January 2020

English Language Learner Teachers' Perceptions Of Digital Games On Student Learning

Khalifa Alshaya

ENGLISH LANGUAGE LEARNER TEACHERS' PERCEPTIONS OF DIGITAL GAMES ON STUDENT LEARNING

by

Khalifa Alshaya

Bachelor of Arts, The University of Texas at San Antonio, 2015

Master of Arts, New Mexico State University, 2016

A Doctoral Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

May 2020

Author Note

Khalifa Alshaya, Department of Teaching, Leadership & Professional Practice, University of North Dakota.

Correspondence concerning this work should be addressed to Khalifa Alshaya, Department of Teaching, Leadership & Professional Practice, University of North Dakota, Grand Forks, ND 58201. Contact: khalifa.alshaya@und.edu

This dissertation, submitted by Khalifa Mohammed Alshaya in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

Pamela Beck

Dr. Pamela Beck, Chair

Dr. Sagini Keengwe

Bonni Gourneau

Dr. Bonni Gourneau

Dr. Joshua Hunter

This dissertation meets the standards for appearance, conforms to the style and format requirements of the School of Graduate Studies of the University of North Dakota, and is hereby approved.

Dr. Chris Nelson, Dean of the School of Graduate Studies

2/18/20

Date

PERMISSION

Title	English Language Learner Teachers' Perceptions of Digital Games on Student Learning
Department	Teaching and Learning
Degree	Doctor of Philosophy

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Khalifa Alshaya

February 13, 2020

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ACKNOWLEDGMENTS

The journey to this place was strenuous and full of surprises. This work would not have been possible without those in my life that guided and supported me. At times when I doubted myself, they were there to pick me up and push me to do more. This is an accomplishment that I attribute to my family, friends, and mentors. They are the ones who were there with me from the start, encouraged me to explore, and believed in me.

My family, the invisible army that is always there for me. They supported me financially when times were tough, spirituality when my spirit was not in check, emotionally when my heart was in distress, and academically when papers needed the grammar checked. Their love and support is unconditional and I'm forever grateful for them. I would also like to thank the Saudi Arabia Cultural Mission (SACM) for their generosity in providing me with a scholarship that enabled me to complete my degree.

The University of North Dakota also provided me with opportunities to think critically and expand my horizons. I came in wanting to know more about the intricacies of teaching and learning and I leave wanting to know even more. The cycle of growth does not stop here. It has reenergized me with a thirst for more knowledge and ways of knowing. I thank everyone in the Department of Teaching, Leadership & Professional Practice that was part of my journey. I particularly would like to thank Dr. Gail Ingolwsen and Dr. Cheryl Hunter, for believing in me and providing me with an assistantship for the duration of my study. Dr. Jill Shafer, for her mentorship and guidance. Dr. Mary Baker, who interviewed me over the phone before coming into the program while I was pacing my apartment. The rest of the faculty members, for my coursework that not only opened my eyes to new avenues I did not realize existed, but they encouraged me to create my own meaning with that knowledge.

I would also like to thank Dr. Pam Beck, my doctoral advisor, for her time and never-ending encouragement. She emphatically agreed to be my advisor before she even knew what my topic was. Her hard work, dedication, and literacy lens she brings to my work is greatly appreciated. She always provided me with timely feedback that made me say ‘oh, I never thought about that this way!’ Our late emails back and forth will be missed.

I would also like to give gratitude to my dissertation committee who took countless hours to read my work and be a part of my academic and intellectual growth. I thank Dr. Joshua Hunter, for his knowledge of qualitative research and the critical questions he always made me ponder. Dr. Sagini Keengwe’s experiences in technology within education was invaluable as I sought to frame this research. Dr. Bonni Gourneau, I appreciate your willingness to join on such short notice and your meticulous attention to detail in my work. With the committee’s endless guidance and support, I was able to come to a new and deeper understanding of my research. Each one of you contributed greatly to this work.

Finally, I would like to thank the six participants in my study. They opened their doors and hearts to share their intimate feelings and thoughts only to have me analyze them. Without them, none of this would have been possible. Suzy, Ann, Kate, Jordan, Liz, and Bella - I am forever in your debt. This work is from teachers to teachers.

ABSTRACT

This body of work contains three articles that examine the intersectionality between English Language Learner (ELL) teachers and digital games. The purpose of the study is to qualitatively explore the perception of ELL teachers' use of digital games as educational tools and whether they realize the potential to promote language learning for ELLs. This study aims to understand the lived experiences of ELL teachers to identify their viewpoint of language learning through gaming. The work focuses particularly on the teacher in an effort to contribute empirical work that supports the need for a more holistic approach to digital games in teacher education programs. This dissertation attempts to answer four main questions: 1) What is the perception and lived experiences of ELL teachers use of digital games as educational tools?; 2) What are the perceived challenges facing ELL teachers in incorporating digital games?; 3) How does ELL teacher's perception of digital games influence their use and incorporation?; 4) How do ELL teachers define best practices for digital games in order to promote language learning?
I employed qualitative case study methods with a phenomenological lens to analyze the data. I interviewed six ELL teachers in the upper Midwest of the United States.

The outcome of this study has the potential to enable teachers to use digital games effectively and to ultimately improve teaching and learning. Today, almost every aspect of society requires the use of technology. Therefore, the incorporation of technology into lesson plans is aligned with the needs of society in the 21st century. By adding digital games into classroom learning, educators may be able to better prepare students for their future careers. This preparation can be achieved because digital games have the potential to increase students' problem-solving skills, as well as spatial and logical reasoning. The upward mobility and learning opportunities in digital games for ELLs are multiplied in fun and engaging ways.

Keywords: digital games, education, game-based learning, language learning, English language learner

CHAPTER I

INTRODUCTION

Technological developments have continued to transform society. Today's children are more media-literate than any previous generation because of the rapid advancements in technology. A recent study by Assadourian (2016) revealed that children in the United States spend more than six hours a day on electronic screens. Children are spending more time engaged in television, music, and interactive media than books, magazines, or newspapers (Dodge et al., 2008). For quite some time now, interactive media, particularly digital games, has become common and constitutes a powerful cultural industry among young people (De Aguilera & Mendiz, 2003). Digital games have become part of many children's daily lives, especially in industrialized countries. In the United States, there are 164 million people that do play video games, while 75% of housholds in the United States have at least one gamer in their household (Entertainment Software Association, 2019). Altogether, this information indicates that there are opportunities to utilize interactive media for educational purposes, to connect learning at home and learning in the classroom.

Early on, researchers examined digital games in the classroom only to find that some educators might discredit digital games by assuming their negative effects (De Aguilera & Mendiz, 2003). Nonetheless, digital games have the ability to attract the attention of children and intrinsically motivate them (Blumberg, 2000; Van Eck, 2009). Thus, researchers have investigated the root cause of teachers' negative perceptions toward digital games and has driven more body of research to investigate the benefits of digital games (Koh, Kin., Wadhwa & Lim, 2012; Pastore & Falvo, 2010; Rice, 2007). For example, the study by Blumberg (2000) predicted better performance among children who play digital games frequently. The effectiveness of

digital games in the learning process can be described in terms of immersion and incorporation (Calleja, 2007). Immersion is the extent to which children internalize the spatial frame of involvement in video games. Incorporation refers to the memorable and important experiences that children obtain from engaging in digital games (Calleja, 2007). These are important features that have been used to explain why digital games can promote attentiveness and knowledge retention. For some children, digital games constitute the reality they occupy and the meanings that they make out of that reality. Therefore, it is crucial to critically examine digital games as viable educational tools.

Problem Statement

In spite of the cognitive, motivational, emotional, and social benefits that digital games have on children's development (Gee, 2003; Granic, Lobel, & Engels, 2014; Griffiths, 2002; Primack et al., 2012), schools have been reluctant to incorporate digital games into classroom learning (Dodge et al., 2008; Shaffer, Squire, Halverson, & Gee, 2005). In 2018, The World Health Organization (WHO) classified gaming disorder in their International Classification of Diseases (ICD-11), which is a list of diseases and medical conditions that health professionals use to make diagnoses and treatment plans (World Health Organization, 2018). This makes it more important than ever to add to the body of research that examines both sides of the issue in light of these new developments. The heavy emphasis from researchers on the negative impact of digital games (e.g. aggression, addiction, violence, and impact on socialization and family functioning) skews the public's perception (Aarseth, Bean, Boonen, Colder Carras, Coulson, Das, ... & Haagsma, 2017; De Aguilera & Mendiz, 2003; Granic, Lobel, & Engels, 2014; Griffiths, 2002; Kim, Chang, Chong & Park, 2019). The approach adopted by many schools has failed to leverage technological developments that increasingly influence children's lives while

other industries, like the military, government, and corporations have recognized their potential for quite some time (Dodge et al., 2008; Shaffer et al., 2005). Dodge et al., (2008) argued that students have continued to be positioned as passive learners who largely depend on print-based materials created by curriculum experts, and teacher-centered pedagogies. The relationship between digital games and language learning is also documented to lower anxiety and improve motivation (Horowitz, 2019; Iaremenko, 2017; Reinders & Wattana, 2015; Vosburg, 2017) which makes ELL teachers' perception of them and the role they play in teaching and learning even more valuable. It means that schools are losing an opportunity to utilize digital games to improve teaching and learning. However, much of the research on digital games focus on serious games, which are games designed to serve a primary purpose – in our case, educational. Furthermore, research examining the intersectionality between digital games and language learning has a lot of room to grow (Reinders, 2017). I argue that digital games, due to their accessibility, versatility, and popularity, is still in its infancy stage as a Digital Game-Based Language Learning (DGBLL) tool for language learners (Calvo-Ferrer, 2017; Charsky & Mims, 2008; DeKanter, 2005; Kirkley & Kirkley, 2005; Kirriemuir, 2005A, 2005B; Simpson, 2006). Thus, the need to strengthen the field with more empirical evidence is paramount to understanding its fullest potential.

