and districts vary widely in the technological, physical, and personnel resources they have available for such extracurricular activities. Similarly, this study was conducted in a school district that supported esports participation from its schools and welcomed me in these spaces as a participant observer. This may not be the case in other research contexts.

Another limitation of this study is that, due to the involved nature of those who participated as focal participants, the insights from interviews in particular might represent the viewpoints only of those members who are most active in these high school esports clubs. This can, therefore, fail to account for the practices, demands, and

perspectives of peripheral participants in the clubs. However, in an attempt to account for this limitation, part of this study's approach involved conducting observations and documenting the interactions of other members who were not the focal students. These peripheral participants attended meetings and participated in asynchronous interactions, but their specific accounts are not as detailed in the ways that focal participants were. Relatedly, the interview and observational insights in this study came from only one of the two clubs. This is because one of the clubs did not participate as fully as the other did due to concerns of esports "being one more web-meeting" after a long school day of web-meetings.

The extent to which different researchers are able to consistently produce similar interpretations is an important quality criterion of qualitative studies. As such, checking and improving intercoder agreement over time is closely linked to quality (Schreier, 2012). While I took great care to draw on methodological insights for increasing the trustworthiness of my interpretations and assertion building processes, due to the nature and goal of this work as a dissertation project, I was the only researcher making these interpretations. As such, this work did not benefit from the increased trustworthiness to coding and interpreting qualitative data that multiple researchers who have reached inter-coder agreement can attain. However, to alleviate this limitation, I employed a two-cycle coding procedure (Saldaña, 2016) that helped approximate such trustworthiness in the analysis of the data.

Future Research

Given esports multifaceted projected growth (Newzoo, 2019) as well as the prevalence of digital technologies, platforms, and programs relevant and useful in the

digital-age, continued research that explores these topics and expands this current study are necessary. For instance, based on this current study and previous work, we need to better understand and appreciate the different ways students think and behave and what motivates these literacy practices, demands, and perspectives. As such, I outline some future directions that I intend my own work to pursue.

If videogaming—and more specifically esports—represents such a window into students and teachers' ways of thinking and behaving, then my own efforts can involve continuing to work closely with practitioners, stakeholders, and gatekeepers to seek, facilitate, and encourage the evidently valued activities of, for example, competing and building communities through esports. We should do this in adaptable ways amidst precautions of in-person interactions until these once again become safe. In doing so, we may turn to using esports as an effective alternative that invites and requires participants to engage in multimodal literacy practices, meet demands, and build perspectives of and with digital-age technologies, platforms, and programs.

Future work in the fields of literacy research must account for the "human-machine world" that Prensky (2012) described as "anyone who doesn't understand this, and who is not struggling to adapt to the new environment—whether they like that environment or not—is already being left behind" (p. 1). This means that, as we continue to use emerging digital technologies in novel ways, my own research work must seek out and explore new and creative ways that we will continue using digital technologies, platforms, and programs. In the context of esports, future work might involve specific kinds of videogames (e.g., individual-based games, team-based games) as well as emerging technologies on which these games can be played and leveraged for esports

competitions (e.g., virtual and augmented reality). At present, esports are largely carried out in what can now be considered standard on-screen ways, but with increasingly immersive technologies continuing to become affordable and commonplace, this might change in the near future.

For literacy studies, I have become increasingly interested in the notion of critical digital literacies (CDL), which "combines several perspectives on what it means to be literate, what it means to be critical, and what it means to live and learn in a digital age" (Aguilera & Pandya, 2018, n.p). Given the recent widespread heightened sensitivity to imbalances of power, privilege, and societal change in recent events over the previous year and a half, I now aspire to expand my future work to include and position people as readers and writers of our virtual and physical worlds in ways that recognize how literacy practices, demands, and perspectives are related to the historical, political, technological, economic, and cultural meldings which we form part of. This is inspired from one of the earliest scholarly pieces on esports where Wagner (2006) spoke about how esports could be interpreted as a "consequence of a transition from an industrial society to the information and communication based society of today", for which he used the term *cyberfitness* to encompass a set of competencies in the use of information and communication technology. Under a CDL frame, my work in literacies would seek to continue exploring the spirit of Wagner's description but include who does (and does not) develop such cyberfitness, for what (un)stated reasons, and in what ways might we ensure it is equitably accessible on, behind, and around digital screens and technologies.

