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Esports Curricula in U.S. Post-Secondary Institutions: A Case Study

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by

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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Abstract

Esports Curricula in U.S. Post-Secondary Institutions: A Case Study

Although the concept of Esports competency has been widely recognized, it is not yet well understood by the various educational institutions that have started offering certification programs in this field. This study aims to provide a comprehensive analysis of the multiple principles that have been established to promote this specialization.

The increasing popularity of gaming and esports has led to the development of a wide range of educational programs that are geared toward addressing the needs of the future workforce. Although the goal of these programs is to provide a comprehensive view of the various facets of this field, the process of teaching them is still new.

The goal of this study was to explore the common learning competencies that are developed in the post-secondary education of gamers and Esports in the United States. It was also conducted to identify the potential advantages of working in this field**,** over the traditional sports industry.

Although esports has been included in various post-secondary education programs, such as secondary and post-secondary, it is not yet considered a completely new field. The findings of this study will be used to develop an interdisciplinary program in this field.

Through the object collection process, the researcher w**as** able to identify the various materials that are used in the education of esports students. These included the program descriptions and job postings for positions in the industry. **S**he also examined the curriculum and course syllabi.

Secondary data were then collected from a school that has an esports program. This type of data was used to analyze the program's engagement and effectiveness. These quantitative data will be used to study how these programs are implemented in practice.

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Chapter One: Introduction

Esports and gaming represent an important emerging topic in education. Esports can be viewed instrumentally to develop key skills (Anderson et al., 2018; Lee et al., 2020; Rothwell & Shaffer, 2019) or, increasingly, as a career path unto itself (Bánvai et al., 2019). Yet, regardless of the ultimate purpose of teaching Esports content, the process of doing so is new, especially at the post-secondary level (Funk et al., 2017; Lee et al., 2020). Therefore, it is not yet well understood, especially in terms of the shared principles between the degree or certification programs that have recently arisen to offer certification in Esports competencies (Funk et al., 2017; Lee et al., 2020). The present study is intended to help address that gap.

This chapter, Chapter One, introduces the study. The chapter begins with a brief overview of the key background issues inherent in the research topic, followed by a discussion of the theoretical framework guiding the study. Next, the research problem is stated, leading to the development of the study purpose and the research questions. Following the research questions is a discussion of the study's significance. Next, assumptions, limitations, and delimitations are presented, along with a list of especially relevant terminology. Chapter One concludes with a summary and introduction to Chapter Two.

Background of the Study

Electronic sports (Esports) are, in many ways, a natural evolution of physical sports. With the rise of video games, certain games feature significant competitive aspects, either at the individual or team level (Reitman et al., 2020). For games that are both highly competitive and designed in such a way that the competition creates a

spectacle that an observer can watch and make sense of relatively easily, the parallels to physical sports are straightforward (Jang & Byon, 2019).

An example of Esports includes video games, such as Dota 2, Fortnite, and League of Legends. Esports entail virtual sports and action-based video games including, but not limited to, plat former, shooter, and fighting (Saiz-Alvarez et al., 2021; Yin et al., 2020). While Esports are delivered virtually, these Esports require the same amount of physical and mental demands, as with non-digital sports (Saiz-Alvarez et al., 2021; Yin et al., 2020). This is because contenders or players in Esports also undertake significant training and time to develop proficiency in utilizing control devices (e.g., keyboards, mice, or console controllers; Yin et al., 2020).

As such, there are various similarities and differences between traditional sports and Esports. For instance, while traditional sports are executed physically, live streaming and content are delivered virtually in Esports (Saiz-Alvarez et al., 2021). As such, the popularity Esports is significantly dependent on the active participation of the mass of spectators (Qian et al., 2020a; Saiz-Alvarez et al., 2021). In line with this, Esports is an emerging and fast-growing entertainment domain, which has rapidly grown during the COVID-19 pandemic in 2020, while real-life events have been constricted and thus replaced by at-home entertainment, such as Esports (Saiz-Alvarez et al., 2021). Qian et al. (2020a) added, in traditional sports, spectators positively view the convenience of schedule, commentators, players, and event attractiveness. While this is also true in Esports, Qian et al. (2020b) noted that game components, such as chat room, streamer traits, stream quality, and virtual rewards are unique in the Esports setting. In the Esports context, streaming content recreates an interactive view of the game, enabling the

spectators to interact with virtual objects and content, such as camera angles, rewind, and pause using the spectator's personal computer device (Saiz-Alvarez et al., 2021; Qian et al., 2020b).

In light of the similarities and differences between traditional sports and Esports, whereas the athletics underlying traditional sports have long commanded respect and admiration among the general public and been integrated into education through gym classes and extracurricular activities, Esports have been slower to develop the same level of respectability (Hallmann & Giel, 2018). This may have to do with the pervasive anti-video game stigmas held by a significant portion of the population.

Despite this obstacle, Esports have begun to receive increasing educational attention. This attention began at the secondary level, where some schools recognized that Esports participation can teach skills as valuable or more valuable than those arising from traditional sports (Rothwell & Shaffer, 2019). In parallel, however, a significant Esports industry has developed, in part with the rise of online streamers and other content creators (Wohn & Freeman, 2020). Because of the more decentralized nature of its media and the greater variety of games that can be played as Esports, the Esports industry has given rise to many jobs for actual players, in addition to those supporting them (Bánvai et al., 2019). Some of the jobs in the Esports industry include digital games developer, Esports coach, network engineer, software developer, product manager, community management agent, referee, booking agent, Esports marketing specialist, and shoutcaster, among others (Jenny et al., 2021; Pizzo et al., 2022).

This rise of Esports as a career option has prompted a small, but growing number of scholars and practitioners to acknowledge that Esports have a place in education, as

more than simply a way of teaching skills to be applied elsewhere (Funk et al., 2017; Bánvai et al., 2019). One result of this shift has been the development of Esports degree programs at post-secondary institutions (Bánvai et al., 2019). These programs seek to offer students command of the myriad of interdisciplinary skills called for in the world of Esports (Anderson et al., 2018). However, these programs, like the field they serve, are new and not fully crystalized.

Jenny et al. (2021) outlined that the output of higher education Esports academic programming and curricula include Esports game design, coaching Esports players or teams, and Esports event management; these are among the potential career pathways related to Esports at the post-secondary level. Researchers have also added that the common misconception of Esports at the post-secondary level and Esports programs is regarding its objective: to train players to compete professionally (Jenny et al., 2021; Pizzo et al., 2022). However, Esports at the post-secondary level and current Esports programs exist primarily to educate and train individuals, supporting the professional and amateur competitive Esports scenes (Jenny et al., 2021; Pizzo et al., 2022). While curricula within Esports at the post-secondary level and Esports programs differ by educational institution, the main purpose of such programs is to prepare individuals to work in positions within and tangential to Esports (Jenny et al., 2021). Nonetheless, there remains important work to do in determining the objective of an education in Esports at the post-secondary level (Anderson et al., 2018; Jenny et al., 2021; Pizzo et al., 2022).

Theoretical Framework

The theoretical framework for the study will be curriculum theory (Kelly, 2009). Curriculum theory is a theory explaining the ways in which curricular materials are

developed (Kliebard, 1975). It is both the study of historical development of new curricula and how these materials have evolved, and a theory intended to help understand the rationale underlying curricular policy choices (Kelly, 2009). Curriculum theory is a broad field and encompasses a broad array of scholarly perspectives on the development of educational materials, including the humanist, social efficiency, developmentalist (or child study), and social meliorist philosophies (Kliebard, 1975). These are different influences on the development of educational materials and offer a tool by which to understand the competing influence in terms of what is taught and how it is taught.

Humanist influences on curriculum tend to be those focused on the development of reasoning and mental discipline (Kliebard, 1975). From this perspective, the purpose of education is not to acquire particular technical competencies, but rather to hone one's reasoning skills and develop a broad set of mental tools. By contrast, social efficiency influences view education as a path toward social control (Kelly, 2009). By identifying and promoting talents and teaching related knowledge and skills, social efficiency influences in curricula are geared toward pushing any given student toward his or her optimal role in society (Kliebard, 1975). Developmentalist influences are those that are instead focused on the role of education in the development of the student (Kelly, 2009). This type of educational philosophy focuses on social and emotional learning factors and its influences drive education toward more focus on these outcomes over academic ones. Finally, social meliorist influences in education are geared toward reform and creating positive social change (Kliebard, 1975). Hence, social meliorist influences on curriculum development tend to be those pushing it toward greater awareness of social issues and how educational content can be leveraged to improve society.

These four competing influences will represent a valuable tool to understand how and why specific core competencies have been developed for Esports degree programs. Therefore, curriculum theory represents a way to understand this still emerging curricular domain. In addition, the use of curriculum theory will allow the present study to more deeply probe the reasons for certain content and focus choices in the programs under study. This is especially important to do, not only because the field is new, but because some view Esports as merely a pathway to key general skills, while others view it foremost as a career unto itself. In this fashion, the results of the present study will offer insight not only into what choices have been made, but also why they have been made and what the ultimate goals of the educators developing this key emerging field of post-secondary education are. Hence, curriculum theory is an ideal theoretical standpoint from which to conduct the study.

Statement of the Problem

The problem is that it is not known what common core competencies are developed in post-secondary Esports/gaming curricula in the United States. The recent literature has begun to investigate the integration of Esports into high school curricula to help students develop science, technology, engineering, and math (STEM) skills and social-emotional learning (SEL), and to promote career technical education (CTE; Anderson et al., 2018; Lee et al., 2020; Rothwell & Shaffer, 2019). Esports have been identified as a strong way to gain "soft" skills, including those pertaining to communication, teamwork, and problem-solving in high pressure situations; all valuable skills in almost any line of work (Rothwell & Shaffer, 2019). In addition to these skills' application to other fields, scholars and practitioners have recently recognized Esports as

a viable career opportunity, with some post-secondary institutions offering degree and certification programs (Bánvai et al., 2019). These degree and certification programs cater to a variety of professions related to the gaming industry (Bánvai et al., 2019). For example, Anderson et al. (2018) highlighted the many professions involved in Esports, such as with event organizing, web development, legal protections, game analysis, and shout casting.

However, there is a significant research gap related to this emerging discipline in that, while the Esports industry is growing rapidly, the workforce remains stagnant and inadequate to meet consumer demand (Funk et al., 2017). Thus, the broad problem is that Esports as a degree option is in its nascency and there is a lack of research on Esports as a viable career in general (Funk et al., 2017; Lee et al., 2020). Funk et al. (2017) suggested that sport management academics and practitioners should accept the addition of Esports as a new industry and engage in further research to examine its evolution and provide guidance to industry through education and research. This study aims to advance research in the field of Esports by exploring the common core competencies that are developed in post-secondary Esports curricula in the United States.

Purpose of Study

The purpose of this qualitative case study is to explore the common core competencies that are developed in post-secondary Esports/Gaming curricula in the United States. The case in this case study is Esports curricula in U.S. post-secondary institutions. The sources of data for this study include interviews with two university directors/coaches and three Esports league representatives at U.S. post-secondary institutions, Esports program materials, and competencies listed on job postings for

positions falling under the Esports industry. In addition, secondary data from a small private school (100 students on average) will be collected through the STEM (Science, Technology, Engineering, and Mathematics) curriculum used at the school. These data will be analyzed using content analysis individually and case study triangulation together. The central phenomenon in the study will be that of post-secondary Esports curricula. The results of the study may help advance the understanding of Esports as a career option and in general of how collegiate programming can help contribute to that emerging and fast-growing entertainment domain.

Research Question

The study will be guided by a single, overarching qualitative research question as follows: What common core competencies are developed in post-secondary Esports curricula in the United States?

Significance of the Study

The study has both practical and academic significance. The academic significance of the study is twofold. Firstly, it will address a gap in the existing research regarding the emerging curricula for Esports degrees. Though the merit of Esports education has been acknowledged (e.g., Rothwell & Shaffer, 2019), there remains a gap between the demand for the new profession and the supply. Because Esports degree programs are only just emerging as a way to bridge this gap (Funk et al., 2017; Lee et al., 2020), they are not yet well-researched. The combination of these programs' importance and their newness means that research to bridge that gap will help fill a critical lacuna in the research and improve the understanding of post-secondary Esports programming. Secondly, the emergence of Esports curricula represents the opportunity to test

curriculum theory in a new field. Such opportunities are relatively rare and represent an opportunity to test the theory by seeing if the existing theory can explain the key influences in it, as well as a chance to expand it with novel examples.

From a practical standpoint, the emergence of Esports degrees represents an important educational development. These programs are a wholly new field of study, combining aspects of domains as widespread as event organizing, web development, legal protections, game analysis, and shout casting (Anderson et al., 2018). Therefore, understanding how these programs are developed and what content they prioritize has two key applications. First, it can directly help other post-secondary Esports programs or schools considering them to develop their own content, thereby helping fill the unmet need for more Esports professionals. Secondly, it represents an important case study in the development of interdisciplinary education. Given the increasing interconnectedness of domains in many areas (Proust & Fortier, 2018), Esports degree programs may represent a valuable model for developing other future interdisciplinary degree programs.

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions represent unprovable truths upon which the study rests (Merriam & Tisdell, 2015). These assumptions cannot be tested but must be true for the research to have meaning. This study has several key assumptions. Firstly, it is assumed that qualitative research can offer meaningful insight into the development of Esports curricula in post-secondary institutions. This assumption is based in the long tradition of using qualitative inquiry to explore educational topics. Secondly, it is assumed that the participants in the study will respond fully, accurately, and truthfully to the interviews.

This assumption is necessary, because there is no way to verify the participants' truthfulness, but the study would have no meaningful results if the data were to be treated as unreliable. Finally, it is assumed that the development of Esports curriculum in post-secondary institutions is being carried out in such a fashion that common core principles can be identified across programs. Without this assumption, no underlying body of knowledge or understanding of the fields from which the programs are drawing can be expected to exist.

Limitations

Limitations are the weaknesses of a study, or the flaws that the research methods make unavoidable (Merriam & Tisdell, 2015). There will be several important limitations present in this study. First and foremost, the study will be limited by self-reported data. Although the case study methodology allows for the triangulation of different data sources, the broader qualitative methodology requires the participants' subjective experiences to be respected. Therefore, there is no way to be certain the results are accurate. Secondly, the study will be limited by the relatively shallow inquiry into each school's program. Addressing a wider array of participants will be necessary to develop common core principles, but this precludes, for reasons of practicality, digging too deep into any specific program, as well. Finally, the study will be limited by the participants' willingness to share key aspects of their programs, a willingness that is not guaranteed given that the purpose of the study would ultimately help facilitate the development of competing degree programs.

Delimitations

Delimitations are deliberate boundaries imposed upon the study by the researcher (Merriam & Tisdell, 2015). There will be several delimitations on this study. Firstly, the study will be delimited to two university directors/coaches and three Esports league representatives, because of their particular relevance to developing common core principles. Secondly, the study will be delimited to post-secondary institutions with programs offering a formal degree or certification. Thirdly, the study will be delimited to the United States to avoid divergent national culture issues. Fourthly, the study's secondary data component will be delimited to a single school, because of issues related to the practicality of accessing such data from multiple programs.

Definition of Key Terms

The following key terms are central to the study:

Career and Technical Education (CTE)

"Career and technical education (CTE) is the practice of teaching specific career skills to students in middle school, high school, and post-secondary institutions" (Stauffer, 2020, para. 4).

Esports

"Esports are multiplayer, online video games played competitively as part of a team" (Clarity Innovations, Inc., 2019, p. 4).

Social and Emotional Learning (SEL)

Social and emotional learning (SEL) "involves acquiring and effectively applying the knowledge, attitudes, and skills to understand and manage emotions, set and achieve

positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (Weissberg & Cascarino, 2013, p. 4).

STEM Education

"STEM education is an experiential learning pedagogy in which the application of knowledge and skills are integrated through in-context projects or problems focused on learning outcomes tied to the development of important college and career readiness proficiencies" (National Science Teaching Association [NSTA], 2021, para. 1).