Purpose of the Study

The modern era has witnessed an increase in the utilization of technology in various aspects of society (Dodge et al., 2008; Shaffer et al., 2005). It is the responsibility of schools to prepare children adequately to enable them to utilize the available opportunities to improve their lives and those of others (De Aguilera & Mendiz, 2003). Thus, it is indisputable that digital games, and other interactive media, have become common among young children. ELL teachers

play a crucial role in the development and growth of their students, a population that proposes unique challenges in learning both content area and language proficiency. The outcome of the study sheds some light on ELL teachers' perception of digital games and how that can impact their teaching and learning which will ultimately affect their students. Today, almost every aspect of society needs the utilization of technology (Dodge et al., 2008). Therefore, the incorporation of digital games into lesson plans is aligned with the needs of society in the 21st century. By adding digital games into classroom learning, we hope to prepare students better for their future careers. This preparation is achieved due to the fact that digital games can increase the students' ability in problem-solving and encourage the growth of spatial and logical skills (De Aguilera & Mendiz, 2003). The upward mobility and learning opportunities in digital games for ELLs is multiplied in a more fun and engaging way. Although the focus of this work is on teachers, we know that students are interrelated which they will, directly and indirectly, benefit from this work.

The purpose of the study was to qualitatively explore the perception of ELL teachers' use of digital games as educational tools and whether they recognize their potential to promote language learning for ELLs. This study aimed to understand the lived experiences of ELL teachers to identify their viewpoint of learning through gaming. As indicated in the background of the problem, previous research shows that some teachers believe that video games are disruptive and can have negative effects on learning (Aarseth et al., 2017; De Aguilera & Mendiz, 2003). However, research that explores gaming in relation to language learning, particularly in primary school, is scarce.

From this research, three articles were composed to share the findings. In the following sections, the research questions, conceptual framework and methodology are detailed.

Research Questions

My study explored these four research questions:

Article #1

1. What is the perception and lived experiences of ELL teachers' use of digital games as educational tools?
2. What are the perceived challenges facing ELL teachers in incorporating digital games?

Article #2

3. How does ELL teacher's perception of digital games influence their use and incorporation?

Article #3

4. How do ELL teachers define the best practices for digital games in order to promote language learning?

Definition of Terms

The study involved various key terms that need to be understood, as they will form the basis of the study. The definitions below reflect the meanings of the terms in the context of the study. Therefore, other meanings that might be associated with the terms will be ignored.

Digital Games Refer to computer, console, mobile, and any other games that a person will interact with digitally (Kerr, 2006).

Video Games A platform-specific term that falls under the broad umbrella of digital games and their primary purposes is so-called 'entertainment' (Girard, Ecalle, & Magnan, 2013).

Serious Games "Games primarily focused on education rather than entertainment" (Miller, Chang, Wang, Beier & Klisch, 2011, p. 1425)

Game-Enhanced Learning Refers to the application of commercial or off-shelf (COTS) digital games that are not purposefully designed for educational purposes. It capitalizes on the games' authenticity to create engagement and coherence for learners (Reinhardt & Sykes, 2014).

Game-Based Learning A pedagogical approach that applies gaming principles into teaching and learning which is also referred to as gamification (Trybus, 2015).

Digital Game-Based Learning (DGBL) Refers to a pedagogical method or approach that integrates digital games as educational tools (Prensky, 2003; Van Eck, 2006, 2015). The concept is not new but an evolution from game-based learning, which promoted learning principles into digital game environments.

Commercial Off-the-Shelf Games (COTS) are video games that can be purchased and used by anybody, mainly for recreational purposes. These differ from games for learning (G4L) or better known as serious games, which are designed specifically to serve an educational purpose. For the scope of this research, COTS games are games that are used with a dedicated game console (i.e. Xbox and PlayStation) or PC.

English Language Learners (ELLs), English Learners (ELs), or English as a Second Language (ESL) refers to non-native English speakers who are learning the English language but who are in the process of developing their English proficiency.

World-class Instructional Design and Assessment (WIDA) is a consortium of states that creates standards for ELLs. WIDA English proficiency standards are the de facto standards in 40 states in the United States.

Phenomenology "Empirical phenomenological research returns to experience in order to obtain comprehensive descriptions. These descriptions then provide the basis for a reflective structural analysis to portray the essences of the experience. First the original data is comprised of 'naïve'

descriptions obtained through open-ended questions and dialogue. Then the researcher describes the structure of the experience based on reflection and interpretation of the research participant's story. The aim is to determine what the experience means for the people who have had the experience. From there general meanings are derived" (Moustakas, 1994, p.21).

Assumptions, Limitations, and Delimitations

The study was limited to kindergarten to 12 public school ELL teachers in the upper Midwest of the United States. It particularly focused on six ELL teachers and their experience with digital games. There was a heavy emphasis on the effective application of digital games in the learning of the English language. The main assumption of the research was that the students and teachers would be aware of the different types of digital games.

CHAPTER II
CONCEPTUAL FRAMEWORK

The use of digital games to engage students in the learning process is not a new idea. Many teachers have incorporated digital games into their curriculum and in their classroom to create a more entertaining and engaging environment for learners. Certainly, implementation of digital games into the learning process can be time consuming at first, yet their collaborative, interactive, and challenging nature can outweigh that. Digital games seem to encourage and motivate students to engage in the learning process (Charsky & Mims, 2008).

The use of digital games to support learning can be a contested topic. Researchers have demonstrated the significance of pedagogical support to enhance the efficacy of these digital games (Southgate, Budd, & Smith, 2017). Teachers and administrators are expected to exercise their professional judgment when selecting digital games given that not all are developmentally appropriate for all children or can be used for educational purposes. It is important that teachers ask critical questions in order to evaluate digital games to use them in teaching and learning. Although there are numerous frameworks that can be used to guide teachers in making informed-decisions, this study will build on the available framework that teachers can use when embracing Digital Game-Based Learning (DGBL). This study utilizes the framework grounded in knowledge domains in the education field adopted from Southgate et al., (2017). The five domains include teacher's pedagogy, the learner, assessment, technical context, and the curriculum. Southgate et al., (2017) explains:

> These domains are (a) the learner and how they learn based on their developmental stage, individual needs and motivations, sociocultural background and experience in gaming; (b) pedagogy including planning of learning activities, teaching strategies, and the evaluation of the effectiveness of the teaching approach; (c) curriculum or what is being

> learnt and the various ways of knowing, encountering and investigating this; and, (d) assessment or the formative and summative evaluation of how and when students meet learning outcomes; and, (e) technical context which includes platforms, connectivity infrastructure, and expertise in the school to support serious game use and content creation (where applicable). (p. 7)

These domains are interrelated and documented by various educational scholars (Alexander, 2008; Bernstein, 1975, 1990). It is important for ELL teachers to consider these domains and address the relevant questions to guide their decision-making. The curriculum and pedagogical-related decisions include the sequencing or timing of digital games within the content unit and lessons. ELL teachers play a central role in determining the type and level of games that can be implemented and the standards that these games will promote. Thus, the level of summative and formative assessment as well as the transfer of knowledge within game play and beyond is essential for a successful implementation (Southgate et al., 2017). Through this we can create an evaluation mechanism to help with gauging and engaging students in digital games. Nonetheless, the decisions that ELL teachers make will be influenced by the technical context, the assessment structure, and the curriculum priorities (Southgate et al., 2017). Each one of the five domains will influence ELL teachers' use and implementation of digital games. If an ELL teacher does not view digital games to be part of their pedagogical approach, they will most likely not incorporate them. Entering this study, I anticipated ELL teachers to be using digital games; however, the reality during the interviews reflected weak linkage between those domains that impacted their perception of digital games. Therefore, ELL teachers could be losing valuable learning opportunities for their students.