Final Thoughts

As some final thoughts, this study represents one of the first in-depth qualitative explorations of high school esports and the literacies that are at play in such spaces. It consisted of a conceptual and theoretical frame that emphasized literacy as a social endeavor. This means that what one *must* or *can* do and how these are perceived is attached to social "stuff". This stuff includes social relations, cultural models, and differing perspectives. When looking at literacy as a social endeavor, this means that these literacies take on meaning for those who engage in them in ways that are always dependent on (un)stated ideological conceptions and values of their larger societies and particular contexts. This means that the findings of this work have captured a snapshot of the current time and context, which informs these findings by providing an understanding that each of the practices, demands, and perspectives explored in this study are (most likely) in flux. Additionally, this study recognizes the dynamic nature of literacies in a rapidly changing, globally connected, and technologically mediated society where the actions of students and educators carry implications for their respective preparedness and functionality in the growingly digitized and networked future. It is my hope that the work herein described has contributed to greater understanding of the digital-aged world and the confluence of digital-aged identities, socialization practices, motivations, group belonging, and technological abilities that potentially all of us might (continue to) put into play—in one form or another—in the not-too-distant future.

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APPENDIX A

LETTER OF EXPRESSED WILLINGNESS TO PARTICIPATE ON RESEARCH PROJECT

Letter of Expressed Support

To whom it may concern:

My name is [redacted] and I am the sponsor-teacher of the electronic sports (esports) club at [redacted]

Through this letter, I express that I am familiar with **Luis E. Perez Cortes** as he is working in our after-school electronic sports (esports) club at [redacted] as a district-approved volunteer.

Furthermore, I express that I am aware of and am interested in forming part of Luis' doctoral dissertation research project titled ***Literacies at play: Digital-age literacies in scholastic esports***.

I understand the involvement on our part as the research setting. This involvement includes student club members and the teacher-sponsor of the club being **interviewed** and **observed** during our club's weekly meeting times. In addition, I understand that this research will be carried out following sound ethical principles. I also understand that all participants' involvement in this research study is strictly voluntary and is confidential of any data that may be produced or collected.

Therefore, as the esports club's sponsor-teacher, I express our awareness of Luis' research protocol and our willingness to participate in this research project.

Sincerely,

[redacted] 2/27/20

Signature *Date*

[redacted]

Name

[redacted] [redacted]

Email Phone Number

APPENDIX B

OBSERVATIONAL PROTOCOL

Date:

Participants:

Today's Topic:

Time	Observations	Researcher Notes
00:00:00 - 00:15:00		
00:15:00 - 00:30:00		
00:30:00 - 00:45:00		
00:45:00 - 01:00:00		

Transcript of text chat
00:00:00 - 00:15:00
00:15:00 - 00:30:00
00:30:00 - 00:45:00
00:45:00 - 01:00:00

Reflection:

APPENDIX C

INTERVIEW GUIDE FOR USE WITH STUDENTS

Core/Main Questions
These are the main questions that represent the interview

1. Tell me about your involvement with esports at this school. a. What do you do in esports?

2. Do you prefer to play competitively (i.e. by yourself against others) or collaboratively (i.e. with others on a team against other teams)?

3. How would you describe the activities that you do in this club? . Are they competitive or collaborative?

4. What do you think about high schools across the US showing increased commitment with esports?

5. How would you define esports? . How would you explain what esports is to someone who knows nothing about it?

What do you think about esports being socially distant nowadays

Describe esports in 5 words…

what do you think you've learned from your time in the club?

Demographics questions:
These questions help build a participant's demographic profile

• What grade are you in?
• How old are you?
• What gender(s) and race(s) do you identify as?
• When did you first join this esports club?
• How often do you play video games a day?
• How much time do you spend on the computer a day?
• How much time do you spend on a cellphone a day?

Follow-up or probes of core/main questions
These questions can be used as follow-up or probes for answers given to the core/main questions

High School Cultures:
• What stereotypes of esports do you think the campus administration or your teachers hold?
• What stereotypes of esports do you think the schools or media hold?

• What stereotypes of esports do you think other students who don't play videogames hold?
• What stereotypes of esports do you think other students who do play non-esports games (like MMORPG's or single-player games) have?
• What stereotypes of esports do you think the general public or media, people outside the schools who don't play esports, hold?
• Why do you think these stereotypes exist?

Esports Experience:
• What types of games do you consider "esports"?

• Since when have you been playing esports video games?
• How/Why did you start?
• How often do you play?
• About how long do you usually play for in one single gaming session?

• Do you play on consoles or PC/computer?
• What games do you play?

• Have you ever represented the school in esports?
• What does it mean to be an esports player/athlete?

• Do you like to watch esports matches?
• Where do you watch them? (in person, tv, twitch, youtube, somewhere else)
• Do you most often watch them alone or with friends?

• Do you consider esports a hobby of yours or as something more/something else?
• Would you say video gaming is an important part of who you are?

Esports and sociability:
• Do you mostly play esports games by yourself, with friends/acquaintances, with classmates, with people you know from work, or maybe relatives?
• Why?
• Do you play mostly online or in-person?