Summary

In summary, the problem is that it is not known what common core competencies are developed in post-secondary Esports/gaming curricula in the United States. To address this research problem, the purpose of this qualitative case study is to explore the common core competencies that are developed in post-secondary Esports/Gaming curricula in the United States. The study will address a single, overarching research question, namely: What common core competencies are developed in post-secondary Esports curricula in the United States? The study will be guided by and contribute to the understanding of curriculum theory, a key theory on the development and evolution of curricula. The study both addresses a significant gap in the existing literature and will help to promote the practical development of new Esports programs at post-secondary institutions.

This chapter, Chapter One, comprised an overview of the study and its key components. Next, Chapter Two presents a review of the literature. In the literature review, key issues developed in the background and theoretical framework sections are developed further, including the research gap motivating the study. Hence, Chapter Two

both grounds the study in the existing literature and strongly makes the case for why the study will represent a significant and novel contribution to that literature.

Chapter Two: Review of Literature

The problem under consideration within this study is that currently there is little known about what common core competencies are developed in post-secondary Esports/gaming curricula in the United States. The recent literature has begun to investigate the integration of Esports into high school curricula to help students develop science, technology, engineering, and math (STEM) skills and social-emotional learning (SEL) and promote career technical education (CTE; Anderson et al., 2018; Lee et al., 2020; Rothwell & Shaffer, 2019). The focus of the current study is on the Esports/gaming curriculum development in the United States. The current research problem is that there is a shortage of knowledge about how core competencies are developed in post-secondary Esports/gaming curricula in the United States. Although there is some research being conducted about integrating Esports into high school curricula, there is limited evidence of integrating it into a post-secondary setting (Anderson et al., 2018; Lee et al., 2020; Rothwell & Shaffer, 2019). Similarly, there continues to be limited research on Esports as a viable career or the skills required for the Esports/gaming career (Funk et al., 2017; Lee et al., 2020). As Esports gaming is a growing phenomenon in the educational setting, the researcher believes that it is important to explore what the existing literature says about its developments.

To address the current literature gap, the purpose of this qualitative case study is to explore the common core competencies that are developed in post-secondary Esports/gaming curricula in the United States. The case in this case study is Esports curricula in U.S. post-secondary institutions. There is some evidence of emerging Esports degrees at post-secondary institutions, due to the transferability of skills to other fields or

the opportunities for greater career prospects (Anderson et al., 2018; Banyai et al., 2019; Wimmer et al., 2021).

There are various skills gained from Esports participation, such as those related to perceptual processing, including processing speed, spatial resolution, problem solving and planning, and visuomotor coordination (Murphy et al., 2021; Nielsen & Hanghøj, 2019; Torner et al., 2019). Social skills may also be gained through video games participation, according to Torner et al. (2019) and Nielsen and Hanghøj (2019). These gained skills from Esports participation may be transferred to other fields of study, such as aviation, more specifically among air traffic controllers, for example (Torner et al., 2019). Wimmer et al. (2021) concurred and noted how creativity and critical thinking that are fostered through Esports participation can be transferred to real-world contexts. Wimmer et al. (2021) noted that such skills of creativity, communication, and critical thinking can be transferred and used in the fields of marketing and public relations. The benefits of perceptual-cognitive skill gained in Esports can also aid in the enhancement of expert performance in traditional sport, which benefits traditional sports players (Murphy et al., 2021). The scope of the current research study will be the Esports/gaming curriculum in post-secondary institutions only, as Esports/gaming degrees are a relatively new phenomenon in post-secondary education (Anderson et al., 2018). Due to the novelty of these curricula, the researcher believes that it is important to explore the core competencies developed by these programs.

The literature chosen for this review was based on several inclusion criteria. The researcher chose articles that were peer-reviewed and published within the last five years of this writing, as Esports/gaming programs are still a relatively new concept in

education. The researcher included in this chapter older literature to discuss the theoretical framework, specifically the curriculum theory by Kliebard (1975). The researcher also included other significant studies that contributed to the knowledge related to the curriculum theory, such as those discussed by Kelley (2009) and McFadden and Roehrig (2017). The current chapter will be structured as follows. First, the researcher will discuss the theoretical framework that will guide the current study. Next, the chapter will discuss three main components behind the current study: gaming curricula, Esports in the educational setting, and Esports curriculum design.

Theoretical Framework

The theoretical framework that guided the current study was the curriculum theory by Kliebard (1975). The general curriculum theory centers around the enactment and development of the educational curriculum and policy decisions. The curriculum theory helps to increase the understanding about the different influences on the development of educational materials and offer a tool by which to understand the competing influence in terms of what is taught and how it is taught. The curriculum theory was previously explored by scholars, such as Stephen Schiro and Herbert Kliebard (as cited in Kelley, 2009). Schiro took a philosophical approach to curriculum development. He argued that certain ideologies and philosophies of the American education system influenced the way that the American curriculum was developed between 1890 and 2007 (as cited in Kelley, 2009). However, the current study will be guided by the approach proposed by Kliebard (1975).

Having discussed the fundamental principles of the curriculum theory, Kliebard (1975) contributed to the theory by taking on an historical approach to examine how the

American curriculum was shaped between 1893 and 1958. He argued that there are four main groups of curriculum influences: humanist, social efficiency, developmentalism, and social reform (as cited in Kelley, 2009).

The humanist influences on curriculum focus on how mental reasoning and mental abilities assist children with their education. According to Kliebard (1975), educational curriculum should be developed in a way that supports the development of reasoning power in students, through the four main groups of curriculum influences discussed by Kelley (2009). Thus, the purpose of the curriculum is not to acquire specific competencies, but to assist students with sharpening their mental tools and increasing their mental capacities.

The social efficiency influences focus on optimizing the social unity of the student within the society (Kelley, 2009). By developing the curriculum in a way that stimulates the students' social utility, they are prepared for a predicted role within the society. According to Kliebard (1975), this is a method of social control, as it is designed to develop learning of basic life activities within the society. Activities that would promote growth in this area include, but are not limited to, housekeeping, yardwork, occupational-related, leisure-related, and transportation, such as biking and driving (Fletcher et al., 2018; Juvonen et al., 2019).

With respect to developmentalism, Kliebard (1975) believed that curriculum could be designed to promote the development of the students' behavioral and emotional qualities. Through developing these qualities, students are prepared to improve their social and emotional outcomes in the society, over their academic ones. Some activities that promote the development of the students' behavioral and emotional qualities include

working in groups, playing in teams through sports, reflective journaling, and practicing dialogues, among others (Fazliddinov, 2021; Lara, 2020).

Last, the social reformer influences focus on using curriculum as a tool to reform and change the society for the better (Kelley, 2009). Activities that would promote growth in this area include, but are not limited to, volunteering, participating in charities or fundraisers (Westheimer, 2020). Many of school-based activities that promote students to change the society for the better are related to emphasizing and developing good character (Kelley, 2009; Westheimer, 2020). As such, within curriculum practice, students need to be taught to raise questions, exposing them to multiple perspectives and controversial issues in society (Westheimer, 2020).

In line with this, according to Kliebard (1975), educational curriculum can be designed in a way that promotes socialization through the power of intelligence of the individual. Curriculum that stimulates the intelligence of its students to drive them toward achieving a societal change can ultimately contribute to greater diversity and equality within the society (Kelley, 2009). In the context of this study, according to Wojciechowski et al. (2021), digital games can act as stimulants of one's intelligence and cognitive functions. More specifically, Bediou et al. (2018) concurred and explained how gaming platforms, such as first-person shooter virtual games, enhance and train the cognitive functioning of individuals. This is because virtual shooter games require repetition and practice on selected target cognitive skills within a variety of settings to be successful (Bediou et al., 2018). Thus, the purpose of the curriculum is not to acquire specific competencies, but to assist students with sharpening their mental tools and

increasing their mental capacities, which is what Esports curriculum should strive to achieve.

The principles proposed by Kliebard (1975) have been applied in some of the more recent research. One such study was conducted by Beeching et al. (2021), who explored the structure and content of the curricula in Medical Microbiology in various European countries. Through applying Kliebard's (1975) humanist and social efficiency principles, the researchers argued that the ultimate objective of the studied curricula was to deliver specialist training and future medical specialists and help them develop necessary competencies that promote appropriate skills, knowledge, and adequate professional conduct, that will allow them to fulfil their duties as medical professionals. Chiu and Chai (2020) have built on that by arguing that the curriculum design should reflect the educator's understanding of the students' needs, as opposed to simply preparing them to fulfill their duties in the profession. This could be especially relevant for other professionals within the Esports industry that require a specific set of skills that may otherwise not be directly targeted by the Esports curriculum, such as finance professionals. Kliebard's (1975) humanist principle focuses on developing mental reasoning skills, and social efficiency focuses on preparing individuals for their roles within the society. With respect to the medical field, appropriate curriculum design helps to promote both of these areas.

Kliebard's (1975) principles can also be applied with respect to designing a curriculum that helps to prepare students for their industry. Another study that adopted Kliebard's (1975) principles of curriculum design was conducted by Chiu and Chai (2020). The researchers focused on exploring the views of educators and teachers in K-12

schools on the development of an Artificial Intelligence (AI) curriculum. Their findings indicated that the AI curriculum is a relatively new concept in research. They discovered that the most efficient way of developing an AI curriculum in K-12 schools consisted of understanding the perceived educational needs of students, aligning the curriculum with other mandatory taught subjects, applying the curriculum in the global context, and including multimedia learning. McFadden and Roehrig (2017) came to similar conclusions, arguing that the curriculum should be designed in a way that promotes the skills and knowledge of students that is necessary in their field. Although professionals, such as marketers and managers are not the first professions that would be targeted by the Esports curricula, they remain an important part of the industry, which the curriculum should reflect. These findings center heavily around Kliebard's (1975) humanist and social reformer principles. The findings by Chiu and Chai (2020) suggest that the ultimate curriculum design stimulates the intelligence of its students and drives them toward achieving a societal change, such as through innovative technology, such as AI. Thus, the right curriculum not only equips students with the necessary skills and knowledge, but also aspires them to take this knowledge and pursue further change.

The right curriculum will help students to develop the niche skills within specific industries. With respect to STEM-based curriculum, McFadden and Roehrig (2017) conducted a study where they explored how teachers integrated with its development. Their findings indicated that curriculum for STEM-based subjects should be centered around activities and strategies that help students to develop subject matter expertise. Similarly, curriculum development should reflect the roles, responsibilities, and participation of students in the STEM field, and thus should reflect the necessary skills

and knowledge to support them with this transition. Likewise, Beeching et al. (2021) argued that curriculum development should assist students in developing the necessary competencies that promote development of appropriate skills, knowledge, and adequate professional conduct to help them fulfill their professional roles, such as roles that require finance or marketing skills that are still relevant in the Esports industry. The study by McFadden and Roehrig (2017) adopted the humanist and social efficiency principles proposed by Kliebard (1975), as in technical disciplines, such as STEM, the curriculum is designed mainly to develop students' knowledge, skills, and mental reasoning to allow them to perform well. Thus, curricula should be designed in a way that is specific to the industry standards and promote the necessary skill development to allow students to transition into the professional field smoothly.

Aside from simply promoting knowledge development, curricula should assist students with real-life learning and experiences that replicate those that students can expect in their industries. In the study by Voukelatou (2019), the researcher explored the students' perceptions regarding the experiential learning curriculum in a school in Greece. Her findings indicated that the experiential learning curriculum focused mainly on acquiring skills and knowledge of students. However, the researcher argued that experiential learning curriculum also contributed to improving students' social skills and attitudes. These findings suggest that regardless of the discipline, curriculum is a tool that helps to prepare students for their responsibilities and fulfilment of their future professional roles. Indeed, Beeching et al. (2021) also argued that the curriculum design should offer students a specialist training to help them develop necessary competencies that promote appropriate skills, knowledge, and adequate professional conduct that will

allow them to fulfil their duties in the field. This is especially relevant for financial professionals, who require appropriate financial skills and knowledge in order to successfully adapt in the Esports industry. Thus, the study by Voukelatou (2019) applied Kliebard's (1975) principles of humanism and developmentalism, promoting knowledge and social skills acquirement. These findings highlight that the role of the curriculum is not only to provide knowledge, but to assist students with the right learning environment and experiences that support practical skill development.

There are several reasons for selecting the above framework as the guide for the current study. From the above analysis, it is evident that Kliebard's (1975) principles within the curriculum theory have been widely applied to scholarly research, which are applicable to the Esports discipline. Similarly, Kliebard's (1975) principles help to increase the understanding about the different influences on the development of educational materials and offer a tool by which to understand the competing influenced in terms of what is taught and how it is taught. As will be highlighted later on in this chapter, challenges associated with Esports discipline require these elements to be addressed, to assist with a successful design of a curriculum. The current study will adopt these principles to explore the common core competencies that are developed in post-secondary Esports/Gaming curricula in post-secondary institutions in the United States.

Literature Review

Building on the statement of the problem and purpose of the current study, it is important to explore what is currently available in the scholarly literature. This chapter will be structured as follows. First, this chapter will explore the topic from a wider, and more commonly known angle, which is educational curricula with gaming elements. The

reason for that is that the topic of educational curricula has been more researched than Esports, which are relatively new phenomena. Next the chapter will discuss the Esports in education as a whole, before discussing the necessary aspects needed when designing an Esports curriculum.

Characteristics of Esports

Starting from the 1990s, Esports emerged as a new form of media and entertainment. According to Sjöblom and Hamari (2017), Esports can be defined as "a form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces" (p. 213). There are various genres of Esports, including games that simulate sports (e.g. FIFA), multiplayer online battle arenas, or MOBA, (e.g. League of Legends), first-person shooters (e.g. Fortnite), real time strategy (e.g. StarCraft II), and collectable card games (e.g. Hearthstone) (Sjöblom & Hamari, 2017; Tjønndal & Skauge, 2021).

One of the characteristics of Esports is that it is produced and delivered virtually. Esports is delivered and watched online, conquering markets from global to local and from online to offline. Due to this core characteristic, the Internet is made its fundamental pillar (Saiz-Alvarez et al., 2021). Through the Internet, the athlete-gamer and spectators can participate in live streaming and video on demand (Saiz-Alvarez et al., 2021). With social and video platforms, the athlete-gamer and spectators communicate in the chat room as the athlete-gamer plays and spectators actively participate (Block et al., 2018; Qian et al., 2020b). These chat rooms are also where playing teams can interact with each other, as well as through web cameras and live audio (Block et al., 2018; Qian et al.,

2020b). For example, spectators in Twitch can watch their choice of athlete-gamer play live while asking them questions about game strategies, techniques (Hamari & Sjöblom, 2017; Howard, 2018; Saiz-Alvarez et al., 2021). Hamari and Sjöblom (2017) outlined that athlete-gamer and spectator participants have a community in Esports. That is, in the context of Esports, a community can be viewed as a virtual platform wherein Esports athlete-gamers and spectators communicate with each other (Hamari & Sjöblom, 2017). Esports athlete-gamers join a community to train and further develop their skills while spectators watch the performance of athlete-gamers for entertainment or to also advance their gaming skills (Hamari & Sjöblom, 2017).

Moreover, using their personal computer, spectators can interact with certain virtual objects and content, such as, but not limited to, camera angles, rewind, and pause (Saiz-Alvarez et al., 2021). Esports also has unique characteristics, such as the chat room, streamer traits, stream quality, and virtual rewards (Block et al., 2018; Qian et al., 2020b). All these components help enhance the gamer-spectator connection and the overall Esports experience (Howard, 2018; Saiz-Alvarez et al., 2021).

While Esports are virtually played sports, there are various characteristics that Esports have in common with traditional sports that are delivered physically (almost all sports) and mentally (such as chess). For instance, researchers have noted that Esports also place physical and psychological stress of the athlete-gamer (Block et al., 2018; Fiore et al., 2020; Tjønndal & Skauge, 2021). Esports also have the spirit of competition that can be found in traditional sports (Block et al., 2018; Fiore et al., 2020). Fiore et al. (2020) added, both Esports and traditional sports have the structural component and composition of the teams playing. This body of literature provides more in-depth

information about the characteristics of Esports, outlining both the differences and similarities of Esports characteristics and those of traditional sports (Block et al., 2018; Fiore et al., 2020; Tjønndal & Skauge, 2021).