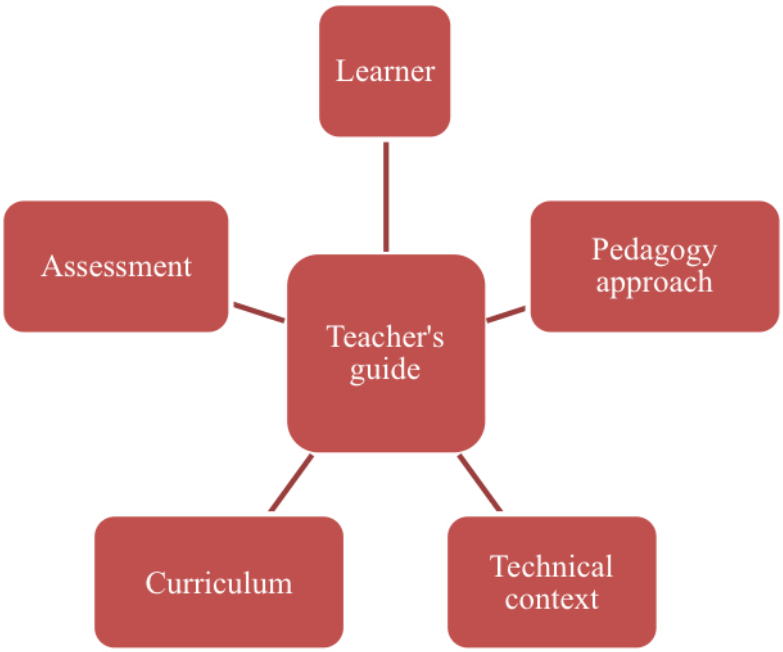

Figure 1. A Framework to Guide Teachers in Using Serious Games in K-12 Classrooms. Adopted from Southgate, E., Budd, J., & Smith, S. (2017). Press play for learning: a framework to guide serious computer game use in the classroom. Australian Journal of Teacher Education, 42(7), 1-10.

Based on the framework, it is evident that before teachers select and implement digital games, they need to prepare by identifying the learning goals, players, game platform, and the game itself (Southgate et al., 2017). This will allow the teachers to maximize their potential and determine how they will fit in the curriculum and lesson. When making this crucial decision, the relevant practical, safety, and technical considerations need to be taken into account for successful implementation.

CHAPTER III

METHODOLOGY

The world is always changing and methods are constantly changing to meet the unique needs of different research. Accordingly, the world has become more computerized. Nowadays, children will spend more time watching their favorite cartoon or playing their favorite video game than reading a book (Al Abdul Jabbar, 2015; Ashinoff, 2014). Digital games have become more than just recreational activities; studies have emphasized their significance as instruments of learning (Becker, 2016; Van Eck, 2007, 2015). Children today highly depend on computers and cellphones in their everyday life (Van Eck, 2015).

Studies have found that schools can integrate commercial off-the-shelf (COTS) games into teaching and learning (Aleksić, Ivanović, Budimac, & Popescu, 2016; Sandford, 2006; Van Eck, 2007). However, there are a number of challenges facing educators including the cost of these games and their infrastructure, inappropriate or unrelated content, alignment with lesson standards, and lack of experience with teachers.

A qualitative design was chosen for this study given how it can highlight participants' experience and achieve a depth of understanding (Creswell, 2011; Patton, 2002). Through phenomenology, which is the essence of a person's lived experience, the main advantage of conducting research using a qualitative design is that a realistic feel of the world is obtained in situations where experience cannot be expressed in numerical form promoting insight, discovery, and interpretation (Creswell, 2011; Merriam, 1998). At the core of phenomenology is to acquire a holistic view of the *meanings* (Creswell, 1998) of ELL teachers' experience or *essence* (Moustakas, 1994). The 'essence of something' opens a window into the social phenomenon of ELL teachers' perceptions of digital games in which my role is to seek the implicit structure and

meaning of such experiences. The essence is a combination of what (*textual*) ELL teachers' experience with digital games and how (*structural*) that experience informs their perceptions (Patton, 1990). Husserl (1931) explains phenomenology by "set[ing] aside all previous habits of thought, see through and break down the mental barriers which these habits have set along the horizons of our thinking ... to learn to see what stands before our eyes" (p. 43). In the case of this research study, my intention is to seek out the essentials of ELL teachers' perceptions and lived experiences toward digital games. Van Manen (2007) explains,

> In doing phenomenological research, through the reflective methods of writing, the aim is not to create technical intellectual tools or prescriptive models for telling us what to do or how to do something. Rather, a phenomenology of practice aims to open up possibilities for creating formative relations between being and acting, between who we are and how we act, between thoughtfulness and tact (p. 13).

As indicated in the background of the problem, previous research shows that some teachers believe that video games are disruptive and can have negative effects on learning (De Aguilera & Mendiz, 2003). However, research that explores gaming in relation to second language learning is scarce particularly in the pre-K-12 grade setting.

Qualitative research design offers a deeper way to explore how teachers use video games and how it can influence teaching and learning, particularly in an ELL environment. The Framework to Guide Teachers in Using Serious Games in K-12 Classrooms outlines a protocol through five domains that include teacher's pedagogy, the learner, assessment, technical context, and the curriculum. Therefore, this framework will be utilized as the parameter of this study (Southgate et al., 2017).

Research Design

While a questionnaire and teacher interviews were designed and implemented, I deviated from it slightly due to my initial findings. Rennie & Jarvis, (1995) propose one way to capture children's perception of technology which included three stages; questionnaires, interviews and children's writings/drawings. The researcher drew from their methods and strategies as a skeleton to how data collection and analysis can be formatted. Although Rennie & Jarvis (1995) approach focuses on children's perception for this dissertation I modified it to highlight teachers' perception given they are the focus here.

I utilized an exploratory phenomenological case study to better understand the phenomenon of how ELL teachers use digital games in the classroom. Under this method, I sought to understand teachers' experiences and perceptions relating to digital games, and how it might influence language learning. Yin (2003) defines case studies as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). The key for an effective case study is to "fence in" or set parameters for what needs to be studied (Merriam, 1998). This dissertation is bound by a finite number of ELL teachers I have access to because they might not be able to or want to participate, setting clear boundaries to study the phenomenon.

Questionnaires

To determine who to interview a set of questions were developed to be distributed to all ELL teachers in North Dakota (see Appendix A). In theory, this was designed to help me pinpoint prime candidates to be interviewed based on their responses to the survey. Given that

the goal is to capture perception of ELL teachers about digital games, the survey will offer a way to choose these participants. To make sure to get a holistic view of the essence. Moreover, the survey can provide descriptive statistics which summarizes the data to show patterns that might emerge from it. However, after collecting all contact information of ELL teachers in the state with the total number being around 80 contacts I was faced with low participation. I emailed them the survey three times. Thirteen participants started the survey, nine of which completed it, while only two of those indicated their interest in doing an interview. One is an ELL paraprofessional and the other is an ELL program coordinator which makes neither of them a current ELL teacher.

Semi-Structured Interviews

Merriam (1998) stated, “case study does not claim any particular methods for data collection or data analysis” (p. 29). The research design involves the use of interviews as a phenomenological measure of collecting data which "focuses on descriptions of what people experience and how it is that they experience what they experience" (Patton, 1990, p.107). Interviews are great tools to investigate ideas and beliefs of participants (Cohen, Manion & Morrison, 2000). To ensure validity, a series of face-to-face interviews were conducted. The first interview included prepared interview questions accompanied by an interview guide that served as an outline of the topics to be covered while the order of questions was slightly modified based on the flow of the interview (see Appendix B). Additional unplanned questions were asked to follow up on what the interviewee said for clarification and better understanding. The second set of interview questions were developed based on the first interview responses (see Appendix C). The length of these semi-structured interviews was between one hour and 1.5 hour; under these considerations I engaged six ELL teachers in two school districts in two states in the upper

Midwest of the Unites States. All the particpants were active ELL teachers at the time of their interview. All interviews were conducted in the teachers' classroom except one that chose to be interviewed in a restaurant. Each participant was asked how they would like to be identified in the study (i.e. pseudonym) before recording our first interview which was used throughout data storage and analysis. The primary purpose of the interview was to collect data to help understand what (*textual*) ELL teachers' experience with digital games and how (*structural*) that experience informs their perceptions (Patton, 1990). The interview questions, which were written with the conceptual framework in mind, will cover personal background, professional background, gaming background, gaming at school, opinion, ELL and video games, and challenges.