• How do you meet potential teammates? What do you do to look for teammates/clans/guilds, etc?
• How does this process work?
• What kind of things do you look for in teammates?
• What do you think others look for in you as a teammate?

• Have you ever used esports to seek/build friendships?
• Do you play/participate in esports with a romantic partner (i.e., boyfriend/girlfriend)
• How?

• Do you have preferred gaming partners and/or opponents?
• Why? What about playing with/against them do you (not) enjoy?

• Do you prefer games which have you play cooperatively or competitively with others?
• Why do you prefer one over the other?

• Do any of your relatives play esports titles? Do you play together often?

• Do you interact with your esports partners in other activities other than video gaming?

• Do you play esports with people you know from other places such as your work or your classes?

Esports Perceptions:

• Some might say esports games are aggressive since they are highly competitive, but can you tell me your thoughts about this?

• Recently, universities and colleges have implemented esports programs with scholarships and other support. Why do you think they are doing that?
• Would you like to be at such an institution?
• Why (not)?
• Do you think colleges treat esports differently from other games?

APPENDIX D

INTERVIEW GUIDE FOR USE WITH TEACHERS

Core/Main Questions
These are the main questions that represent the interview

1. Tell me about your involvement as the esports club sponsor at this school.
How and why did you come to get involved?

2. How would you describe the activities that you do in this club?
What do you do?

4. What do you think about high schools across the US showing increased commitment with esports?

5. How would you define esports? How would you explain what esports is to someone who knows nothing about it?

6. How do you think esports impacts students? How is esports valuable?

Follow-up questions
These are the pool of follow-up questions after asking any of the main questions above

• What stereotypes of esports do you think the campus administration or teachers hold?
• What stereotypes of esports do you think the schools or media hold?
• What stereotypes of esports do you think other students who don't play videogames hold?
• What stereotypes of esports do you think other students who do play non-esports games (like MMORPG's or single-player games) have?
• What stereotypes of esports do you think the general public or media, people outside the schools who don't play esports, hold?
• Why do you think these stereotypes exist?

• What types of games do you consider "esports"?
• Do you play esports video games yourself?
• How/Why did you start?
• How often do you play?
• About how long do you usually play for in one single gaming session?

• What does it mean to be an esports sponsor?

• Do you like to watch esports matches?
• Where do you watch them? (in person, tv, twitch, youtube, somewhere else)
• Do you most often watch them alone or with friends?

• Do you consider esports a hobby of yours or as something more/something else?

• Would you say video gaming is an important part of who you are?

• Have you ever used esports to seek/build friendships?
• Do you play/participate in esports with a significant other?
• How?

• Do you have preferred gaming partners and/or opponents?
• Why? What about playing with/against them do you (not) enjoy?

• Do you prefer games which have you play cooperatively or competitively with others?
• Why do you prefer one over the other?

• Do any of your relatives play esports titles? Do you play together often?

• Some might say esports games are aggressive since they are highly competitive, but can you tell me your thoughts about this?

• Recently, universities and colleges have implemented esports programs with scholarships and other support. Why do you think they are doing that?
• Would you like to be at such an institution?
• Why (not)?
• Do you think colleges treat esports differently from other games?

APPENDIX E

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER

ASU Knowledge Enterprise Development

APPROVAL: EXPEDITED REVIEW

Brian Nelson
Division of Educational Leadership and Innovation - Tempe
480/727-4550
Brian.Nelson@asu.edu

Dear Brian Nelson:

On 9/23/2020 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Literacies at Play: Digital-age literacies in scholastic esports
Investigator:	Brian Nelson
IRB ID:	STUDY00012517
Category of review:	
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Literacies at Play: Digital-age literacies in scholastic esports, Category: IRB Protocol; • MHS--Letter of Expressed Support--Luis Perez Cortes.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • PARENTAL PERMISSION TO PARTICIPATE IN RESEARCH.pdf, Category: Consent Form; • recruitment_methods_message_16-09-2020.pdf, Category: Recruitment Materials; • Responses & clarifications to requested revisions.pdf, Category: Other; • STUDENT ASSENT--CONSENT TO PARTICIPATE IN RESEARCH.pdf, Category: Consent Form; • supporting document 17-09-2020.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

	• TEACHER CONSENT TO PARTICIPATE IN RESEARCH.pdf, Category: Consent Form; • THS--Letter of Expressed Support--Luis Perez Cortes.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc);

The IRB approved the protocol from 9/23/2020 to 9/22/2025 inclusive. Three weeks before 9/22/2025 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 9/22/2025 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Luis Perez Cortes
Luis Perez Cortes