Benefits of Esports

In the world of Esports, video games are competitively played, which are simultaneously broadcasted live to mass spectators. Due to the connection that Esports yields between athlete-gamer and spectator, this form of media and entertainment is rapidly growing in mainstream entertainment (Block et al., 2018; Chung et al., 2019). Researchers have noted that there are various benefits of Esports participation, such as increased engagement, bonding, and collaboration (Chung et al., 2019; Qian et al., 2020a; Tang, 2018). Chung et al. (2019) reported that through Esports individuals can learn to collaborate effectively, as well as develop a sense of responsibility with various tasks involved in playing. This collaboration from playing yielded and fostered a bond among teams (Chung et al., 2019). Similarly, Qian et al. (2020a) conducted further study on this topic and employed people to examine Esports spectatorship. Through semi-structured interviews and online open-ended surveys, the findings of the mixed methods study showed that participants had feelings of friends bonding and socialization opportunities through Esports (Qian et al., 2020a). This body of research provides initial information regarding the benefits of Esports participants, such as engagement, bonding, and collaboration (Chung et al., 2019; Qian et al., 2020a; Tang, 2018).

In the world of Esports, individuals or teams compete in various forms. For instance, Esports individuals or teams competing in video games either in person or 122 online, for trophies, gathering points, or for prize money (Ruvalcaba et al., 2018). In

order to win the game, Esports individuals or teams need to have high levels of perceptual-cognitive skills, which enable them to anticipate moves and make decisions in a limited amount of time (Murphy et al., 2021; Ruvalcaba et al., 2018). As such, researchers have argued that Esports participation can help develop the perceptual and cognitive processing skills of players given the demands of the game (Murphy et al., 2021; Ruvalcaba et al., 2018). This is especially because Esports also entail perceptual and strategic elements, as well as processing demands, just as traditional sports (Murphy et al., 2021; Ruvalcaba et al., 2018). Ruvalcaba et al. (2018) conducted further research on this area and found that engagement with video simulations, especially of real-world actions, can significantly and potentially increase the development of perceptual-cognitive skills. However, Yin et al. (2020) noted that there is a still a gap in literature regarding the potential health benefits of Esports, calling out the need to develop a strategic research agenda to understand Esports and its abilities to boost individual health, wellbeing, and physical activity. Nonetheless, while there is still a lack of research regarding the effect of Esports engagement on participants' perceptual-cognitive skills, this body of literature provides initial empirical information regarding the potential benefit of Esports engagement in enhancing the development of one's perceptual-cognitive skills (Murphy et al., 2021; Ruvalcaba et al., 2018; Yin et al., 2020).

Esports participation can also benefit the personal development of players and their psychological wellbeing. Several researchers, such as Qian et al. (2022), Wong et al. (2021), and Carbonie et al. (2018) found that Esports can help increase the personal development of players, as well as their psychological wellbeing. Wong et al. (2021) focused on this topic in their study, examining Esports players in Hong Kong regarding

Esports participation. Wong et al. (2021) conducted interviews in their qualitative study and found that Esports participants reported stronger psychological health, especially in the areas of judgment, concentration, self-enforcement, and perseverance. More specifically, the findings of their study indicated that Esports participation and training yielded advancements in judgment, focus, and self-affirmation, and reduced stress among the players (Wong et al., 2021). In a more recent study, Qian et al. (2022) noted similarly, as the researchers explored psychological processes and basic psychological needs among Esports fans. Using the self-determination theory as the framework of the study, the researchers found that Esports participation helped the participants feel more related or connected (Qian et al., 2022). This is important information given that relatedness or connectedness is one of the most salient basic psychological needs for each individual (Qian et al., 2022). This body of knowledge highlights the different ways in which Esports participation benefits the psychological processes of Esports players and spectators alike (Qian et al., 2022; Wong et al., 2021).

As previously noted, there are various skills gained from Esports participation that involve the neurocognitive area. Researchers have reported how Esports participation can potentially enhance perceptual processing skills, such as, but not limited to, processing speed, spatial resolution, problem solving and planning, and visuomotor coordination (AlMarzooqi et al., 2022; Murphy et al., 2021; Nielsen & Hanghøj, 2019; Torner et al., 2019). Campbell et al. (2018) noted the potential benefits of Esports on the brain. The researchers highlighted the need for more research on the area of Esports and the positive neurocognitive effects on its participants (Campbell et al., 2018). AlMarzooqi et al. (2022) also noted that Esports participation can possibly hone different skills among

participants, such as increased hand-eye coordination, quick reaction times, improved tactical abilities, and movement accuracy. This body of literature further provides empirical information on how Esports participation can benefit the players' the neurocognitive processes (AlMarzooqi et al., 2022; Campbell et al., 2018; Murphy et al., 2021).

Negative Effects of Esports

Despite the many benefits of Esports, there are also potential negative psychological effects. Esports participation has also been linked to addiction and gambling (AlMarzooqi et al., 2022; Palanichamy et al., 2020; Yin et al., 2020). Further to this, researchers have argued how excessive use and participation of Esports can lead to adverse health behaviors and outcomes (AlMarzooqi et al., 2022; Palanichamy et al., 2020). Palanichamy et al. (2020) examined seven empirical articles about Esports. The findings of their study showed that the excessive hours of playing online was significantly associated with experiences of depression, social phobia, presence of obsession-compulsion, lack of interpersonal connectedness, increased hostility, anxiety, paranoia, psychoticism attention-deficit hyperactivity disorder, and addiction (Palanichamy et al., 2020).

Furthermore, some research has shown that Esports excessive play has been found to negatively impact participants' psychological processes. Several researchers have noted that excessive Esports participation can lead to negative effects, such as in the specific cases of anxiety, insomnia, and physical activity (AlMarzooqi et al., 2022; Palanichamy et al., 2020). AlMarzooqi et al. (2022) conducted a cross-sectional study on this topic and examined the lifestyle of 893 Esports players in Saudi Arabia. Through a

questionnaire, the findings of their study showed that there is a high prevalence of nomophobia, anxiety, and insomnia among Esports players (AlMarzooqi et al., 2022). Furthermore, Palanichamy et al. (2020) concurred and noted how Esports has an influence on stress, especially citing psychological distress as an effect of Esports excessive play. The researchers conducted a systematic literature review on this topic and found that Esports excessive play can lead to psychological problems, such as depression, anxiety, apathy, uncooperative attitude, tense, sleep disturbances, mental distress, aggressive affect and behaviors, distress in social life, and emotional issues (Palanichamy et al., 2020). This finding by Palanichamy et al. (2020) is consistent with the finding of AlMarzooqi et al. (2022). However, these findings are not in line with those of Qian et al. (2022) and Wong et al. (2021) who noted that Esports participation can result to positive psychological processes. Given the varying findings in this area of Esports research, further research should be conducted to examine and define Esports participation and Esports excessive play in order to determine their effects on participants' psychological processes (AlMarzooqi et al., 2022; Palanichamy et al., 2020; Qian et al., 2022; Wong et al., 2021).

Gaming Curricula

One of the first concepts explored by the current study are the curricula with gaming elements. The rationale for starting the literature review with this topic is the fact that there is currently limited scholarly research about Esports curricula, due to its infancy in the educational sphere. Gaming in educational curricula was widely studied by scholars, and some of its aspects will help to shape the later discussion for Esports curricula.

Gaming curricula have increased in popularity with the recent growth of technology and social media (McEnroe-Petitte & Farris, 2019). According to scholars, gaming curricula are generally focused around playing a game, which can take various forms, such as role-plays, Esports, puzzles, computer-based games, or card games (McEnroe-Petitte & Farris, 2019). Students currently have become more technologically advanced than the previous generations, which has increased the incorporation of technologies to learning, such as using personal computers, computer-based simulations, and phones to support the learning process (Davis, 2020). With the growth of technological advancements and students' growing reliance on these devices, this gave rise to curricula with gaming elements (McEnroe-Petitte & Farris, 2019). These curricula help to develop specific skills and knowledge related to Esports, which will be explored in this chapter.

Apart from gaming-based activities, gaming curricula can also implement the use of virtual and augmented reality into students' learning. Virtual reality refers to an interactive environment where students experience a realistic simulation of a 3D environment (Sitterding et al., 2019). In the virtual reality, students are able to be transported into a novel environment, where they are able to perceive the stimuli around them as if they were in the real-world. As the student is at the center of the simulation, they are able to interact with their environment and actively experience all auditory and visual stimuli (Sitterding et al., 2019). A similar environment occurs in the Esports environment. Through exposure to auditory and visual stimuli and learning in gaming-based curricula, professional players in the Esports industry can develop the necessary skills to adapt to the virtual environment as part of their work. Active participation in

these environments helps to stimulate the creativity and problem solving of students, who are faced with a novel environment where they can develop solutions and ideas in a testable environment, before these are applied in the real-world (Zirawaga et al., 2017). These opportunities are important in the work context and highlight that implementing gaming and Esports elements into the academic curricula develops some skills that are applicable to employment.

Similarly, augmented reality learning occurs in the real-world setting, but through applying digital and physical media to the learning process (Sitterding et al., 2019). In the augmented reality environment, the learner is able to use the surrounding objects and programs and incorporate them into their virtual learning (Sitterding et al., 2019). Esports environments combine elements of virtual and augmented reality, which allows the players to compete during live competitions. As opposed to simply practicing their skills at home, curricula that incorporate learning through augmented reality help players to develop their skills to allow them to become professional in their fields. This activity helps to promote thinking outside the box and creativity among students, as students can experiment with new solutions and ideas (Amara & Saberi, 2018). Through interacting with virtual and real-like objects, the students are able to develop their skills through practicing and testing solutions that are not easily achievable in the real-life setting. As Esports uses an environment that incorporates both virtual and augmented reality elements, this setting allows future professional players to develop their skills in a way that helps them to excel more than those players who did not complete a similar education.

Another important aspect of the gaming curricula is video games. Video games are action-oriented virtual environments that are typically used for entertainment, but recently there has been a noticeable growth of video games being used in the educational setting (Mason & Turner, 2018). Esports are an important part of video games. The nature of playing video games helps learners to develop their cognitive skills, such as memory, attention, and spatial skills, which can be particularly beneficial to fast-paced and detail-oriented industries (Lecorchick et al., 2020). As a consequence, similar skills are obtained during Esports. Similarly, other researchers have concentrated on the benefits of using video games on specific populations that experienced brain damage or stroke, who practically had to re-learn some of their previously acquired skills (Mason & Turner, 2018). Through the use of video games, some of the individuals were able to improve the neuroplasticity of their brains, due to the increased stimulation and increased attentional cognition when playing a video game (Mason & Turner, 2018). Thus, video games in curricula have the potential of engaging the students in acquiring new skills and knowledge, as this was previously demonstrated on brain damaged patients. This relates to Esports curricula, which implement similar set of activities.

Serious video games are different from the ordinary video games, as they are designed with a purpose that is different than entertainment (Mason & Turner, 2018). These types of video games are primarily used to create a simulation of a real environment, either for educational or practical purpose, similar to that of Esports. Examples of industries that implement serious video gaming consists of defense, emergency services, engineering or health care (Mason & Turner, 2018). Through the use of serious video gaming, learners are presented with virtual environments where they are

able to practice their acquired skills and knowledge and develop their critical thinking and problem-solving skills when faced with unexpected scenarios. Similar skills are obtained through Esports, where students need to be able to assess their competition accurately and solve problems. Serious video games were previously linked with improving the engagement levels of learners, motivation, and retention, as a result of its creative, collaborative and multitasking nature (Davis, 2020). These games can be applied in the education setting, where students are able to apply their acquired skills in a practical setting, which can be later translated into employment.

In order to be effective in preparing students for working in the gaming industry, gaming curricula need to meet certain criteria. Amara and Saberi (2018) identified that in order to meet the educational objectives, gaming curricula should be creative, stimulating, engaging, provide pleasure, promote social interactions between students, increase their motivation and participation, and increase their knowledge and skills, which Esports provide. Other researchers argued that the reason for gaming curricula' effectiveness lies in its competitive nature, where students were encouraged to develop their own understanding about a subject through competing with other students (Zirawaga et al., 2017). Esports offer a similar competitive environment, where students actively and continuously develop their understanding of their opponent and the virtual environment. Similarly, instant feedback in gaming was notably significant in improving the motivation to learn in students (McEnroe-Petitte & Farris, 2019).

The effectiveness of gaming curricula is centered around its experiential learning nature. According to McEnroe-Petitte and Farris (2019), through using practical experiences, the students are able to apply their technical knowledge. This in turn helps to

promote students' involvement and motivation. Similarly, gaming-based activities can help students to develop their learning at their own speed, as each student is able to contribute a different set of skills and knowledge into the activity (Zirawaga et al., 2017). Although Esports provide a competitive environment, which requires problem solving and performing under pressure, gaming curricula can support students in their development as they progress to work in the industry. When incorporated into the educational curriculum, students are able to repeat certain activities during the gaming activity until they become familiarized and comfortable with it. This differs from traditional learning environments, where all students are encouraged to learn and perform at the same rate, regardless of their learning styles or levels of understanding of the subject (Amara & Saberi, 2018).

There are several benefits with incorporating gaming and Esports into the educational curriculum. Gaming curricula help students to develop skills, such as critical thinking, creative thinking, problem-solving, conflict resolution and teamwork (Amara & Saberi, 2018; Jong et al., 2017; McEnroe-Petitte & Farris, 2019; Zirawaga et al., 2017). This is achieved through the active process of learning involved in gaming, where students actively interact with other students and are often required to problem-solve and think on their feet, which replicates the environment of Esports. This can be especially beneficial in the post-secondary setting, where students are encouraged to think of real-life scenarios and develop real solutions to existing problems, which Esports and video games offer (Zirawaga et al., 2017). Gaming curricula were also found to increase course retention rates and increase student motivation (Davis, 2020; Lam et al., 2019). The reason behind this is the increased stimulation and curiosity of students, who have the

opportunity to apply their existing knowledge into developing practical solutions. This not only promotes thinking outside the box, but also improves their academic performance. To add to that, higher retention means that more students successfully complete the degree, which helps to prepare them for the employment in Esports.

The scholars have noted that gaming addresses some of the limitations of traditional learning curricula, such as incorporating different learning styles of students. For instance, as a result of the interactive nature of gaming curricula, the activities and behaviors of the educators can be easily adjusted to help promote the learning style of each student (McEnroe-Petitte & Farris, 2019). Similar logic can be applied to Esports, as each player develops their own competitive style. The more effective the curriculum is at promoting certain learning styles, the better academic achievements of the students (Sitterding et al., 2019). Moreover, through incorporating technology into gaming curricula, it can help to improve the students' understanding of the technological solutions used in their professions, such as Esports (Davis, 2020). This advancement not only helps to support students with real-life application of their knowledge, but can also contribute to improve work-related and academic outcomes.

However, in order for gaming curricula to develop the core competencies required to support the Esports industry, it should be designed and implemented in a way that helps to develop practical skills (Jiravansirikul et al., 2017). For instance, the format of the gaming activities should be adjusted to the employment needs in order to promote the development of specific skills, such as critical thinking, thinking under pressure, or problem solving (McEnroe-Petitte & Farris, 2019). Through incorporating problem-

solving games into their learning, students are able to remediate their skills and knowledge, which could then be replicated into the real-world setting, such as Esports.