Participants

To offer information that is most relevant to the questions and purpose of the study, purposeful sampling was originally chosen for the study (Maxwell, 2013). Participants were chosen based on their specific traits that appeared to make them a good source in providing information. Maxwell (2013) lists five reasons to use purposeful sampling for a study and one of them is "to adequately capture the heterogeneity in the population" (p. 98). The survey questionnaire was to be used to determine participants that would in turn be invited to participate in the interview. However, due to the lack of participants both for the survey and interview I reverted to a mix of convenience sampling and snowball sampling. The participants were six ELL school teachers; some recruited through direct email communication asking them if they were willing to participate while others were recruited by their peers. All were from two towns in the upper Midwest of the United States that is divided by a state line making them two independent cities. Two participants, Ann and Kate, were from the Urbanized Area of the west side of the city who both female, Caucasian, and teach in the same middle school. The other four

Suzy k-2, Bella Swan 3-5, Jordan Belle 6-8, and Mrs. Liz 9-12 all-female Caucasians are from the Urban Cluster of the east side and are the entirety of ELL teachers in their district. The United States Census defines Urbanized Areas (UAs) of 50,000 or more people; and Urban Clusters (UCs) of at least 2,500 and less than 50,000 people (US Census Bureau). Their teaching experiences vary widely from being a first-year teacher to a 20-year veteran. Their educational backgrounds also vary, the majority having a master's degree with the exception of one participant, Suzy. They each chose a pseudonym to ensure confidentiality. The only criteria to be a participant was to be currently or formerly an ELL teacher. Through email, I introduced myself, explained the purpose of the study, what their participation would entail, and if they were willing to participate, they should provide me with a date and time of their choosing.

Data Collection and Analysis

To protect participants' rights, they each were given a consent form outlining the description of the study, benefits, risks (if any), their voluntary nature of the study, and contact information of the principal investigator and Institutional Review Board (IRB) Chair for their rights as research participants. Before the first interview, they each chose a pseudonym that they wished to be identified as in the research. I offered that to allow participants a level of ownership and one way for them to express themselves. Thus, all documentation or data collection that is associated with that participant used their pseudonym. There were six participants with two interviews each ranging between one hour and 1.5 hour. Each interview was recorded using an iPhone 8 Plus Voice Memos app and transcribed using Otter.ai and proofed by myself. Then the transcripts were analyzed and examined for emerging themes and coded in an excel sheet.

Bracketing, or epoche, was used to set aside biases, personal experience, and preconceived notions of the topic. This was accomplished by memoing throughout the research process by jotting down all my presumptions while continuously examining my thoughts and feelings about the study. Phenomenological data analysis is largely driven by intuition and reflection based on rigorous and repetitive reading of the collected interview data. Initially, I was unsure if the interviews presented a substantial set of data to be analyzed; however, after interviewing more participants and elevating my intuition into logic, I was able to see those themes. I started the data coding process by doing open coding for any emerging themes based on the frequency of what was being said within each interview and if those were echoed across interviews with other participants. I read and reread the transcripts at different times and places to add to those codes. It was important to me to view the data set in different circumstances that might spark new codes. In the end, I had roughly 35 codes from which I looked for categories they each fell under. In many instances, a code fell in different categories at the same time. Finally, I looked for a larger theme that these categories belonged to creating three main themes that shape this study: barriers, attitude, and appropriateness. The underpinning of phenomenology is that there is always a core, a nature of things, a shared understanding amongst a group of people, an essence that holds a phenomenon or experiences together.

All participant data were saved on two locations for data redundancy: locally on an encrypted hard drive and in the cloud through Google Drive, which is a secure and encrypted cloud storage service. Both methods are protected with a password and are only accessible to the principal investigator. Table 1 has each participation information and how they contributed to each theme in the study. Figures 1, 2, and 3 are data coding visualization diagrams of the themes that emerged from the data for each article.

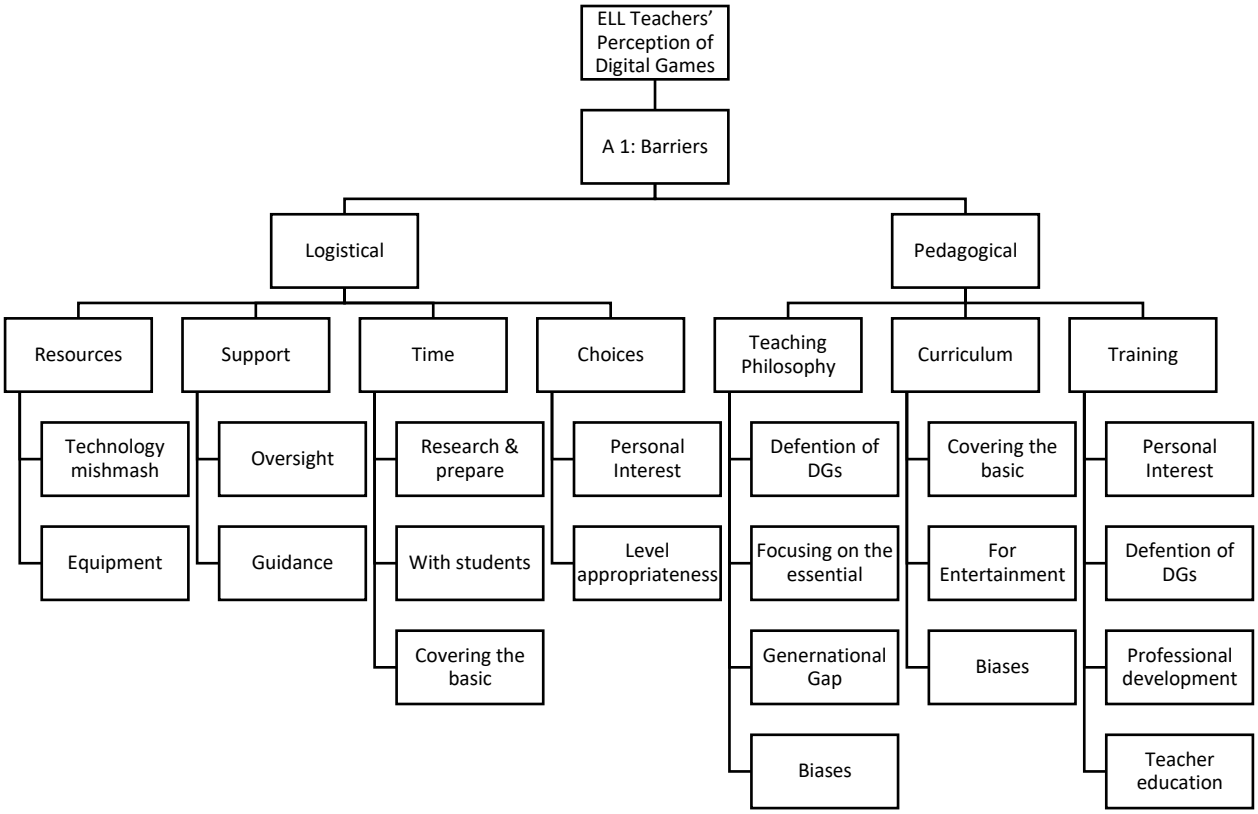

Figure 1. Data Coding Visualization for Article 1

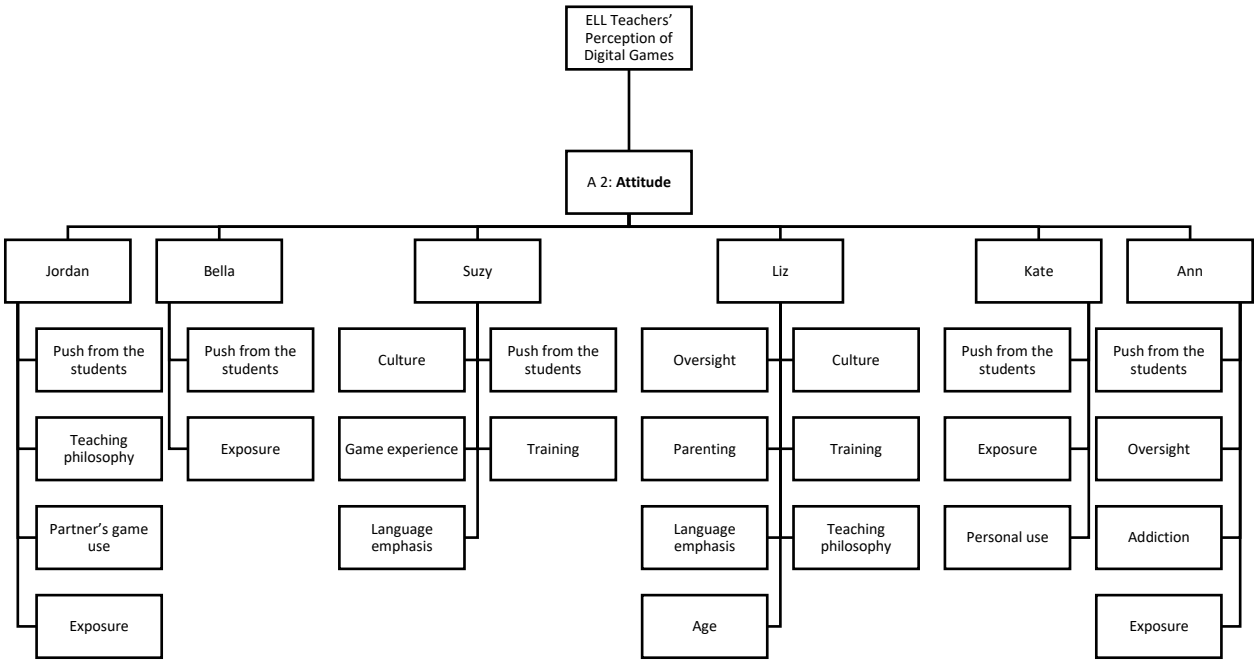

Figure 2. Data Coding Visualization for Article 2

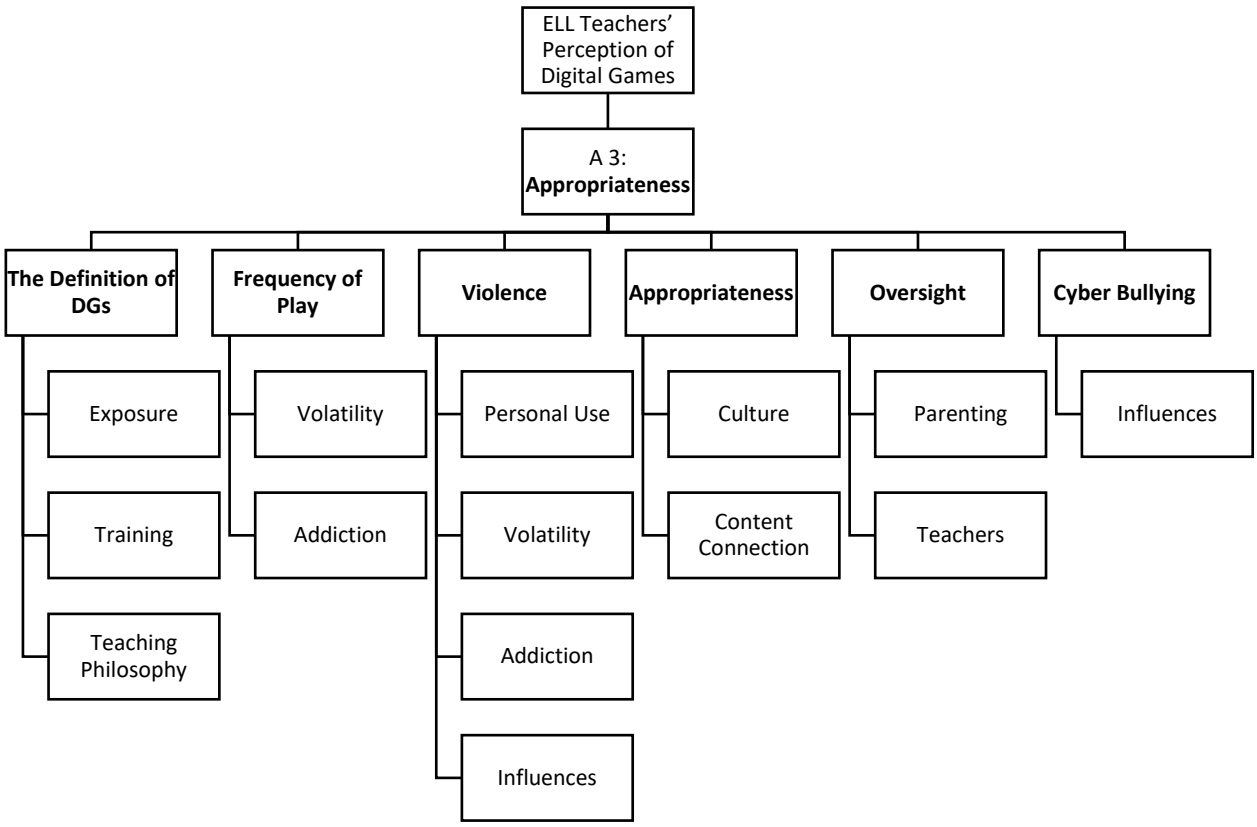

Figure 3. Data Coding Visualization for Article 3

Table 1. Teachers' Synopsis

Name	Location	Grade level	Education	Themes		
Suzy	Urban Cluster	K-2	Bachelor of Science in Elementary Education, 1992 Pre-Primary Licensure, 2006 English as a Second Language Licensure, 2011	Barriers: *Time constraints -Research & prepare -With students *Number of students *Equipment Resources *Technology mishmash *Support Resources *Training *Cultural disconnect *Focusing on the essential *Program structure *Teaching philosophy	Attitude: *Culture *Push from the students *Game experience *Training *Language emphasis	Appropriateness: *Frequency *Cultural disconnect *Content connection

Liz	Urban Cluster	9-12	Bachelor of Science in Education, 1983 Master of Science in Education, 1992 Literacy Endorsement, 1998 Administration Endorsement, 2014	Barriers: *Technology mishmash *Focusing on the essential *Number of students *Program structure *Cultural disconnect *Training *Teaching philosophy *Age	Attitude: *Oversight *Cultural disconnect *Parenting *Training *Language emphasis *Teaching philosophy *Age	Appropriateness: *Oversight *Cultural disconnect *Parenting *Content connection
Jordan	Urban Cluster	6-8	Bachelor of Arts in Spanish Education, 2015 Master of Science in TESOL (Teachers of English to Speakers of Other Languages), 2018	Barriers: *Time constraints -Research & prepare *Support Resources *Training *Program structure	Attitude: *Push from the students *Teaching philosophy *Partner's game use *Exposure	Appropriateness: *Exposure *Personal use
Bella	Urban Cluster	3-5	Bachelor of Arts in German, 2014 Master of Education in English Language Learners, 2018	Barriers: *Time constraints -Research & prepare -With students *Equipment Resources *Support Resources *Training *Focusing on the essential *Number of students *Program structure *Teaching philosophy	Attitude: *Push from the students *Exposure	Appropriateness: *Addiction *Game content *Influences
Ann	Urbanized Area	6-8	Bachelor in Elementary Education with a Math Major ELL Endorsement Master of Education in Reading	Barriers: *Time constraints -Research & prepare -With students *Program structure	Attitude: *Push from the students *Oversight *Addiction *Exposure	Appropriateness: *Frequency of play *Cultural disconnect *Oversight *Parenting *Game content

Kate	Urbanized Area	6-8	Bachelor of Arts in Elementary Education, 2001 With Education Technology minor Master's in Special Education, 2012 K- 8th Teaching Certification ELL Endorsement	Barriers: *Time constraints *Research & prepare *With students *Equipment Resources *Technology mishmash *Number of students *Program structure	Attitude: *Push from the students *Exposure *Personal use	Appropriateness: *Volatility *Frequency of play *Game content

Trustworthiness

In order to establish credibility and reliability, triangulation, memoing, and member checking were utilized. First, triangulation of findings from the interviews with data from the literature to gain a better understanding of the phenomenon (Denzin, 1978; Patton, 1999). A data source triangulation was used to better understand ELL teachers' perceptions. "[Data source triangulation] means comparing and cross-checking the consistency of information derived at different times and by different means within qualitative methods" (Patton, 1999, p. 1195). Second, memos were written and some voice recorded after each interview. The goal is to enhance data exploration and better understand my state of mind at the time of the interview. By its nature, qualitative methods are infused with a reflexive stance to the research, participants, and data (Birks, Chapman, & Francis, 2008). Lastly, member checking by sharing interview transcripts and biographies with participants. With the conclusion of every interview, I initially shared the complete transcript with each participant to give them a chance to examine their answers and whether it still resonate with them. Since participant feedback lacked detail, I condensed our interviews to a short biography of each participant and shared that as well hoping it will be easier to look through which I also did not get response to as well.

CHAPTER IV
SIGNIFICANCE OF STUDY AND FINDINGS

The articles that describe this research focus particularly on the teacher, in an effort to contribute empirical work that supports the need for more holistic approach to digital games in teacher education programs. Given the broad topic of digital game usage in the classroom, three articles shape the body of this work. These three articles are the result of the themes that emerged after data analyses. All articles tie together and play a part in the overall purpose for ELL teachers' perception of digital games. Figure 4 showcase the themes that emerged from this work. The following is a description of what each article attempts to do and how it contributes to this body of knowledge.