Gaming curricula ought to be designed in a way that helps to prepare students for the demands of the industry or transition post-education, particularly Esports (Elkins & Hollister, 2018; Fu & Burns, 2017; Jiravansirikul et al., 2017; Wheeler, 2020). As previously mentioned, students require a lot of problem-solving and critical thinking skills to enter the Esports industry, thus they are likely to benefit more from a gaming or Esports curriculum (Wheeler, 2020). Other researchers identified that there are applications of gaming curricula to later education (Awan et al., 2019; Lecorchick et al., 2020; Mason & Turner, 2018; Verkuy; et al., 2020). For instance, students who learn a degree in a gaming environment are more likely to be more prepared for the challenges of post-secondary education. The reason for that is the fact that gaming activities help to promote different learning styles of students and increase practical skills that are not typically exercised in traditional curricula (Lecorchick et al., 2020). Similar skills can be obtained in Esports curricula, as these share a lot of similarities with gaming.

Despite the clear benefits of implementing gaming-based activities and simulations into learning, there are several challenges that should be noted, that can perhaps inhibit the development of core competencies of the students. For instance, scholars have argued that many students may experience technical problems during virtual simulations, which can prevent the effectiveness of their learning unlike the traditional learning environment (Verkuyl et al., 2020). Although it was previously mentioned that gaming activities can help to promote motivation and curiosity of the students, when incorporating technology into virtual learning, students are more likely to

become frustrated and disinterested in the activity as a result of the technological problems (Lam et al., 2019). When faced with ongoing technical challenges, the learning process of students may become affected, and in turn their ability to develop some of the core competencies. All of these challenges are applicable to Esports, which rely on technology and virtual learning, but ultimately prepare students for the industry.

Similarly, as previously mentioned, technology-based learning is a relatively new and unexplored concept. This means that many teachers and educators may be unequipped to introduce that into the curriculum, or develop a curriculum solely based on gaming or Esports (Verkuyl et al., 2020). The level of implementation of the gaming curriculum ultimately determines its effectiveness in helping students to develop some of the core competencies and prepare them for work in Esports. This suggests that many institutions would require to facilitate additional training for its educators, some of whom may have never adapted to the technological advancements of the recent years (Amara & Saberi, 2018). Moreover, the educators would be required to conduct an ongoing evaluation of the state of the technology before each educational session, and that will guide the design and content of the curriculum taught to the students (Verkyul et al., 2020). This can be time-consuming and stressful for the educators, which can reflect the quality of learning received by the students.

Gaming curricula have been previously implemented in multiple educational disciplines. Among these disciplines were nursing (McEnroe-Petitte & Farris, 2019; Sitterding et al., 2019), geography (Davis, 2020), business (Amara & Saberi, 2018), medicine (Awan et al., 2019), computer science (Lecorchick et al., 2020), pharmacology (Lam et al., 2019), pedagogy (Wheeler, 2020), history (Zirawaga et al., 2017), and library

information science (Elkins & Hollister, 2018; 2020). However, the researcher noted a significant absence of literature of Esports curricula in post-secondary education, as a majority of these studies were conducted in the professional setting. Through focusing the current study on exploring the core competencies promoted by Esports curricula in post-secondary education, the researcher will be able to address this gap.

E-Sports in Education

Not much is known about Esports curricula in higher educations, and its role in preparing students to work in the industry. Esports industry has only recently developed into education (Jang & Byon, 2019). After the increase in popularity of Esports in the mainstream sport entertainment, Esports have gradually increased the interest of academic stakeholders (Clark et al., 2007). The Esports games were both highly competitive and designed in such a way that the competition creates a spectacle that an observer can watch and make sense of relatively easily, the parallels to physical sports are straightforward (Jang & Byon, 2019). Initially, academics have accepted Esports as a form of sport at the university, but over time Esports developed into a discipline taught in the form of curriculum (Jang & Byon, 2019).

Esports have been a recent phenomenon in higher education. In the United States alone, just 40 college degrees for Esports programs were implemented in 2017 (Kauweloa & Winter, 2021). However, as Esports grew in popularity in the mainstream, there was a growing interest in pursuing Esports as a viable career option, which would otherwise be an unlikely option even a few years prior (Jang & Byon, 2019). The Esports college programs started to pick up the momentum and in 2018, nearly 200 college institutions have provided Esports-focused scholarships for its students (Kauweloa &

Winter, 2021). In 2014, Robert Morris University was the first higher education institution to recognize Esports as an official sport activity in the school, before University of Utah implemented the very first Esports academic program in 2017 (Kauweloa & Winter, 2021). Thus, although Esports is a relatively new discipline in the academic sphere, it is rapidly picking up speed.

Before understanding what competencies are developed by the Esports curriculum at higher education institutions, it is important to explore the nature of Esports. Esports are considered to be as competitive as traditional sports and some scholars have argued that it helps to develop the skills that traditional sports do, such as performance under pressure, discipline, and managing stress and anxiety (Iwatsuki et al., 2021). The reason for that is, in Esports players have to monitor their mindset for motivation and concentration, while practicing their discipline using their pre-performance routine (Iwatsuki et al., 2021). Other scholars argued that successful performance in Esports helps players to develop high confidence, which acts as a foundation for building self-efficacy and confidence, which is task-specific and increases the students' beliefs that they can perform well (Clark et al., 2007). This differs from the traditional university degrees, which are not as task-focused as Esports. Arguably, Esports programs can increase students' confidence and self-efficacy to perform well, more so than the traditional academic programs do (Iwatsuki et al., 2021). Thus, this is an important element for preparing students for future careers in their fields of study.

There has been further research conducted on understanding how exactly Esports help to shape the skills and competence of its players. Esports were found to develop motor skills of students, autonomy support, programming, storytelling, networking,

visual design, and artificial intelligence, which can be transferred into work environment (Clark et al., 2007; Iwatsuki et al., 2021). Similarly, the Esports programs also help students to develop the players self-image, self-expression, and self-actualization, on top of the skill and knowledge development (Kauweloa & Winter, 2021). The reason for that is behind the nature of Esports. Esports are considered by scholars to be social, reflective, and goal-oriented in nature (Kauweloa & Winter, 2021). Thus, in order to progress higher in the field, Esports players need to develop a high-stress tolerance level, high discipline for pre-game preparation, and reflection of past failures. Only with these skills are the Esports players able to attain the professional level and subsequently progress into the field.

An important element of Esports is its role in creating opportunities and resources for students who wish to expand their capacities in the Science, Technology, Engineering, and Mathematics, STEM-related disciplines. Esports in education help to develop problem-solving skills, critical skills, creativity, communication and collaboration among students (Anderson et al., 2018; Komatsu et al., 2021; Post & Birt, 2020; Williams, 2020). Esports helps to equip students with the necessary skills to complete the STEM degrees and help to articulate technical education to a higher standard (Williams, 2020). Similarly, students are able to become equipped with basic skills that prepare them for virtually any working environment, that is English speaking and writing skills and telecommunications technology (King et al., 2021). Apart from that, Esports help students to practice their planning abilities, ability to work as part of a team, effective execution, flexibility, listening ability, and creativity (King et al., 2021). All of these skills are likely to benefit students for their future careers of choice.

Esports also help to expand the scope of career education, through developing career paths around students' interests. As the initial interest in Esports is most likely to occur as a result of leisure activities and explorations during personal time, the perseverance, knowledge, effort, and identity are all shaped, even before the student enters an Esports-focused degree program (Lee et al., 2020). Thus, this means that students that enroll in the Esports-focused curricula are likely to be more motivated and disciplined than the traditional student who had no prior exposure to the subject of his degree choice (Lee et al., 2020). Due to the innate interest, Esports are arguably a discipline that promotes social connectivity among students, teachers, and program creators (King et al., 2018). Overall, all of these factors contribute to a positive progression between students' hobbies, education, and professional careers.

The growing popularity of Esports means that many educational gaps can be closed. For instance, Esports can help to reduce the learning gap between women and minority students within the field of technology. This is because Esports can help students to catch up on the technological demands of the working world, which would otherwise be unattainable to them in the event of undertaking a traditional college degree (Amazan-Hall et al., 2018). In this way, Esports can help to shift the educational culture through its unique characteristics that focus on collaboration, interpersonal bond with other players, strategy, and simulation (Byrne, 2020). Therefore, Esports are able to not only help players to close many educational gaps, but its wider implementation into the academic world can also help to create a culture change, which can have long-lasting effects on education and industry as a whole.

With relation to specific subjects, Esports are more closely linked to the STEM discipline. There has been some evidence of implementing Esports elements into STEM curricula (Byrne, 2020). In these programs, students were involved in regularly solving challenging problems, which over time helped to increase their self-efficacy and confidence in their subject of study (Byrne, 2020). Similarly, other researchers identified that STEM students who undertook Esports as an additional learning activity as part of the course were able to develop their commitment, sense of common purpose, collaboration, consciousness, congruence, and citizenship behaviors (Freeman & Wohn, 2017). As demonstrated by these findings, even when Esports are implemented as part of a degree, they can still create substantial benefits for students of that discipline.

On top of the previously mentioned benefits of Esports, it is important to highlight that Esports can create several limitations for some students and professionals trying to enter the field. For instance, some researchers have highlighted the challenge of differences in skill development among individuals with limited access to technologies for professional Esports, which affects the levels of dedication and discipline that the student develops (Kauweloa & Winter, 2021). This aspect can potentially limit the students' abilities to progress in the field at the same level (Amazan-Hall et al., 2018). However, these challenges can be addressed by the design of the curriculum itself. The next section will explore the subject of Esport curriculum design in detail.

E-Sports Curriculum Design

Despite the clear benefits of Esports in education, care needs to be taken when designing the curriculum for an Esports degree. Scholars have started the discussion about the potential implications of implementing Esports into the university degree

programs. Esports is a highly skilled and competitive field, with high entry requirements (Shum et al., 2020). In order to be able to progress into the Esports career after education, students are required to undertake hundreds of hours training to become excellent in their fields, with an average estimated time of 6.68 hours per week, and achieving the expert level would require a weekly commitment of 11.56 hours (Shum et al., 2020). Although long hours of training are also required for other disciplines, Esports are considered a leisure activity on top of education. This means that students are likely to be exposed to long hours of training at home and at university, which may make it challenging for them to adapt into other academic activities (Ohno, 2021). As Esports were a relatively new academic discipline, there is little knowledge available on how time management is handled to maintain an academic balance, while simultaneously supporting students into becoming Esports experts.

Similarly, due to the recent growth of Esports and its infancy in the academic sphere, it is difficult to estimate the health impacts of an Esports degree. For instance, as previously mentioned, in order to reach an expert level at Esports, students are required to practice during university hours, as well as during their spare time. This means that students are exposed to higher numbers of trainings than normal, which can affect their long-term health (Shum et al., 2021). For instance, when carrying out Esports activities, students are required to perform a lot of repetitive activities with their hands, are in the state of constant concentration, looking at the computer screen for many hours at a time, and sat in a seated positions for long periods of time (Mumtaz et al., 2021). Curricula for Esports should be designed in a way to minimize the damage to students' long-term health, however current knowledge on this topic is scarce (Mumtaz et al., 2021). There is

also limited knowledge about how many Esports professionals or students seek medical attention after prolonged symptoms, which should be explored.

Previously, benefits of Esports were highlighted in relation to the development of cognitive abilities, problem solving skills, concentration, self-efficacy, and confidence. However, some research has been conducted on the psychological impact of Esports games. Some researchers have argued that prolonged Esports activities can contribute to lowered self-esteem, maladaptive coping strategies to stress, poorer academic performance, spending long periods of time in solitude, and negative affectivity (Shum et al., 2020). Although these are the risks associated with Esports as a profession in general, these are important factors to consider when designing the degree curriculum, to help manage these outcomes in the long-term. Inevitably, Esports students are likely to be exposed to defeats, which are associated with high levels of pressure (Korotin et al., 2019). This can have a severe impact on the psychological functioning of students or make them more vulnerable when entering Esports as a profession, as their previous hobby had subsequently become associated with responsibility and added pressure. Incorporating these concepts into Esports curriculum design should be further explored.

Continuing the topic of psychological impacts of Esports, there is a higher risk of developing a gaming disorder. Scholars have described the gaming disorder as an illness, where players lose control and balance over their games, lose interest in other activities, and start to prefer solitude (Shum et al., 2021). As Esports in education were still a relatively unexplored topic, it is difficult to assess the level of awareness and understanding of Esports educators on the topic of gaming disorders, and their ability to support the students with it. Similarly, extreme emotional responses are closely

associated with the gaming disorder, although they can also be a separate occurrence (Shum et al., 2021). As Esports are highly competitive and players are required to perform under extreme pressure for extended periods of time, participation can develop into an emotional disorder (Korotin et al., 2019). Similarly, many students can develop a triggering reaction in response to games and other related activities, which can affect their ability to complete their academic studies, as well as the ability to pursue this career long-term. These are some of the concerns that remain unanswered by the existing research, which should be considered when developing an education curriculum.

Despite these risks, some universities and colleges are already starting to implement Esports into their degree programs (Schaeperkoetter et al., 2017). Due to the controversy of Esports, its relative infancy, and lack of understanding, Esports have been slower to develop the same level of respectability as other disciplines, despite being slowly implemented into the academic world (Hallmann & Giel, 2018). Despite this fact, Esports are considered to increase interconnectedness of different subjects and skills, which other traditional degrees do not cover, or do not cover to the same extent (Proust & Fortier, 2018). With the obvious advantages of Esports, it is important for degree curricula to be designed in a way that cultivates the benefits promoted by sports, but simultaneously manages the adverse risks, which could draw negative stigma around the activities.

Esports remains to be a new field that raises questions on how it can be implemented into education (Reitman et al., 2019). Effective implementation of Esports into degree curricula requires engagement of educators and students, and it should reflect students' career choices and interests (Jenny et al., 2021; Lee et al., 2020). However, as

previously stated, students already have higher interest levels than in traditional degrees, as Esports is considered to be primarily a leisure activity. Although student engagement is likely to be high, there is little knowledge about the level of awareness and understanding held by educators with regards to Esports (Lee et al., 2020). Knowledge about risks associated with Esports is critical to ensure that educators and teachers at higher education institutions are able to manage these risks effectively, while simultaneously providing a good level of education. Similarly, it is important to develop a variety of academic structures and processes for successful Esport curriculum implementation to prevent the potential psychological and physical impacts of Esports (King et al., 2021). As introducing Esports into the academic sphere means that students will start to spend more time in front of their computers than before, it is important to start considering these aspects prior to the Esports degrees becoming mainstream.

One area where Esports are encouraged is within STEM-related disciplines (Rothwell & Shaffer, 2019). Elements of Esports, such as communication, coordination, and cohesion can supplement academic disciplines, such as STEM, and help students develop soft skills that they would not otherwise master (Jenny et al., 2021). Although the focus of this research is primarily on Esports-focused degrees, this finding helps to illustrate that elements of Esports are already being implemented in other educational disciplines, with positive outcomes. Other researchers have also highlighted the importance of developing skills, such as teamwork, working under pressure, problem-solving, and communication (Reitman et al., 2019). Thus, if aspects of Esports are already being introduced in other disciplines, this suggests that the implementation of Esports degrees should be an easy transition for educators.

As previously mentioned, Esports curriculum implementation requires valuable teaching resources, that need educational awareness, expertise, and ownership to support students through the opportunities and challenges of an Esports degree. However, many teachers at higher education institutions, even in STEM-related disciplines, lack the necessary knowledge about Esports (Nielsen et al., 2021; Scott et al., 2021). Although this risk can be managed while educators develop their knowledge, there is an additional risk of limited available research about the risks of ineffectively designed Esports curricula. Moreover, implementation of Esports into education requires regulated self-learning of students, which may be challenging to monitor by teachers (Ostnes, 2021). Despite these certainties, scholars argue that Esports can help to increase opportunities to grow and develop employment prospects (Rothwell & Shaffer, 2019). However, if the degree curriculum is not designed and implemented effectively, this will have a significant impact on potential employment prospects.