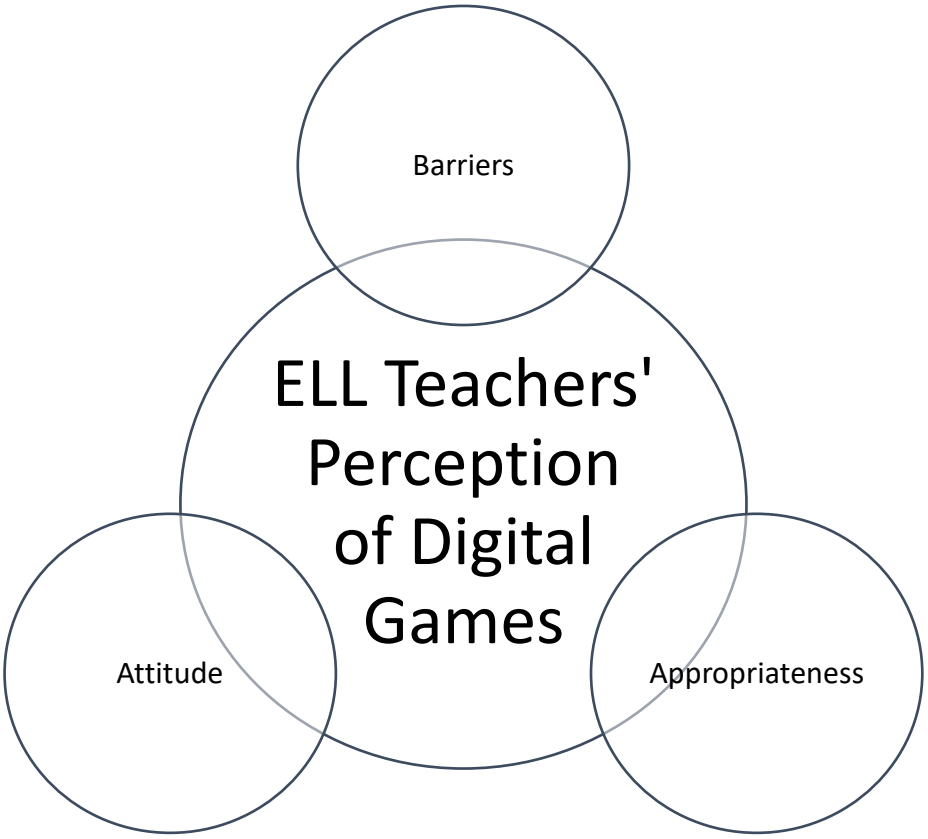

Figure 4. Emergent Themes: ELL Teachers' Perception of digital games

Article #1: The Logistical and Pedagogical Aspects of Using Digital Games For ELL Teachers

The first article explored the perceived challenges that ELL teachers encounter when using and implementing digital games as educational tools. Six ELL teachers were interviewed, and a phenomenological lens was used to analyze the data. The synthesis of textural and structural meanings and essences as a last step of phenomenological data analysis (Moustakas, 1994) lead to two major findings of ELL teachers' experiences with digital games; logistical and pedagogical. Southgate et al. (2017) two domains in pedagogy and technical context served as a framework to this work. The findings indicate that there is a lack of resources, support, time, and overwhelming choices that characterize the logistical challenges. On the other hand, ELL teachers teaching philosophy, curriculum, and training highlights the pedagogical challenge of incorporating digital games.

Article #2: ELL Teachers' Attitude Towards Digital Games

Attitude refers to one's level of evaluation and how it affects the targeted behavior. For this reason, attitude is a critical measure as it influences a person's intentions in performing or implementing a particular action based on their deeply held beliefs. In this work, six ELL teachers from two school districts in the upper Midwest of the United States were interviewed for a qualitative collective case study. Southgate et al. (2017) framework was used in this study with the focus on the curriculum and assessment domains. Findings from this study show a clear bias among ELL teachers towards digital games. Even when some indicated the desire to incorporate them in the future and after listing their potential benefits to their students, they are still cautious of their potential harm. The findings highlight the connection between time, access,

support, and appropriateness in shaping ELL teachers' perception towards digital games. At the end, some recommendations were proposed for future research.

Article #3: The Perceived Appropriateness of Digital Games from ELL Teachers

In today's era of technological advancement, nearly all aspects of society require the use of technology. Hence, the integration of digital games into the curriculum aligns with society's needs in the 21st century. Although research shows that digital games have numerous benefits for students, such as psychological and language improvements, some teachers are skeptical of using digital games for classroom activities due to their perceived negative impact. In this study, six ELL teachers in the upper Midwest of the United States were interviewed to examine their perceived appropriateness and best practices of digital games in teaching and learning with diverse populations. Findings indicate that the majority of the ELL teachers interviewed perceived serious games, games that are designed specifically for educational purposes, in a positive light while they unanimously agreed that violent digital games could have a negative impact to a child's psychological, emotional, and social life. The teachers highlighted the rate at which children play those game, their violent nature, appropriateness, cyber bulling implication, and the need for an oversight from parents and teachers as reasons why. Those beliefs were formed not on the basis of playing those digital games but rather from people in their lives that influenced their perception about them.

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CHAPTER V

ARTICLES

Article 1: Perceived Challenges and Opportunities of Digital Games

Abstract

This qualitative study explored the perceived challenges ELL teachers encounter when using and implementing digital games as educational tools. Six ELL teachers were interviewed, and a phenomenological lens was used to analyze the data. The synthesis of textural and structural meanings and essences as a last step of phenomenological data analysis lead to two major findings of ELL teachers' experiences with digital games; logistical and pedagogical. The findings indicate that there is a lack of resources, support, time, and overwhelming choices that characterize the logistical challenges. On the other hand, ELL teachers teaching philosophy, curriculum, and training highlights the pedagogical challenge of incorporating digital games.

Keywords: digital games, education, language learning, English language learners

The use of technology in the classroom has grown more popular in recent years. Unlike in the past, where teachers provided instructions without much concern for technology, they are now expected to integrate technology in their teaching and learning as early as kindergarten. The increased use of technology in the classroom has resulted from overwhelming evidence that technology facilitates learning (Fichten, Jorgensen, Havel, King, Lussier, Asuncion, & Amsel, 2018; Kulik, 1994; Liao, 1992; Ryan, 1991; Tay, 2016). Accreditors recognize the role of technology in teacher preparation programs through standards, such as the Council for the Accreditation of Educator Preparation (CAEP) Standard 1.5:

> Providers ensure that candidates model and apply technology standards as they design, implement and assess learning experiences to engage students and improve learning; and enrich professional practice. (CAEP, 2018)

Language classes are among the beneficiaries of the use of technology in facilitating the learning process. In particular, digital games have a track record in improving the cognitive, motivational, emotional, and social development of learners (Gee, 2003; Granic, Lobel, & Engels, 2014; Griffiths, 2002; Primack et al., 2012). Apart from improving the learning of language skills by learners, technology has the potential to improve teachers' teaching. English Language Learner (ELL) teachers can make learning interesting by incorporating technology in their practice (Ahmadi, 2018). If properly used, technology can help to improve teaching and learning in the classroom.

Digital games are arguably among the most valuable components of ELL classes, as they increase confidence and motivation while lowering anxiety about learning English (Horowitz, 2019; Iaremenko, 2017; Reinders & Wattana, 2015; Vosburg, 2017). When students play a

digital game, they remember faster, better, and with more understanding, because they are "using" the language, rather than "thinking" about whether they are saying words and phrases correctly. It has been suggested that digital games should occupy a central role in language teaching programs, as opposed to the peripheral role that they are often reserved. Digital games are fun and interactive, which makes them a learner-centered approach to language learning (Gozcu & Caganaga, 2016).

For any teaching approach in ELL classes to be highly effective, teachers need to possess the required pedagogical and content skills. Teachers often lack the necessary technical knowledge, and in many cases, the personal desire to play a digital game, let alone incorporate it in their teaching (Caldwell, Osterweil, Urbano, Tan, & Eberhardt, 2017; Dickey, 2015; Gerber & Price, 2013; Mifsud, Vella & Camilleri, 2013; Sáez-López, Miller, Vázquez-Cano & Domínguez-Garrido, 2015). In most cases, digital games require a certain level of technical skills for a player to participate. Teachers must possess the necessary skills with the digital games if they are to provide effective instruction to students (Reinders, 2017). Additionally, when teachers are unfamiliar with digital games, they tend to lack the critically important support. When teachers have low digital literacy skills, it impedes their use of this approach. The National Educational Technology Plan (U.S. Department of Education, Office of Educational Technology, 2017) emphasized the need to improve teachers' digital literacy, recommending that teacher education programs "provide pre-service and in-service educators with professional learning experiences powered by technology to increase their digital literacy and enable them to create compelling learning activities that improve learning and teaching, assessment, and instructional practices." (p. 40) While these teachers are interested in integrating digital games, they are not as enthusiastic as the learners due to the generational divide. In other cases, they are worried about

how to implement digital games in the classroom due to the pedagogical and technical constraints involved (Alyaz & Sinem, 2016).

This phenomenological study highlights the barriers facing ELL teachers that want to use digital games, and it is relevant because of the limited literature that addresses teachers (Ketelhut & Schifter, 2011). The study highlighted challenges related to two main dimensions: logistical and pedagogical. The logistical dimension examined how the implementation of digital games could be impossible when an ELL teacher does not have the hardware, software, and/or school support. In addition, the study explored ELL teachers' pedagogical beliefs about the role of digital games.

Literature Review

Digital Games and Education

Digital games have been around for a little over 40 years (Squire, 2003). The 'net generation' that describes the student population today, as mentioned by Annetta, (2008), live in media saturated environments. Digital games are designed not only to be played, but also "they are talked about, read about, fantasized about, cheated at, [and] altered…" (Annetta, 2008, p. 230). As a result, digital games are a cultural phenomenon that is the reality of many children in the United States and around the world. According to Kafai (2006), when talking about digital games as instructional tools, educators are divided into two camps - Instructionist and Constructionist Perspectives. The instructionist perspective refers to "thinking in terms of making instructional educational materials, turn naturally to the concept of designing instructional games" (Kafai, 2006, p. 37). Teachers who carry an instructionist prespective do not need digital games to teach what they otherwise can do on their own. On the other hand,

constructionist perspective means that instead of embedding lessons into digital games, the goal is to provide opportunities for students to construct their own games, which leads to new construction of knowledge in the process (Kafai, 2006). Thus, a constructionist perspective frames the literature review.

Digital Games in the Classroom

De Aguilera and Mendiz (2003) found that classroom learning in different disciplines turned into collaborative, interactive, scaffolded, and intellectually rich experiences when technology was introduced. The enhanced learning experience occurred because gaming supported and accelerated the students' language development and content learning. Educators are interested in engaging students in high quality behaviors and experiences founded on the content learning processes. With the content learning tasks, the processes become collaborative, interactive, and intellectually rich, which encourages curiosity and critical thinking among learners. To this effect, students benefit from authentic disciplinary learning and language development. Furthermore, the classroom learning should create opportunities for students to write and talk, including collaborative conversations related to complex texts, academic concepts, and the way language can be meaningful for learning disciplinary language and contents. The use of English is emphasized to promote deep learning.

Digital games used for instructional purposes have grown in popularity in recent years. Charsky and Mims (2008) demonstrated how integrating commercial, off-the-shelf (COTS) digital games in curriculum has numerous benefits. They start by defining games as "playful activities, with or without a computer, that have some essential characteristics" (Charsky & Mims, 2008, p. 38). These characteristics are competition, goals, game rules, challenging activities, choices, and fantasy elements. The efforts to create DGBL environments through the

utilization of COTS digital games is becoming a tenable and valuable instructional strategy. Miller, Robertson, Hudson, and Shimi (2012) also studied the role of COTS game-based learning in the early years of a child's education, such as the link between DGBL and early-years pedagogy. Similar to other researchers, Miller et al. (2012) reaffirmed the congruence between signature pedagogy and games in education. The new information technologies have thus transformed the learning processes, because students have benefited from the pedagogical skills.

COTS digital games have become a critical tool in achieving higher-order and content-based learning outcomes. Real-world classrooms have made it difficult for learners to achieve educational outcomes by promoting critical thinking and problem-solving strategies in public education. Van Eck (2009) examined the successful integration of digital games in classrooms and discussed the use of COTS digital games in modern classrooms where implementation requires the instructors and learners to understand the relevancy of digital games in the classroom settings.

Teacher Preparedness

As with every aspect of teaching and learning, teachers' training and professional development play a central role in shaping their pedagogy. For teachers to use digital games effectively and appropriately, teacher educators need to consider them as valid learning tools. If a teacher is not comfortable working with technology, digital games will not integrate seamlessly into instruction and students will sense a lack of continuity to the lessons (Wu, 2018). Conversely, when teachers regularly include technology in their instruction with a pedagogical approach that honors the use of such devices, the use of digital games will be appropriate and successful, in conjunction with other types of instruction (Chapelle, 2017). As shown in the Southgate et al., (2017) framework, teachers are at the center, and the existing sequence of

lessons includes how that integration will be reflected on as a whole class, small group, and individual students.

The role teachers play before, during, and after implementing a digital game is critical (Goldin & Katz, 2018). While it is important that the digital game aligns with the pedagogical practices and beliefs of the instructor, it is also critical that it be appropriate to the standards and curriculum being addressed in the classroom (Chapelle, 2017). Particularly in classes designed to support second language (L2) learners, this is a key element in determining the appropriateness of games to support instruction (Huizenga, Ten Dam, Voogt, & Admiraal, 2017). Considering the elements of the digital game and how they align with the classroom curriculum on its own is not enough; digital games should present a unique element that enhances the curriculum (Southgate et al., 2017).

According to Darling-Hammond and Bransford (2007), teachers need to be willing to adapt to the rapidly changing world by consistently understanding and interpreting the needs of their students. Teachers must consider whether digital games affords learners the opportunity to *create* knowledge that complements and enhances the standard course materials in the classroom (Southgate et al., 2017).

Technology has influenced teaching and learning in a drastic way. It has transformed the way teachers deliver instruction, leading to improved student performance and achievement (Fichten et al., 2018; Tay, 2016). Not all digital games, especially COTS digital games, should be used in every classroom or with every student, but when conditions are met, they can be a great addition to students' learning. Even though most teachers feel somewhat prepared to utilize digital tools to enhance their teaching, they do not feel prepared to use digital games in the classroom, and in many cases, they have minimal professional development once they are

practicing teachers (Chandler, 2013; Karadag, 2015; Millstone, 2012; Yilmaz Ince & Demirbilek, 2013). The literature review also revealed that it is important that teachers understand the relevance of digital games in the learning process; yet, challenges exist when introducing digital games into the classroom.

Methodology

Study Design

Phenomenology, the essence of a person's lived experience, was chosen for a realistic feel of the world obtained in situations where experience cannot be expressed in numerical form, thus promoting insight, discovery, and interpretation (Creswell, 2011; Merriam, 1998). Husserl (1931) explains phenomenology by "set[ing] aside all previous habits of thought, see through and break down the mental barriers which these habits have set along the horizons of our thinking ... to learn to see what stands before our eyes" (p. 43). My intention during this research study was to seek the *essence* of ELL teachers' perceptions and lived experiences towards digital games. At the core of phenomenology is to acquire a holistic view of the *meanings* (Creswell, 1998) of ELL teachers' experience or *essence* (Moustakas, 1994). The 'essence of something' opens a window into the social phenomenon of ELL teachers' perceptions of digital games in which my role is to seek the implicit structure and meaning of such experiences. The Framework to Guide Teachers in Using Serious Games in K-12 Classrooms outlines a protocol through five domains that include teacher's pedagogy, the learner, assessment, technical context, and the curriculum. Therefore, this framework will be utilized as the parameter of this study (Southgate et al., 2017).

Participants

Six K-12 ELL teachers from two school districts agreed to take part in this study all of which are females and Caucasian. All were from two towns that is divided by a state line making them two independent cities in the upper Midwest of the United States. Two participants were from the Urbanized Area of the west side of the city who both teach in the same middle school. The other four are from the Urban Cluster of the east side and are the entirety of ELL teachers in their district. The United States Census defines Urbanized Areas (UAs) of 50,000 or more people; and Urban Clusters (UCs) of at least 2,500 and less than 50,000 people (US Census Bureau). Their teaching experiences vary widely from being a first-year teacher to a 20-year veteran. Their educational backgrounds also vary, the majority having a master's degree with the exception of one participant, Suzy. They each chose a pseudonym to ensure confidentiality.

Table 1. Teachers' Synopsis

Name	Location	Grade level	Education
Suzy	Urban Cluster	K-2	Bachelor of Science in Elementary Education, 1992 Pre-Primary Licensure, 2006 English as a Second Language Licensure, 2011
Liz	Urban Cluster	9-12	Bachelor of Science in Education, 1983 Master of Science in Education, 1992 Literacy Endorsement, 1998 Administration Endorsement, 2014
Jordan	Urban Cluster	6-8	Bachelor of Arts in Spanish Education, 2015 Master of Science in TESOL (Teachers of English to Speakers of Other Languages), 2018
Bella	Urban Cluster	3-5	Bachelor of Arts in German, 2014 Master of Education in English Language Learners, 2018

Ann	Urbanized Area	6-8	Bachelor in Elementary Education with a Math Major ELL Endorsement Master of Education in Reading
Kate	Urbanized Area	6-8	Bachelor of Arts in Elementary Education, 2001 With Education Technology minor Master's in Special Education, 2012 K- 8th Teaching Certification ELL Endorsement

Data Sources and Analysis

For each participant, a series of two interviews was the main source of data. The first interview utilized a semi-structured interview guide, while the second interview was developed from the transcripts of the first interview to probe for more elaboration and clarification. Each interview was recorded using an iPhone 8 Plus Voice Memos app and transcribed using Otter.ai and proofed by the main researcher. Each interview was transcribed and was read repeatedly by intuitive and reflective introspection (Moustakas,1994). Open coding to follow putting categories with similar themes together with each being labeled according to the common characteristics of the units of meaning within the group. Data analysis included member checks and memoing.