Successful implementation of the Esports degree curriculum requires a consideration of several important factors. First, there should be high levels of engagement of educators, program designers, institutional bodies to foster the necessary skill development, while simultaneously maintaining a high social and emotional learning element (Reitman et al., 2019). Additionally, ensuring that the curriculum promotes a balance between the academic environment, students' interests and interpersonal relationships are important for a successful curriculum development (Reitman et al., 2019). Lee et al. (2020) had referred to this as the Connected Learning Model (CLM), which promotes interest-driven learning for the student, encouraging educational and employment opportunities, promotes supportive learning environment, and social

relationships. As previously discussed, Esports disciplines can be associated with a wide array of risks, ranging from one's psychological to physical health.

However, if the curriculum is designed to address these aspects in accordance with the CLM, it will help to minimize the harmful impacts of Esports. Researchers have noted several harmful effects of Esports, including problematic gaming leading to excessive gambling and negative health risks (Chung et al., 2019; Greer et al., 2022; Greer et al., 2021; Kelly et al., 2022; Yin et al., 2020). Chung et al. (2019) reported that Esports can lead to problematic gaming and thus enhanced prevalence of gaming disorder and hazardous gaming. More recently, Greer et al. (2021) and Yin et al. (2020) reported that Esports bettors are commonly involved in skin betting and skin gambling (on games of chance), leading to gambling-related harms. Yin et al. (2020) added, Esports bettors also commonly experience addiction, overuse injuries, prevalence of overweight/obesity, mental health issues, and doping behaviors. Yin et al. (2020) underscored the need to thus explore remedies to the harmful impacts of Esports, as lack of knowledge in this area poses as significant barriers to addressing the emerging public health need among Esports bettors. There is also a need to further explore how to safely promote Esports for either competition or leisure, which merit the need for the current study (Chung et al., 2019; Greer et al., 2019; Greer et al., 2021; Yin et al., 2020).

Summary

The problem addressed in this study is that currently there is little known about what common core competencies are developed in post-secondary Esports and gaming curricula in the United States. Although there is some research being conducted about integrating Esports into high school curricula, there is limited evidence of integrating it

into a post-secondary setting. The focus of this current study is on the Esports and gaming curriculum development in the United States.

The theoretical framework that guided the current study was the curriculum theory by Kliebard (1975). The curriculum theory helps to increase the understanding about the different influences on the development of educational materials and offers a tool by which to understand the competing influence in terms of what is taught and how it is taught. The principles within the curriculum theory were adopted to explore the common core competencies that are developed in post-secondary Esports curricula in post-secondary institutions in the United States.

With the growth of technological advancements and students' growing reliance on these devices, this gave rise to gaming-based curricula. Active participation helps to stimulate the creativity and problem solving of students, who are faced with a novel environment, where they can develop solutions and ideas in a testable environment, before being applied in the real-world. Thus, gaming-based curricula have the potential of engaging the students in acquiring new skills and knowledge, as this was previously demonstrated on brain-damaged patients. The connection behind this is the increased stimulation and curiosity of students, who have the opportunity to apply their existing knowledge into developing practical solutions. This not only promotes thinking outside the box, but also improves their academic performance.

Not much is known about Esports curricula in higher educations, and its role in preparing students to work in the industry. Esports industry has only recently been developed within education. Esports programs can increase students' confidence and self-efficacy to perform well, more so than the traditional academic programs have, which is

an important element for preparing students for future careers within their field of study. Esports were found to develop motor skills of students, autonomy support, programming, storytelling, networking, visual design, and artificial intelligence, which can be transferred into work environments. Apart from that, Esports help students to practice their planning abilities, ability to work as part of a team, and maintain effective execution, flexibility, listening ability, and creativity. All of these skills are likely to benefit students for their future careers of choice.

Care needs to be taken when designing the curriculum for an Esports degree. As Esports were a relatively new academic discipline, there is little knowledge available on how time management is handled to maintain an academic balance, while simultaneously supporting students into becoming Esports experts. There is also limited knowledge about how many Esports professionals or students seek medical attention after prolonged symptoms, which should be explored. Similarly, Esports curricula can have a severe impact on the psychological functioning of students or make them more vulnerable when entering Esports as a profession, as the students' hobbies had become associated with responsibility and added pressure. Incorporating these concepts into Esports curriculum design should be further explored. These, among other factors, will be explored by the current study. Chapter Four, will present the results of the data analysis.

Chapter Three: Research Method and Design

In Chapter Two, the key literature underlying the study was presented. This discussion reaffirmed the research gap and the importance of conducting the study. It also outlined curriculum theory, the study of how curriculum is developed and evolves along with the different philosophies influencing it. Now, in Chapter Three, the research methods by which the study will be carried out are addressed in some detail. The chapter begins with a reiteration of the most important points from Chapter One, namely the research problem and research purpose. Then, the research methodology and accompanying research design are presented. Next, the population and sample for the study are enumerated, followed by the key sources of data. Following the sources of data, the overall data collection procedure for the study is addressed, followed by the process for data analysis. The chapter concludes with a discussion of research ethics and a summary.

Problem and Purpose Overview

To reiterate, the problem is that it is not known what common core competencies are developed in post-secondary Esports/gaming curricula in the United States. To address this research problem, the purpose of this qualitative case study is to explore and identify the common core competencies that are developed in post-secondary Esports/Gaming curricula in the United States. The study will address a single, overarching research question and the following sub-questions to bridge the gap in the existing research regarding the emerging curricula for Esports degrees, namely:

Research Question 1

What common core competencies are developed in post-secondary Esports curricula in the United States?

Sub-Question 1

What are the characteristics of the gap between the demand for the new profession and the supply?

Sub-Question 2

How these programs for Esports developed and designed?

Sub-Question 3

Who are the constituents of Esports programs?

Sub-Question 4

What content is prioritized that has two key applications?

Sub-Question 5

How do Esports meet the needs of interdisciplinary education?

Sub-Question 6

What are the common core principles in Esports?

By answering that research question and the sub-questions, the current study will contribute to the understanding of what the central, essential aspects of Esports curriculum development are and how those aspects are embedded into programs by their directors and reflected in curricular materials.

Research Design

Methodology

The research methodology for the study is qualitative. Qualitative research is descriptive, and crucially, exploratory (Merriam & Tisdell, 2015). By asking broad, open-ended questions, qualitative researchers can probe a broad phenomenon (Cassell et al., 2017). In order to obtain the widest possible perspective, qualitative researchers preclude preconceived responses and instead seek to thoroughly draw out the subjective experiences of the participants (Merriam & Tisdell, 2015). In addition, qualitative inquiry is contextual; rather than separating the research topic from the context in which it exists, a qualitative researcher accepts that the phenomenon is shaped by context and hence should be studied while remaining in that context (Cassell et al., 2017). Qualitative research is ideal when exploring new areas of research and practice, because its exploratory nature is well-suited to understanding new ideas (Merriam & Tisdell, 2015).

All these aspects of qualitative inquiry are relevant to the study. The present study is necessarily open-ended and exploratory, because the research topic is nascent. The phenomenon of Esports post-secondary programs has only recently arisen and thus necessitates open-ended inquiry. At the same time, the phenomenon is contextual in that the curricular principles are shaped by factors within the context of each individual program, as well as the context of the industry. Additionally, at this early stage in the development of Esports degree or certification programs, the subjective experiences of those who designed and shaped them are especially important to triangulating what shared ideas and principles animate these programs. In addition, the newness of these

programs means that there is little existing theory to apply to their study and that the relevant issues are best approached as exploring a broad, new phenomenon.

Design

Within the qualitative paradigm of research, there are many specific research designs. The specific research design to be used in this study will be that of a qualitative case study. Case study research is an especially contextual and in-depth qualitative design (Yin, 2018). In a qualitative case study, the research identifies one or more specific cases of the phenomenon of interest and uses those cases as a way of deducing insights about the larger phenomenon (Merriam, 1988). Because of this case focus, contextual aspects of the phenomenon are magnified (Yin, 2018). Moreover, a case study researcher can draw upon multiple data sources to contextualize the case (Merriam, 1988). These data sources can even include a light amount of quantitative survey data, unlike other qualitative research designs (Yin, 2018). In this regard, the case study paints a nuanced and textured picture of the underlying subjective reality, while at the same time taking more pains to identify potentially conflicting perspectives. The case study is less focused on perceptions than on creating an accurate depiction of the overall case (Merriam, 1988).

A case study design is appropriate to this study for several reasons. Firstly, because of the newness of the phenomenon, the depth of a case study exploration is especially valuable, offering a greater wealth of data and painting a more nearly-complete picture. Secondly, also because of the newness of post-secondary Esports programs, the effects of context on curriculum are especially important to account for, as the context of early programs may have an outsized effect. Thirdly, the use of secondary,

contextualizing data sources in a case study means that it will be possible to determine to what extent the program directors' views and vision are actually reflected in their context, and how well that vision aligns with actual professional qualifications expected of Esports professionals.

Population and Sample

There are two populations under study in this program. In terms of the central interview component, the population will be university directors/coaches and Esports league representatives of Esports degree/certification programs from post-secondary institutions throughout the United States. Among the qualifications will be that they come from an educational background, have written curriculum for Esports, promote the Esports curriculum to the schools, has first had experience with gaming industry, and is currently enrolling students; having existed long enough to have sustained a graduating class.

A secondary population under study will be educators at the high school level. This population will be included to gather data about the awareness of the Esports industry as a viable career option and the post-secondary options available to students who may want to pursue a career in the Esports industry. These participants will include high school teachers and guidance counselors who handle students who are in the process of assessing their post-secondary options. Apart from these qualifications, no other exclusion criteria will be applied for this study.

The sampling for the study will differ for the two components of the research, For the primary participants, purposive sampling will be used in this study, because it is an appropriate technique for researchers who wish to select specific cases that will be

particularly informative or to select members from a specialized population (Neuman, 2009). The purposive sampling will entail the identification of post-secondary institutions offering a degree or certification in Esports, using primarily websites and other official promotional materials. Participants will be contacted directly through email by using the email address listed on their institution's/employer's website. The sample size for this population will be three to five programs, owing to the difficulty of recruiting many high-level university directors/coaches and Esports league representatives caused by a small population size.

For the online survey, convenience sampling will be employed. In particular, the researcher will send an invitation email to acquaintances who meet inclusion criteria for the study. The invitation email contains the link to the *Survey Monkey* website and interested individuals can proceed to complete the survey by clicking on the included link. Since the study is not quantitative, the lack of representativeness of this sample is not a major issue, and this sampling strategy should produce a higher response rate while still giving a general sense of the necessary information.

Sources of Data

Per Yin (2018), a case study should include at least three sources of data. The study will include four sources of data. First and foremost, one-on-one interviews will be conducted with two university directors/coaches and three Esports league representatives. Secondly, 20 surveys will be carried out with high school educators. Third, object collection will be used to examine specific examples of curricular materials. Objects to collect include the course descriptions of Esports programs, as posted online, and job postings for positions falling under the Esports industry to identify which core

competencies or skills are required. Additional objects to collect include program materials regarding Esports curriculum and course syllabi.

Finally, secondary data from one particular school with an Esports program will be collected. More specifically, the type of secondary data collected includes a specific program regarding Esports program engagement. These are quantitative data, which will help ground the study's understanding of how these programs look in practice.

Elite interviews will be the primary source of data. Elite interviews are used to collect key information from a small sample size of especially important individuals in a field (Harvey, 2011). The specific interview format will be qualitative, semi-structured interviews, which are considered ideal for qualitative inquiry (Kallio et al., 2016). Semi-structured interviews combine a degree of structure and a degree of flexibility. On one hand, the semi-structured interview is structured in that it is guided by a set of preliminary questions in a prepared interview guide (Kallio et al., 2016). However, flexibility is introduced by allowing the participants to digress on relevant topics or the researcher to ask follow-up or probing questions where appropriate (Kallio et al., 2016). In this study, the interview guide will be prepared in advance with careful reference to the existing literature regarding the research topic. The interview guide will also be reviewed and validated by three experts in the field of education to ensure it is appropriate for collecting data that can answer the research questions.

The second source of data will be surveys. These surveys will be developed for the purposes of the study and include basic demographic information, as well as several questions regarding awareness and perceptions of Esports programs and Esports as a career option. The survey will be developed for the research and also validated through

expert review. It will then be uploaded to *SurveyMonkey*, an online survey service, for distribution to the participants.

The third source of data will combine publicly available aspects of the Esports programs with more specific objects requested from the interview participants. These will include course descriptions of Esports programs, as posted online, and job postings for positions falling under the Esports industry to identify which core competencies or skills are required. These data are publicly available. The non-public data to be requested from the interview participants will comprise program materials regarding their Esports curriculum, such as, but not limited to the specific list of courses offered in their Esports program and course syllabi.

The final source of data will be secondary data from a specific program regarding Esports program engagement. These data will include, but are not limited to, the number of students involved, the amount of time spent in Esports activity, categories of Esports participating in, specific activities involved in the Esports, any perceptions related to Esports, the number of students interested, number of parents approving, expected benefits of the gaming by participants/institutions, administrative meeting minutes, minutes taken from organizational meetings, and/or minutes from teachers'/coaches' meetings. These data will help ground the study's understanding of how these programs look in practice.

Data Collection

Data collection for the study will proceed as follows. The first step was to acquire IRB approval from Lindenwood University's Institutional Review Board (IRB) to conduct the study. This approval was secured, as of October 2021 (see Appendix A). The

second step was to secure informal permission from the specific program providing secondary data for the fourth data source. This step has also been completed and was added as a formal site authorization letter in the final draft of the proposal. Site authorization is not needed for other study components, as they are directed at individually recruited participants, not an underlying institution.

The first step of actual data collection was to identify the relevant academic programs. This identification was done primarily through internet searches for post-secondary institutions offering Esports degrees or other certification programs. Once a list of programs was compiled, the contact information for each program's university directors/coaches and Esports league representative was retrieved. A total of 50 individuals were contacted individually using their publicly listed email addresses. The order of contacting was to prioritize larger and longer-running programs over smaller, newer programs. Recruitment in this fashion continued until the desired sample size of three to five participants was met or exceeded and, at least all large programs were exhausted.

Individual interviews were one-on-one and conducted online through ZOOM or a similar teleconferencing platform, depending on the convenience and/or preference of the study participants. The interviews were expected to last 30 to 60 minutes and were audio recorded. Prior to the interviews, each participant was provided with informed consent information and required to e-sign informed consent documentation to proceed. At the close of the interview, the participant was asked to provide the types of supporting objects detailed in the previous section, regarding their program's curriculum. At this point, the publicly available data for each program were also collected. Once the

interview was transcribed, the participant was offered the chance to review and correct the transcript, as desired.

For the surveys, the surveys were uploaded to the *SurveyMonkey* online survey service. The link to the survey was then be generated. The researcher assembled a list of personal and professional contacts who met the inclusion criteria for the survey and sent them am email requesting their participation, along with study consent materials and the survey link. The first page of the survey contained informed consent information, which the participants must agree to before proceeding to the full survey.

For the secondary data, once formal site authorization was achieved, data were provided directly by the specific program to the researcher. These data may be received in virtual or physical forms. All data were transformed into digital forms for use in the data analysis process.

Data Analysis

Data analysis for the study comprised qualitative content analysis and case study triangulation. Data analysis was carried out with the assistance of NVivo qualitative data analysis software. Qualitative content analysis was applied individually to each of the three non-survey data sources using the same procedure as follows.

Qualitative content analysis is a derivative of quantitative content analysis and is a technique for extracting meaning from textual information (Schreier, 2012). In practice, qualitative content analysis involves a more streamlined application of qualitative thematic analysis. Therefore, the basic steps used will adhere to Clarke and Braun's (2014) qualitative thematic analysis procedure. The first step is to build familiarity with the data. The second step is to code the data. Codes were assigned using a combination of

an initial codebook and emergent codes that appear in the data. The third step is to create a preliminary list of themes, or larger ideas that capture the essence of the data. These themes are then re-checked against the data and against each other in the fourth and fifth steps. The final step is to compile the themes and put them back into context (Clarke & Braun, 2014).

Once the content of each dataset is analyzed separately, they will be combined through case study triangulation. Per Yin (2018), triangulation is the comparison and contrasting of the results of the separate data sources. Triangulation has two key points: agreement and disagreement. Where two or more sources support the same idea, it can be argued to be an especially strong result. Such agreement was expected between the interview participants' perceptions of core principles and the core principles occurring in the curricular and job posting materials. By contrast, points of disagreement are also of interest. Where two or more sources conflict, the researcher must seek to understand why and hypothesize which is likely the better reflection of the underlying reality, based on the available evidence (Yin, 2018).

Ethical Considerations

Ethical research procedures were adhered to at all points in the study. The study was approved by the IRB. Where appropriate, both site authorizations and informed consent were sought prior to collecting any data. Secondary data were drawn from the school and wholly anonymous, as used in the study. Hence, there was no risk of participant identification.

The study did not collect data from any known vulnerable populations. The results of the study did not directly benefit participants and also were not expected to

harm participants either. Participation was wholly voluntary and did not involve coercion of participants. No recruitment incentives were used, and the researcher was not in a position of authority; vis-à-vis any of the study participants. Participants could choose to withdraw their participation in the study at any point up to the publication of the research.

All data were stored securely to protect the confidentiality of the participants. Data, including NVivo files, were stored in a password protected folder on the researcher's computer. These data will be maintained for five years following study publication then fully deleted. Any physical artifacts, such as photocopies will also be stored securely in a file folder in a locked desk drawer for five years, then will be disposed of through shredding.

Summary

In summation, the problem is that it is not known what common core competencies are developed in post-secondary Esports/gaming curricula in the United States. To address this research problem, the purpose of this qualitative case study was to explore the common core competencies that were developed in post-secondary Esports/Gaming curricula in the United States. This chapter, Chapter Three, highlighted the methodological aspects of the study. The research employed a qualitative methodology and a case study research design. Primary data were drawn from one-on-one interviews with a sample of two university directors/coaches and three Esports league representatives, with a secondary sample of high school educators through a survey and secondary data generated by students enrolled in one specific Esports degree program. The data were analyzed using a combination of qualitative content analysis and case

study triangulation. Ethical research procedures were followed at all stages of the research. The next chapter, Chapter Four, will present the results of the data analyses.

Chapter Four: Qualitative Analysis

The purpose of this qualitative case study was to explore the common core competencies that are developed in post-secondary Esports/Gaming curricula in the United States. This study involved the case of post-secondary institutions in the United States that offer Esports curricula. Researchers have determined a rise in multidisciplinary Esports careers that may exceed the opportunities in the physical sports industry (Bánvai et al., 2019). Esports has also begun to be included in secondary and post-secondary education; however, Esports programs are considered new and not completely developed (Bánvai et al., 2019; Funk et al., 2017). The results of this study are aimed to contribute to the development of Esports education as an interdisciplinary program. The research question that guided this study was: What common core competencies are developed in post-secondary Esports curricula in the United States?

This chapter contains the presentation of the results of this study. The sample of the study, data collection, data analysis, and evidence of trustworthiness are described to supplement the results. The results are presented in the form of themes and in the form of summary statistics of participants' responses to a set of survey questions. The three themes that emerged from the data were: Esports programs increase student success through their developing education structure, Esports create career opportunities as an interdisciplinary field, and Esports programs improve relationships. Descriptions, excerpts from the data, and summative tables are also included in the results, along with discussion of the contribution of survey responses to those results.

Sample of the Study

The sample for the elite interviews were two university directors/coaches and three Esports league representatives from post-secondary institutions in the United States. In addition, nine secondary data were collected. Finally, survey responses were collected from 20 high school teachers. All of the interviewees and survey respondents expressed their consent through the informed consent form, while all the secondary data were publicly available documents.

Participant 1 graduated from college in 2015 with a degree in politics. While in college, Participant 1 played video games to relieve stress. After college, Participant 1 moved to a city in the Midwestern region of the United States. where the participant met a community of video game and Esports players. The community helped him adapt to his new environment. Prior to involvement in an Esports program, Participant 1 had work experiences in social work and sales in a gaming retail organization.

Participant 2 has been interested in video games since childhood and had an experience of creating gaming content on YouTube before he entered college. At that time, he did not expect the gaming and content creation industries to grow as much as they did; therefore, he chose the “traditional route” in college and obtained a bachelor’s degree in business administration. The participant went back to creating gaming content as a full-time job and was hired as a coach for an Esports team as a part-time job. Participant 2 believed that the field of Esports opened several career opportunities. As an example, Participant 2 stated that individuals with a degree in business administration may find work in advertising or managing Esports teams.

Participant 3 expressed his interest in gaming, but he did not have an extensive video gaming background like the other participants. Participant 3 was employed in a post-secondary institution in the United States. He became involved in a post-secondary Esports program after the college president assigned him to explore Esports curricula when the athletic director of the institution could not take on the task.

Participant 4 studied criminal justice, history, and political science. He went to enroll in law school, but found that he was not passionate about the field. The participant expressed his interest in the gaming industry despite the lack of experience and knowledge. He deliberately looked for opportunities that suited him.

Of the nine secondary data, six were job postings. The job postings contained details about the job qualifications and job descriptions. The other secondary data contained career pathways information from a high school Esports club, a newsletter about a U.S. state university's comprehensive Esports program, and a description of the comprehensive Esports program of the same U.S. state university.

Data Collection

The data collection methodology for this qualitative case study was acquired through elite interviews for the primary source of data and surveys for the secondary source of data. The researcher, first and foremost, sought the approval of the University's Institutional Review Board to perform this study. Securing permission from specific Esports programs was also performed by the researcher to gather the necessary data for this study.

Purposive sampling was utilized to identify the primary participants of the study. Using primarily websites and other official promotional materials, the researcher

identified post-secondary institutions that offer Esports degrees or other certification programs. After compiling a list of programs, the contact information for each of the university directors/coaches and Esports league representatives was gathered. The target participants were reached directly via their email addresses as indicated on their institution's website.

To derive the sample, the researcher emailed 50 individuals working in university Esports programs and Esports leagues. Initial emails yielded five responses, of which three continued to the interview stage—two university directors/coaches and three Esports league representatives. One interviewee possessed a doctoral degree and has experience writing Esports high school curriculum. He was recently hired by a high school-focused Esports league in the midwestern United States to promote his Esports curriculum to area schools. Another interviewee currently works in the Esports industry after obtaining an undergraduate degree in an unrelated field. The final interviewee was a high school teacher who works directly with the Esports team at her high school and has experience incorporating gaming into her own curriculum.

These individuals agreed and expressed interest in participating in the research. Before conducting the interviews, each participant was given informed consent and their consent was gained and documented. Individual interviews were done using the Zoom platform or another teleconferencing platform, depending on the study participants' convenience and preferences. The researcher used a semi-structured interview guide to investigate the common core competencies acquired in post-secondary Esports programs in the United States. The interview guide questions were developed based on the current literature on the research topic and were evaluated and approved by three education

professionals to ensure their suitability for data collection. Each interview lasted between 30 and 60 minutes and was audio recorded. At the end of each interview, the participant was requested to submit the types of supporting materials described in the previous section regarding their Esports program's curriculum. Following each interview, audio recordings were promptly validated, and complete transcripts of the interviews were generated. They were asked to go over their replies as well as the correctness of the transcription. Participants agreed on the interview transcripts; thus, no changes were made to them. The transcripts were then created for data analysis.

Convenience sampling was employed to gather the second source of data through surveys consisting of basic demographic information and questions about awareness and perceptions of Esports programs and Esports as a career option. The researcher created these surveys and was evaluated by an expert panel. Upon the validation of the surveys, these were then uploaded to the *Qualtrics* online survey service. The surveys also include informed consent, which states that participants must agree to participate in the study before they may complete the whole survey. Through convenience sampling, the researchers selected high school educators who have been involved in helping students in the process of evaluating their post-secondary options for at least one year. This sample of educators were selected to gather information about awareness and perceptions of Esports programs and Esports as a career option. The researcher sent the survey link to personal and professional educators who help students in the process of evaluating their post-secondary options. The data gathered from these surveys were gathered and stored for analysis.

Secondary data on Esports program engagement was also acquired from a specific program. The data were sent to the researcher upon getting the approval and authorization. Data obtained were six job postings with details about the job qualifications and job descriptions, one career pathways info from a high school Esports club, one state university newsletter about its comprehensive Esports program, and one state university description of its comprehensive Esports program. The gathered data were converted into digital formats. All the data gathered from the different sources of the study were compiled and prepared for the data analysis process.

Data Analysis

Qualitative content analysis and case study triangulation were utilized as data analysis procedures on the data gathered from various sources of this study to explore the common core competencies developed in post-secondary Esports/gaming curricula in the United States. Data analysis was performed with the support of NVivo qualitative analysis software in organizing and categorizing the data to facilitate the coding process. The data collected in this study were analyzed using thematic analysis by Braun et al. (2019). Familiarization involves engaging oneself in the facts in numerous ways wherein in this study, the researcher familiarized the data by conducting individual interviews, listening to and transcribing the audio recordings of the interviews, and examining the transcripts to get basic knowledge and understanding of the whole data set.

The second step in the thematic analysis process is the code creation, in which the researcher highlighted the texts that appear to be related to the general patterns that were detected and to the research topic of this study. The researcher was able to discover many text portions that were relevant to the core competencies acquired in post-secondary

Esports programs. A description was provided to each portion of the text to capture and reflect the most basic meaning. The descriptors served as codes, while the portions of text served as coded messages. From this, several codes were formed based on the data obtained.

The themes were then explored by the researcher in connection to the research topic. Themes were checked further by referring to raw data to ensure that the themes had appropriate support based on the codes generated. After comparing the themes to the interview transcripts to answer the research question, three themes emerged. Each finalized theme was given a name and a brief description to verify that no themes were duplicated. The list of codes and themes is presented in Appendix A.

Once the content of each dataset was analyzed separately, they were combined through case study triangulation. The researcher compared the data gathered from the various sources to determine the sources supporting the same idea and to identify the points of disagreement. Data that were strongly supported by two or more sources as well as the data conflicting with one another from two or more sources were identified and reported by the researcher as part of the data analysis of this study.

Evidence of Trustworthiness

The credibility, dependability, transferability, and confirmability of the data are all established to guarantee that all data is represented correctly and relevantly. Credibility refers to the level of confidence in the truthfulness of the study and its findings (Polit & Beck, 2020). The researcher in this study ensured the study's credibility by employing member checking, in which the four participants were given the interview transcripts for validation and correction of their responses during the interviews and the

researcher's interpretation of their responses. The member-checked transcripts were used for data analysis since the participants agreed with the data transcribed. Methodological triangulation was also utilized in the study wherein the data collected and analyzed came from four sources namely: individual semi-structured interviews, surveys, publicly available aspects of the Esports programs, and secondary data from an Esports program regarding its engagement. The inclusion of two university directors/coaches and three Esports league representatives as participants for the central interview component of the study allowed for triangulation, with themes based on several participants rather than just one exceptional individual. Moreover, the researcher was also immersed with the data from personally conducting the interviews, completing the transcription process, and during thematic analysis. Immersing oneself with the data also increased the credibility of this study.

The possibility of obtaining identical results if the study is duplicated in different circumstances is referred to as dependability (Baskerville et al., 2017). In this study, dependability was established by triangulation, which involved using many data sources and comparing them to one another. Furthermore, the researcher supplied detailed information on the complete research procedures to increase the reliability of the study's results.

The usefulness and applicability of the findings of this study in varied contexts outside of the current situation are referred to as transferability (Connelly, 2016). To ensure the transferability of this study, the researcher thoroughly described and provided a thick description of the methodology which highlights the population used, recruitment and selection of participants, sampling methods, data collection, and data analysis.

Providing thick descriptions of the procedures of the study allows other researchers in similar situations and fields to use it.

Confirmability is the objectivity and consistency of the data and the findings of the study (Noble & Smith, 2015). The researcher used triangulation and documented every stage of the conductance of the study that was important for data analysis in establishing codes and themes to solve the research topic to enhance the confirmability of this study.

Results

This section contains the presentation of the results. Three themes emerged from the triangulation of the interview and secondary data sources. The themes were: Esports programs increase student success through their developing education structure, Esports create career opportunities as an interdisciplinary field, and Esports programs improve relationships. The themes with the number of data sources and occurrences in the data are presented in Table 1.

Table 1

Themes

Theme	No. of Data Sources	No. of Occurrences in the Data
Esports programs increase student success through their developing education structure	5	54
Esports create career opportunities as an interdisciplinary field	13	37
Esports programs improve relationships	4	12

As described, 20 educators answered questions about awareness and perceptions of Esports programs and Esports as a career option. In all, 75% (n = 15) of educators were familiar with Esports, and 13 of 20 (65%) described themselves and their students as aware of Esports as an industry in which students could work after graduation. Most (75%) also described those parents and guardians of students complain about children's gaming; few (25%) encountered parents or guardians supportive of students' desires for careers in the Esports industry. As previously discussed, the researchers included 20 high school educators who have been involved in helping students in the process of evaluating their post-secondary options for at least one year. Despite most educators knowing about Esports as an industry, only half (n = 10) knew that some universities offer Esports programs and curricula to prepare students for careers in the Esports industry. The full survey results are summarized in Table 2.

Table 2

Survey Responses

Item	Yes	No
Are you familiar with Esports?	15	5
As an educator, did you know that there are numerous jobs in the Esports industry available to students after graduation?	13	7
Do your students know that pursuing a career in the Esports industry is a career option?	13	7
Have you encountered a student interested in pursuing a career in the Esports industry after graduation?	12	8
Do your students' parents/guardians complain about their children wanting to game?	15	5
Have you encountered parents who are supportive of their child's aspirations to pursue a career in the Esports industry?	5	15
As an educator, are you aware of any Esports programs and curriculum at colleges available to students who want to find employment in the Esports industry?	10	10

Esports Programs Increase Student Success Through Their Developing Education Structure

Four participants and one secondary data source revealed that in post-secondary Esports curricula in the United States are developing an education structure that will contribute to the students' career success. The data sources showed that an Esports program enhanced skills in gaming, as well as academic, social, and competitive skills

among the learners. Participants 2, 3, and 4 stated that their Esports program was comparable to a physical sports program. Participant 2 explained that similar to scouting physical sports players, the basis for selecting students was the Esports player's individual ranking and "performance in their team environment" when scouting for players among high school students. Participant 4 shared that his program was "partnered with some sort of collegiate conference" comparable to the National Junior College Athletic Association (NJCAAE) and the Peach Boat Conference.

All four participants believed that Esports was a developing and growing industry. Participants 1 and 2 expressed their perceptions that they had many things to learn about Esports curricula. Participant 1 specified his experiences of beginning to understand the potential of Esports among youth with behavioral and development problems when he was a social worker. The participant shared that the youth "bonded" over the video games he brought. As a result, the youth fought less and played together. Participant 1 shared:

> So, I brought my console in. We started playing fighting games. We started playing basketball video games, and I noticed that the kids really bonded over that. A lot of people that didn't get along, you noticed they're playing the PlayStation together every day now. So, I realize that there is . . . Video games have a way of bringing people together that maybe other things don't

Three participants shared their own experiences of playing videogames as children and as adults and found that they were able to find leisure and relieve their stress. Participant 4 added that he learned to manage his time in college because of gaming. Participant 4 looked forward to gaming as a way to relax in college, but was also mindful of the time he spent while gaming, so as not to adversely affect his studies.

Currently, Participant 4 is involved as a part-time coach of an Esports team. He was able to perform his job, while in a different state from the team he was coaching. The participant believed that the development of the Esports structure in education and career included experiencing career success while working remotely. Participant 2 also used gaming for leisure, but also found a way to profit from it through content creation. Participant 2 began creating gaming content in the early 2010s. As such, Participant 2 was able to experience the progress of generating a small income to having a successful career as part of the developing structure of electronic gaming in relation to content creation.

All the participants reported that their Esports programs were equipped and funded to promote student success. The newsletter from a state university corroborated the participants' statements, such that the document contained the details of the "arena" and the equipment for Esports. As written in the newsletter:

> The arena will not only be a place for our teams to practice and compete, but it will also encourage open gaming, and virtual reality experiences. . . . It will include over 80 seats, with computer console and virtual reality systems, as well as a broadcast booth for students interested in shoutcasting.

According to Participant 2, as in any sports player, Esports players were required to maintain a minimum grade to continue being part of the team. Esports students were also given incentives to motivate them to play. For instance, Participant 2 shared that they provided transportation incentives for in-person games. Participant 3 shared that the students' well-being and training were monitored, such that the training room was closed at midnight. Participant 3 expressed the need to upgrade their training room and

equipment as the program has grown from 13 students to 55 students. To address the students' needs, Participant 3 shared that they hired a coach who was interested in gaming and had an athletic background from playing basketball in college. The coach took the time to get to know the program and the students. To further develop the education structure of Esports learning, Participant 3, as well as Participant 4, cited that they utilized their professional network. Participant 4, who had minimal gaming background, stated that a personal friend helped him start his career as an Esports program director and obtain information about the industry. Participant 3 stated that the National Association of Esports Coaches and Directors helped him solve problems, such as implementing an Esports program with a limited budget. Participant 3 shared, "[The National Association of Esports Coaches and Directors] is a great support system to really get people to take off with their programs." Results from the educator surveys suggested that, despite the robustness of collegiate programming for Esports, relatively few educators (50%) were aware of the existence of such programs.

Esports Create Career Opportunities as An Interdisciplinary Field

All the participants and secondary data showed Esports programs as an interdisciplinary field that create career opportunities. The participants started having ideas about career opportunities in Esports during college when they were studying other fields. Participant 1 was in a political theory course when different forms of media, including video games, were discussed. However, during that time in the early 2010s, the professors did not linger in discussing electronic games, as the industry "did not exist." Esports programs were also non-existent, according to Participant 1. Nonetheless, Participant 1 attested that his college education was helpful in his role as program

director of Esports. He also believed that regardless of one's course, students would benefit from the skills they would gain from post-secondary education. Participant 1 elucidated:

> I think it's just helpful to get you around people, get you writing, and it just makes you more disciplined. I'm definitely grateful that I went. I had a great time. I learned a bunch and I do think it helped me here, definitely.

Participant 2, who had a stint in content creation before college, decided on the "traditional route" to a career and chose to study business administration due to the lack of career options in the digital and electronic field at that time. Participant 2 perceived that the gaming and Esports industry was interdisciplinary, such that theoretical and practical knowledge in business may be applied to managing an Esports team. Participant 2 shared his experience:

> Just real-world work on understanding how businesses is really operating . . . . I worked in transportation for a little bit before I came over to the gaming side. Seeing business development managers working as a digital marketing specialist and how we put together campaigns, all of that could be applicable to the gaming industry. Whether you're coming from one industry or starting in gaming, it's all very valuable and it can all be translated over.

The secondary data collected for this study included six job postings which served as evidence of "translating" skills from different fields into Esports. The job postings did not include a specification of a college degree, but the qualifications involved having a "leader mindset" for the Esports league commissioner position, "talent acquisition capacity" for team manager and recruiter position, multimedia campaigning skills for the

media manager position, troubleshooting of hardware equipment for the Esports representative position, as well as other skills, such as communication skills and decision-making skills. Familiarity in competitive Esports was considered as an advantage, but not a requirement for the job. On the other hand, Participant 3 perceived that some individuals who were interested in gaming and Esports may not necessarily be interested in the academic field. An Esports program may be inviting for such individuals to go to school. Participant 3 stated, “The more you see it from the outside, you really see the value that it has of just engaging a population who wouldn't normally be engaged in the school community.” Participant 3 also stated that Esports as an interdisciplinary field offered career opportunities to people who were not interested in other fields. Participant 3 shared:

> Like we had an accountant degree student who just graduated and he didn't even want to be an accountant. He wanted to be in Esports because it had such an impact on his life. So now he's an assistant coach with us.

The “Career Pathways” document collected from a high school Esports club contained an image of “the Esports ecosystem” in which players were surrounded by “strategists,” “content creators,” “entrepreneurs,” and “organizers.” The four-page pamphlet contained details about the possible careers within the Esports ecosystem. The document also contained a four-step method of selecting the appropriate course, obtaining relevant certifications, developing necessary skills, and choosing a career in each of the categories of the Esports ecosystem. Participant 2 gave credence to the document, and stated:

> I just feel like there's so much opportunity out there for everyone to find their niche. To be able to fit in. Whether it's shout casting or . . . I noticed that a lot of the college programs I looked at were all about game development. That's the first thing you think of. I have a lot of kids that I've talked to that said, I don't want to develop the games, I want to play them, or I want to promote them. I find that the students that we have too are really good at promoting themselves. I mean, they're all on social media, they live on social media and it's all about getting the clicks or the followers, or however it is that you want to do. They don't have any reservations about doing it.

Data collected from educator surveys suggest a reason that so many enter Esports from non-traditional career paths. Teachers lack awareness of the existence of college programs, and most educators (75%) reported perceiving that parents and guardians were generally unsupportive of students' gaming. This result suggests that students may not have support systems in place that help them learn about and nurture their potential paths into the Esports industry.

Overall, the findings of this study represent an important case regarding the development of interdisciplinary education. That is, Esports programs as an interdisciplinary field can help develop other future interdisciplinary degree programs especially given its increasing interconnectedness of domains in many areas (Bánvai et al., 2019; Proust & Fortier, 2018). Esports degree programs at post-secondary institutions provide students with command of the myriad interdisciplinary skills that are considered vital in the world of Esports (Anderson et al., 2018; Bánvai et al., 2019). More specifically, with the interdisciplinary nature of the Esports industry, there are several

core competencies that are developed such as being strategists, content creators, entrepreneurs, and organizers. These common core competencies can also be found in the disciplines and programs of business and marketing.

Esports Programs Improve Relationships

All four participants reported that Esports programs may be an advantage to the development of one's relationship skills. Among the secondary data, the newsletter from a state university indicated the existence of a team environment in Esports. The career pathways document was obtained from a high school Esports club in which students got together through their shared interest in Esports. Participant 4 perceived that shared interest was vital to a student's sense of belongingness and social skills. As an example, Participant 4 shared his experience of studying in a college in Texas where the common interest was football. Participant 4 was not interest in football and was preferred "metal music," gaming, and hockey. He found difficulty in "fitting in" and connecting to his surroundings. His grades suffered. He transferred to a different school where he met a community of gamers. Participant 4 added that he developed his communication skills through gaming due to playing with a team and needing to be attentive to instructions. Participant 4 elaborated:

> [Gaming] definitely taught me communication. So being on a team and saying like, okay, how to listen to instructions and then execute or like whatever those instructions are or then just knowing when to be quiet and let others speak and stuff like that. So, because like, as a kid, I definitely struggled with like, hey, you should probably not talk right now.

Participant 1 also met a community of individuals interested in gaming. The community helped him adjust to a new city after he graduated from college. Participant 1 detailed:

> I didn't know anyone here, you know? So, coming out and meeting pretty much all the friends that I have now, I've met them through videogame jobs, or playing in those venues. So just from a social side, for me, videogames have been fantastic.

Participants 3 and 4 believed that players and students find belongingness and develop their social skills in Esports, as the field was generally inclusive. Regardless of gender, physical disabilities, age or other characteristics, individuals interested in Esports may play if they choose to. Participant 4 compared the inclusivity of Esports and physical sports, particularly in scouting players and offering scholarship. Participant 4 noted, "From like a recruiting perspective, the chance of diversity, equity, and inclusion within gaming [and] allowing scholarships, physical sports cannot come anywhere near that." Participant 3 stated:

> The beauty of Esports that other sports don't have in my mind is its co-ed. You don't see that in football or basketball or those other traditional sports. And then even disabilities aren't necessarily a barrier either. We had a great college player who had one arm. You would think that would be a crippling handicap for, especially gaming, typically use your thumbs and right, your both hands and that wasn't, or somebody whose autistic can be really thriving in Esports. So that's a really cool thing that you can see that maybe other sports don't experience, but there's just a nice network. And then you can even play high school teams, can

play college teams because of the format and the structure of just getting connected.

Participants 1 and 3 also observed improved relationships between students and their parents upon involvement in their Esports programs. Both participants shared that obtaining parental consent for minors was a challenge in recruiting young players, as parents may disapprove of their children being involved in gaming. The two participants employed a strategy of talking to the parents and opening their venue to the parents to raise their awareness about the nature of Esports. Participant 3 shared that when parents see their children perform well in Esports, they generally become "prideful." Participant 1 stated parents invited in their institution may play with their children. Participant 1 described, "You can tell, they just love spending that time together."

Summary

The common core competencies developed in post-secondary Esports curricula in the United States involved enhancement of student success, interdisciplinary learning, and social skills. The interview findings are composed of three themes that emerged from the data which were: Esports programs increase student success through their developing education structure, Esports create career opportunities as an interdisciplinary field, and Esports programs improve relationships. According to the data sources, Esports programs were at the developing stage within the growing industry in which participants were exploring new structures in education and career. This finding is corroborated by the survey data, which reveal both a relative lack of awareness of Esports programs on the part of educators and a lack of support for gaming on the part of parents and guardians. Part of the development of programs, then, was to scout and recruit high school students

and offer them scholarships to the program. The scholarships were not limited to players. The Esports curricula investigated in this case study were reported to have adequate funding and equipment for the learners. The curricula were geared towards the development of Esports, academic, social, and competitive skills among the students.

All of the data sources also showed that the Esports programs explored in this study opened career opportunities for players and non-players alike. The interdisciplinary nature of the Esports industry created several niches that were not limited to gaming. For instance, individuals with business degrees may work on managing or advertising the Esports team. Profits may also be earned from related work, such as content creation.

In general, however, all four participants perceived that Esports has attracted a community of players with shared interest in gaming. Two participants shared that their social skills benefitted from being part of the gaming community, in which one participant improved his communication skills while the other participant was able to adapt to his new environment after moving to a new city. As for the Esports curricula, two participants shared that they witnessed students developing pride in themselves and belongingness in their team. The sense of belongingness was particularly observable when individuals, regardless of their gender, disability, or other characteristics, were included in Esports. Two other participants shared that they saw Esports students developing healthier relationships with their parents once the parents understood the nature of the Esports program.

The common core competencies that emerged in this case study may be comparable to the four main groups of curriculum influences, which were: humanist, social efficiency, developmentalism, and social reformers (Kelley, 2009). The link

between the study findings and related literature will be included in the discussion presented in the next chapter. The next chapter also contains the implications, limitations, recommendations, and conclusion of this study.

Chapter Five: Discussion

The nascent vocation of Esports and gaming is rapidly gaining attention within the field of education. Historically, gaming has been used to teach skills that could be applied to other professions (Bánvai et al., 2019; Funk et al., 2017). For example, participation in Esports has been shown to help with the development of critical thinking and creativity (Amara & Saberi, 2018). However, the emergence of Esports as a valid profession has shifted the purpose of curricula from teaching supplementary skills to offering entire degree programs that prepare students for careers in the field (Anderson et al., 2018). Nonetheless, scant literature exists pertaining to the integration of Esports as a discipline within education. Therefore, the lack of knowledge surrounding common core competencies developed in post-secondary Esports/gaming curricula in the United States is the problem addressed by the current study.

The purpose of this qualitative case study was to identify common core competencies that were developed in post-secondary Esports/gaming curricula in the United States using qualitative inquiry and data gathered from curricular examples and from a sole Esports program. Kliebard's (1975) curriculum theory provided the theoretical foundation for this study. This chapter will provide a discussion of the current findings within the context of curriculum theory and the existing literature. In addition, implications and limitations of the findings will be offered. Finally, recommendations for future research and policy will be offered.

Research Question

The present study was guided by a single, overarching qualitative research question as follows:

RQ1: What common core competencies are developed in post-secondary Esports curricula in the United States?

Summary of Findings

Findings indicated the common core competencies of Esports programs in post-secondary education included the enhancement of student success, interdisciplinary learning, and the attainment of social skills. Three themes emerged from the triangulation of interviews and secondary data sources. The themes included the following: Esports programs increase student success through their developing education structure; Esports create career opportunities as an interdisciplinary field; and Esports programs improve relationships. Following is a discussion of these findings as viewed through the lens of curriculum theory and within the context of the current literature.

Discussion

This section is organized in the following manner: First, the findings will be discussed within Kliebard's (1975) curriculum theory to offer an understanding of the influences on the evolution of Esports curricula. Next, the findings will be compared with the existing literature to determine if the themes that emerged in this case study add to, support, or refute prior research. Finally, this section will offer a discussion of how the current study contributes to the existing literature and fills the identified gap.

Theoretical Foundation

In general, curriculum theory centers on the enactment and development of educational curricula and policymaking which provided the ideal foundation for the current study to explore the nascent field of Esports. The common core competencies that emerged in this case study may be compared to the four main groups of curriculum

influences. These influences included humanism, social efficiency, developmentalism, and social reform (Kelley, 2009). The findings of the current study strongly supported all four aspects of Kliebard's (1975) curriculum theory. Following is a discussion of each influence with supporting evidence from the current study.

The humanist influences that affected a curriculum focused on how mental reasoning and mental abilities assist children with their education (Kliebard, 1975). The current findings demonstrated that humanist influences applied to the development and policymaking of Esports curricula which, supports the humanist aspect of Kliebard's (1975) theory. The data sources suggested that Esports programs enhanced skills in gaming, as well as academic, social, and competitive skills among the learners. In addition, findings indicated Esports assisted in managing stress by providing a leisure activity for participants. According to Iwatsuki et al. (2021), managing stress and anxiety through the mental preparation required to prepare for competition benefitted mindfulness. Furthermore, participation in Esports fostered a sense of belonging amongst participants that may have contributed to students' overall mental wellness.

The social efficiency influences of curriculum theory focused on optimizing the social unity of the student within society (Kelley, 2009). The findings from elite interviews indicated relationships were ameliorated at the peer and parental levels. Further, these findings suggest that participation in Esports programs benefited students through the development of relationship skills including teamwork, social skills, and communication. This is important because prior research has shown that interpersonal relationship development was important to the successful development of educational

curricula (Reitman et al., 2019). Therefore, the findings of the current study lend support to the social efficiency aspect of Kliebard's (1975) theory.

Moreover, social efficiency theorists believed curriculum could be designed to steer a student toward their predicted role within society (Kelly, 2009). However, the findings of the current study suggest that students may not have the support systems in place to help them learn about and nurture their potential paths into the Esports industry. This resulted from teachers' lack of awareness of existing Esports programs at the collegiate level and a general perceived lack of support by parents and guardians.

With respect to developmentalism, Kliebard (1975) believed that curricula could be designed to promote the development of students' behavioral and emotional qualities. The findings of the current study support Kliebard's (1975) assumption. For example, participant 1's observation that students who bonded over playing video games together generally fought against one another less often suggests that participation in Esports may influence students' emotional control. Additionally, minimum grade requirements to remain a member of an Esport team may have influenced students' behaviors to develop good study habits. Thus, the current findings support the developmentalism aspect of Kliebard's theory (1975).

Social reform influences maintain the focus of curricula on driving social change (Kliebard, 1975). The social reform aspect of Kliebard's (1975) theory was clearly demonstrated by the current findings. Participants generally acknowledged that Esports were more inclusive compared to physical sports, because anyone may play an Esport regardless of age, gender, physical ability, or other descriptive characteristics. Further,

Esports provide a forum for all genders, ages, and physical abilities to compete against one another directly, something that is rarely achieved in physical sports.

The findings of the current study offered support to all four aspects of Kliebard's (1975) curriculum theory. In addition, viewing the current findings through the lens of curriculum theory provided insight into the competing influences acting on curriculum development. These findings suggest Esports curriculum does not only provide knowledge but assists students with the right learning environment and experiences that support practical skill development. The remaining discussion will center on the three themes that emerged from the interviews and secondary data sources within the context of the existing literature. The following discussion will be organized by theme.

Esports Programs Increase Student Success Through Their Developing Education Structure

The first theme to emerge from the data was Esports programs increase student success through their developing education structure. Essentially, this means the Esports programs examined here were well funded and equipped, had a complement of teachers and support staff that were knowledgeable and interested in Esports, and were concerned not only for the educational development of the students, but also for their physical and mental well-being to promote student success in the field. Following is a discussion of these findings in relation to the current literature.

Funding and Infrastructure. The current findings indicated nascent Esports programs required funding and infrastructure, in addition to curricula, in order to be successful. For example, secondary data acquired from a state university newsletter indicated an Esports arena encompassed 80 seats, computer consoles, virtual reality

systems, and a broadcasting booth. In addition, some participants hired support staff including coaches and talent scouts, similarly structured to physical sports programs, to recruit and develop team members. These findings contributed new information to the literature on Esports development, as prior research focused mainly on the insufficient knowledge educators possessed to develop effective Esport curricula (Nielsen et al., 2021; Scott et al., 2021).

Knowledge of Educators. Most primary data sources revealed that they relied on personal and professional networks within the gaming community to develop and establish Esports programs at the collegiate level. In addition, secondary survey data revealed that only half of the secondary data survey respondents realized that Esports degree programs existed at some universities. These findings suggest that awareness and knowledge of Esports curricula are limited among educators even though successful Esport programs were found. These findings are in-line with prior research that found many teachers and educators may be ill-equipped to introduce Esports into their curriculum or develop a curriculum solely based on gaming or Esports (Nielsen et al., 2021; Scott et al., 2021; Verkuyl et al., 2020).

Physical Health and Well-being of Students. Prior research suggested that there are several concerns when developing a curriculum for an Esports program. Primarily, these concerns were centered on the physical and mental well-being of students. Mumtaz et al. (2021), for example, raised concerns that Esports activities require repetitive motion of the hands, a prolonged state of concentration, and staring at a computer screen while remaining in a seated position for several hours at a time. Additionally, researchers have argued that prolonged Esport activities can contribute to lowered self-esteem,

maladaptive coping strategies to stress, poorer academic performance, spending long periods of time in solitude, and negative affectivity (Shum et al., 2020). Concerningly, a phenomenon called gaming disorder, where players lose control and balance over their games leading to disinterest in other activities and self-isolation, has been recognized as an illness (Shum et al., 2021).

These concerns were somewhat supported by the current findings. While one participant mentioned that Esports' students' well-being was monitored by limited access to the training room, no evidence was presented that suggested training was limited outside of the classroom. This is concerning given students may be exposed to long hours of training at home and at university (Ohno, 2021).

Other findings were more positive regarding the mental well-being of students enrolled in Esports programs. Half of the primary data sources reported their students benefited from participation in Esports through improved self-confidence and a perceived sense of belonging. In addition, the majority of primary data sources reported that they personally benefitted from leisure activities that included Esports as a way to reduce stress. These findings lend support to research conducted by Iwatsuki et al. (2021) who reported that Esports aid in the development of self-discipline and the management of stress and anxiety. These findings also support Clark et al. (2007) who found successful performance in Esports helps players to develop high confidence.

Esports Create Career Opportunities as an Interdisciplinary Field

The second theme to emerge from the triangulation of the data was Esports create career opportunities as an interdisciplinary field. This theme was evidenced through a collection of job postings, career pathway pamphlets, and personal accounts relayed by

primary data sources. In addition to providing new evidence that supports the viability of Esports as a career option, this study contributed to the existing literature by offering support to prior research that demonstrated practical skills required in other industries could be applied to the field of Esports. For example, the two university directors/coaches and three Esports league representatives who served as the primary data sources all came to the profession via unrelated fields including social work, transportation, education, and criminal justice. In addition, the Esports job postings that served as secondary data listed qualifications, such as communication and decision-making skills that are common requirements in other professions. These findings suggest that skills needed outside of Esports are easily translatable to the Esport industry.

The current findings also add to the existing literature that suggested skills learned practicing Esports translate to other disciplines. Prior research has shown that Esports in education helped to develop problem-solving skills, critical-thinking skills, creativity, communication, and collaboration among students (Anderson et al., 2018; Komatsu et al., 2021; Post & Birt, 2020; Williams, 2020). Playing video games was also associated with improvements to cognitive skills, such as memory and attention, which are valued in fast-paced and detail-oriented industries (Lecorchick et al., 2020).

Additionally, Esports equipped students with the necessary skills to complete STEM degrees (Williams, 2020). Similarly, students involved in Esports developed basic skills including English speaking and writing that prepared them for virtually any working environment (King et al., 2021). Finally, Esports afforded students opportunities to practice their planning abilities, ability to work as part of a team, effective execution, flexibility, listening ability, and creativity (King et al., 2021). Therefore, these findings

demonstrate that the practical skills which are needed to be successful in Esports also translate to other professions.

While this theme establishes Esports create career opportunities as an interdisciplinary field, it should be noted that prior experience in Esports is considered an advantage when applying for jobs in the industry. Additionally, secondary data revealed that those interested in Esports may not necessarily be interested in the academic field. Therefore, as Beeching et al. (2021) suggested, the curriculum design should offer students specialist training to aid in the development of required competencies that promote the appropriate skills, knowledge, and adequate professional conduct needed to fulfill their duties in the field while engaging students.

Esports Programs Improve Relationships

The third theme that emerged from data analysis was Esports programs improve relationships. Participants expressed that students enrolled in Esports programs experienced an increase in their perceived sense of belonging. Further, Esports provided students with a team environment and community support. These findings align with the Connected Learning Model (CLM) established by Lee et al. (2020). As previously discussed, CLM minimizes some of the harmful effects of Esports, such as social isolation through interest-driven learning that encourages social relationships.

Additionally, the current data revealed that students learned social skills, including listening and effective communication, that helped improve their relationships with parents and one another. This finding reinforces prior research that offered similar evidence. Namely, several studies were found that reported Esports in education helped

to develop communication and collaboration among students (Anderson et al., 2018; Komatsu et al., 2021; Post & Birt, 2020; Williams, 2020).

Finally, the findings of the current study suggest that Esports promoted inclusion and diversity among those involved. As previously mentioned, anyone regardless of their descriptive statistics may participate in Esports or work to develop skills in the field. This is an important distinction between Esports and physical sports that was not found in the literature. Therefore, the current study adds to the current literature by revealing an aspect of Esport curriculum not previously recognized by prior research.

This section provided a discussion of the current findings within the context of Kliebard's (1975) curriculum theory and the current literature surrounding Esports. The findings demonstrated that all four influences of Kliebard's (1975) curriculum theory were present in Esports curricula. In addition, the current study generally supported prior research and offered new insights to add to the existing literature. Next, the implications of these findings will be given.

Implications

The current study has several implications. First, this study offers evidence that Esports have positive implications for the individual. Participants in Esports benefitted from learned skills that may translate to other industries making the person marketable for potential employment. In addition, participants in Esports experienced improvements in self-confidence, perceived a sense of belonging, and were offered community support which may positively impact their mental well-being. Due to common interests, Esports is a discipline that promotes social connectivity among students, teachers, and program creators (King et al., 2018).

Second, this study has implications at the interpersonal level. The findings indicated that participants of Esports experienced improved relationships with competitors and family members which may also positively impact mental well-being. Third, this study has implications at the organizational level. Very few colleges and universities offer degree programs in Esports. Therefore, post-secondary institutions have the opportunity to expand their degree programs to offer Esports.

Last, this study has implications at the societal level. Esports is a rapidly growing field creating new jobs that will benefit the economy in myriad ways. In addition to competitors, professional Esports employs content creators, team support staff, marketers, shout casters, league executives, and more all of whom pay taxes and purchase goods and services.

Overall, the findings have shown that there are several core competencies likely to be gained from participation in Esports. These core competencies include the development of relationship skills including teamwork, social skills, and communication. This is important because prior research has shown that interpersonal relationship development was important to the successful development of educational curricula (Reitman et al., 2019). Additionally, the findings showed that participation in Esports programs benefited students through increased collaboration and bonding, as Esports provided a forum for all genders, ages, and physical abilities. As such, one of the core competencies likely to be gained from participation in Esports includes positive development of students' emotional control, supporting the developmentalism aspect of Kliebard's theory (1975). Students' study habits were also found to be enhanced through the participation of Esports, as found through the interviews.

Limitations

The qualitative nature of this study lends itself to several limitations. As previously mentioned, self-report surveys are dependent on the honesty of the respondents. Survey data is subject to response bias that may impact the validity of the results (Merriam & Tisdell, 2015). Further, semi-structured interviews were conducted to elicit data from primary sources. This methodology may also be prone to interviewer bias (Merriam & Tisdell, 2015). To limit interviewer bias, the researcher conducted a thematic analysis, as outlined by Braun and Clarke (2019). In addition, participants were allowed to review interview transcripts to ensure accuracy further reducing the probability of researcher bias.

Recommendations for Future Research

A logical progression of this case study would be to explore the perceptions of students enrolled in an Esports degree program. A phenomenological research design would elicit rich details from the lived experiences of the participants (Merriam & Tisdell, 2015). Information from a study of this nature would augment the evidence offered here and further clarify the common core competencies of successful Esports degree programs. Alternatively, a quantitative research design employing a survey developed from the current findings would reduce researcher bias and provide a larger sample size thereby increasing the generalizability of results (Merriam & Tisdell, 2015).

Future studies should also attempt to identify effective methods of making educators aware of Esports degree programs and the career pathways that are available to better support students considering their future. A cross-sectional study design surveying educators from multiple disciplines could provide insight into their extent of knowledge

surrounding Esports. Those that indicate awareness of Esports could be further probed as to how they attained this knowledge.

Finally, since the field of Esports is in its infancy, little is known regarding the transition from student to professional. A longitudinal study of students pursuing Esports degrees could provide valuable insights into this journey. In addition, a longitudinal study would allow researchers to monitor the physical and mental impact on students enrolled in Esports curriculum. This could be accomplished by having the participants journal or respond to regular push notifications or inquiries.

Recommendations for Policy

Based on the findings of this study, it is recommended that policymakers look to Kliebard's (1975) curriculum theory when planning to initiate an Esports program. The program should consider all aspects of humanism, social efficiency, developmentalism, and social reform influences to ensure a successful program is put into place. The humanist element of an Esports program should address students' mental reasoning and mental abilities (Kelley, 2009). Therefore, curricula should be engaging and informative. In addition, mandatory rest periods should be enforced to allow for mental respite and to address concerns raised by Mumtaz et al. (2021) regarding the physical toll of extended training sessions and competitions. Further, students should have access to mental health practitioners as a precaution to mitigate the potential negative aspects of Esports reported by Shum et al. (2020).

When addressing the developmental influences of Esports curricula, policymakers should consider what aspects influence students' emotions and behaviors. For example, offering incentives for demonstrating sportsmanship or imposing grade point average

requirements might positively influence student behavior. In addition, an Esports program should also provide faculty support to guide students' decision-making regarding course selection and career pathways. To that end, information campaigns and training should be directed towards educators to equip them with knowledge of Esports curricula.

Kelley (2009) noted that a curriculum could be designed to steer a student toward their predicted role within society. Considering social efficacy influences should also be a part of any Esports curriculum development plan. Therefore, it is recommended that curricula be relevant to professional Esports careers. Finally, curriculum development should consider social reform influences. For policymakers, this means leaning on the inclusive nature of Esports to drive social change.

Conclusion

This qualitative case study attempted to address the lack of knowledge as to what common core competencies are developed in post-secondary Esports/gaming curricula in the United States. The findings indicated three themes that emerged from data triangulation in response to the singular research question that was, what common core competencies are developed in post-secondary Esports curricula in the United States? The themes were Esports programs increase student success through their developing education structure, Esports create career opportunities as an interdisciplinary field, and Esports programs improve relationships.

The identified limitations of the study were typical of most qualitative survey designs and included the potential for response and researcher biases. These limitations were addressed by future research recommendations including a quantitative methodology based on a survey developed from the current findings. In addition, the

nascent characteristic of Esports requires study over time. Therefore, a longitudinal study method was recommended to elucidate details of the student transition from novice to professional.

Several recommendations for policy were offered based on the current findings and existing literature on the topic. These recommendations were primarily guided by Kliebard's (1975) curriculum theory. Policymakers should consider each of Kliebard's (1975) four influences when creating an Esports curriculum. The recommendations promoted the physical and mental well-being of students based on humanist influences. Recommendations based on developmentalist influences considered the preferred emotions and behaviors of the students. In addition, it was recommended that curricula be relevant to future Esports professions in alignment with social efficacy influences. Finally, the inclusive nature of Esports lends itself to Kliebard's (1975) fourth influence, social reform. Policymakers should rely on Esports' inclusive nature to broaden social reform within their universities.

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Appendix A

Table 3

Codes and Themes

Codes	Themes	No. of Data Sources	No. of Occurrences in the Data
	Esports programs increase student success through their developing education structure	5	54
developing Esports and academic components		5	15
competition is comparable to physical sports		4	5
Esports can be leisurely		3	6
playing video games as an adult		3	6
for leisure		1	1
saw people enjoying video games		1	1
for leisure and monetization		1	1
to relieve stress		2	4
played video games in college		2	3
seeking new skills		1	1
socialization of youth with developmental		1	1

and behavioural problems		
exploring new structures	4	14
a growing industry	4	10
can work remotely	1	1
realized there was more to learn	2	5
playing video games since childhood	2	2
program is equipped and funded	5	13
involvement of the school board	1	1
minimum grade requirement for team eligibility	1	1
provide equipment to interested learners	1	1
students are motivated to stay in the team	1	1
students have schedules	1	1
sufficient resources for students to succeed in Esports	3	7
hired a coach	1	1
need to expand	1	1
obtain information from professional network	2	3
scouting high school students	3	12
offering scholarships	2	2

		not just for players	1	1
	raising awareness about Esports opportunities		3	10
		coach others in Esports	3	6
			remove stigma about video gaming	1	1
			support the students to increase chances of success	2	2
			teach others about opportunities in video games	1	2
			wanted a part-time position	1	1
		connecting with students	1	1
		engaging parents	1	1
		holding tournaments	1	1
			Esports create career opportunities as an interdisciplinary field	13	37
integration with other fields			1	1
own experiences of Esports as an interdisciplinary field			4	10
	during college		2	5
		discussion of different media in	1	2

political theory courses		
no professors involved during games and no programs for Esports	1	1
got ideas	1	1
took 'traditional route' due to lack of opportunities involving video games	1	1
understand the business side of Esports through bus admin course	1	1
post-college	3	5
assigned by college president to explore Esports	1	2
task could not be handled by athletic director	1	1
own experiences in video games and Esports	2	3
interest in video game sales	1	1
involved in organizing tournaments	1	1
saw business and career opportunities in Esports	1	1
work opportunities other than being a player	12	25

engaging more individuals		1	1
opportunities to be in a field they liked		1	1
opportunities to profit		1	2
several niches		10	12
	Esports programs improve social skills	4	12
brought people together through interaction		4	8
improved relationships with parents		2	3
bonding without getting addicted to video games		1	2
parents become proud of their children		1	1
met other Esports players in the community		2	3
developed communication skills		1	1
help adjust to new city		1	1
met people involved in Esports while creating content		1	1
students develop pride and belongingness		2	4
inclusive regardless of gender, disability, and other characteristics		2	2
shared interests		1	1

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My secondary education began at St. Louis Community College (STLCC), where I gained a certificate as an Interpreter for the Deaf. I then transferred to the University of Missouri St. Louis (UMSL), where I received my Bachelor's Degree and Master's Degree in Special Education. I also received a certification in Autism from UMSL.

I received my Education Specialist Degree in Administration for both general and special education from Lindenwood University.

I began my professional education career with St. Louis Public Schools in 1993. I held three positions with the district: Interpreter for the Deaf, Special Education Classroom Teacher, and Special Education Process Coordinator.

I left St. Louis Public Schools in February of 2021 to accept a position with Logos School as their Director of Compliance, where I continue to work in the field of education.