Findings

As Collins and Halverson (2018) noted, "The history of American schooling was marked by an early institutional flexibility that has since coalesced into a system that is locked in place and is unable to adapt its core practices to new conditions" (p. 65); teachers and educational institutions are left reeling in response to rapidly changing technical and societal foundations. The synthesis of textural and structural meanings, as well as essences, as a last step of

phenomenological data analysis (Moustakas, 1994), lead to two major findings of ELL teachers' experiences with digital games, logistical and pedagogical.

Logistical Challenges

English Language Learning (ELL) teachers face many logistical challenges in their work. For the purposes of this study, those challenges included: equipment resources, support resources, time, and game selection.

Equipment Resources

Teachers generally face a shortage of resources, from books to computers; this lack of resources is compounded in rural schools (Renth, Buckley & Puchner, 2015). All the ELL classrooms that I visited were severely under-resourced. Kate highlighted an extreme case of that shortage when she said, "I was on the move, meaning this is my first year with a classroom, my first two years here, I was on a cart. And I would go to empty classrooms every hour. So I would move." Bella, who is a first-year teacher, did not have a computer for the first half of the school year. That shortage was not limited to technology; it extended to books as well. Suzy shares the frustration of her students reading the same book, "…I have a hard time because sometimes they say, 'we read this book already.' So I wish sometimes just we would have our own books, because sometimes they are reading the same books that they read in classroom." Liz, a veteran teacher who has some technology noticed a lack of resources as well, saying, "I've been where there's a lot stronger technology in the classroom." This drastically limits ELL teachers' ability to expand the scope of their instruction even when the willingness and desire is there.

Three out of the six ELL teachers I interviewed did not have one-to-one (e.g., Chromebooks or iPads) for their students. Furthermore, when a school had a shareable cart, it tends to be reserved for the mainstream classrooms or testing. "I don't get the opportunity to

check out the computers that often" Bella said, and she continued, saying "Yeah, or the schedule would be such that I would have it for 15 minutes of my 30 minute block with a class. So, it would take five minutes to get everybody set up another couple to put it away." Although Suzy does not believe that the reservation process to be practically problematic for her class, she goes on saying, "I think they have 30 in each cart. So usually, the [mainstream] classroom takes out the whole cart. And there's only 25 to 24 kids so I can take the other last six…because I can always get the tail end of the ones that aren't being used in the cart." Later in the interview, Suzy also mentioned how sharable carts could force you to use the least desirable technology as mainstream teachers get first pick "The Chromebooks are easier to access. I think the iPads are being used more often. Because sometimes I don't know if the Chromebooks are easy to use, do you think?" This limitation can push the ELL teacher to revert back to what they feel comfortable doing, namely traditional teaching approaches.

Access to technology can vary from district to district and even school building to school building, which can make it hard for teachers when they work at a school with less equipment than their previous school. And when a teacher learns how to use any given technology, say a SMART board for instance, they struggle when they move to another school that does not have that same device. Suzy explained, "… I don't have a SMART board and I did at the other school… I mean, that I really missed. I miss having a SMART board. I should really, I should really be writing the grant for a SMART board here." Even changing the type of operating system can be daunting, as Kate explained, "I was pretty proficient on the other computers. And now I have to do this Mac, and I'm like, 'oh my gosh'." The lack of consistency in the types of equipment different schools or even different classrooms use introduces a learning curve that can

be seen as a burden. These under resourced classrooms restrict how and when ELL teachers use digital games.

Support Resources

The lack of support staff and other ELL teachers to help and aid in those ELL departments makes digital games a luxury they cannot afford. Suzy, Jordan, and Bella are the only ELL staff in their schools. Even the schools that have more than one ELL teacher and paraprofessionals (such as Ann's and Kate's school) still feel it is not enough. The influx of ELL students in schools limits ELL teachers just covering the basics. The number of students for Liz doubled since she first started at her school 3 years ago, "I started with the Somali population and still have them. So that hasn't changed. But it's more than doubled. And when you're talking to a school of 500 kids, that's a lot. That's a big difference from 22, I think it was, to 50." Ann believed that extra support for targeted content classes for ELLs is desperately needed, by saying:

> It would be nice to have more support, like high school has four EL teachers. So they're able to have an EL science class or EL whatever. There's just two of us here and it's hard to branch into that. Because we have one period where you could do a co-teaching, well then why don't you do eighth grade science? Why don't you do sixth grade science? Why do you only do seventh grade, you know, it's like, hard to branch out when you don't have the extra staff for that.

The majority of the ELL students come from a refugee background creating a unique and delicate situation which ELL teachers need to address. They require more resources especially for those that are not literate in their native language, have experienced traumatic events, or lack a strong home structure.

Time

Time, or lack thereof, is a constant challenge for ELL teachers that includes two prongs: time with the students, and time to prepare, research, and implement digital games. On average, ELL teachers will work with students for 30-60 minute sessions a day, which leads them to question the viability of digital games. Ann explained her time with her students, “each class period’s probably 50 some minutes 52 minutes or so.” Moreover, the large number of ELL students makes digital games impractical to implement. For reference, Kate has 62 students, Suzy has 49 students, Liz has 50 students, Jordan has 36 students, and Bella has 42 students. Although not all of these students are seen every day, as they may receive indirect services when they reach higher levels in the program, they are still put on monitor status for ongoing support. Bella elaborated on what monitoring entails, “we basically just monitor what they're doing in the classroom. If they're slipping and falling really far behind in reading, writing, whatever it is, then I can start taking them for more direct services and smaller groups concentrating on what they're struggling in.” The large number of students under each teacher’s portfolio, combined with the limited time they spend with each student, adds an overwhelming strain on an ELL teacher.

The most common ELL instructions consist of four main models that are Pullout, Push-in, Bilingual Instruction, and Sheltered English Instruction (Sparks, 2016). Many of the ELL teachers in this study, if not all, utilize the Pullout method, which removes ELL students from their mainstream classroom for a designated period of time each day to receive separate instructional support through an ELL specialist. Therefore, some ELL teachers raised critical questions about the impact of pulling students out of classroom instruction and how that might negatively impact their education. Some teachers recognize the challenge of pulling out students for even that amount of time and question their long-term impact. Suzy described, “…some of

them were missing math every day. I mean, is that smart? That's not, they can't be missing math." Bella emphasized that the change of classrooms for the ELLs can be disruptive to the flow of their day:

> My absolute dream would just be able to have the students stay in their room with their classroom teacher. I feel it's so disruptive to their day, and to just pull them from class. And it's a different environment, and they see all their friends. And so they're super silly. And it, it's almost a distraction to leave as opposed to somebody coming in and sitting at their desk with them, or pulling them back to them reading table and working a little bit more in that aspect.

Time to prepare, research, and implement digital games is the other main challenge. Suzy described her teaching last year as "surviving," given how limited her schedule was, and said, "I was going from one classroom to the next so fast that we never really…have the time. Last year…I was going from one school to the next and I think we were just surviving." Bella put her current experience in more vivid terms by describing it, "like, I'm drowning every day." Ann agreed that digital games should be included, yet had some reservations, "sometimes you don't have time for everything. And sometimes it takes more time to police them on the computer…"

ELL teachers in many instances are cultural brokers (McCarty, Cervantes & Stirtz, 2009). They are central in facilitating deep understanding and bridging cultural divides between several groups, whether it is between families and the school or teachers and students. That also adds time constraints to the ELL teacher, exemplified by Ann's comments, "Yeah, they kind of forget we're there to support them. You know, we're supposed to help the students, help the families, help the teachers help and plus teach six periods a day or two separate, you know, which is a lot

but it'd be nice to help them all more with their questions and concerns too." This highlights both the time constraints faced by ELL teachers and the shortage of staff.

Game Selection

The choice of the game to be used in an ELL class is determined by the effectiveness of language teaching and learning. Perhaps the major challenge facing teachers and educators is choosing a game that most effectively meets learning objectives. The structure of the narrative, multimedia, and interaction of games have an influence on how well students can use them for language learning, such as vocabulary acquisition. These elements interact with player factors, such as game literacy (being a gamer, playing frequency, and playing duration), to influence the help that these games provide to ELLs. Both young and adult language learners, like all other types of learners, have varying needs and not all games will meet their needs. Without clear guidance for ELL teachers on how to effectively evaluate, incorporate, and assess digital games, alongside the limited resources they have access to, teachers face numerous logistical challenges.

The technological evolution dictates the wide acceptance and demand for interactive digital games in the classroom, as app stores (like Google Play) rate educational apps as the third most downloaded category of 2019 (Statista, 2019). The vast options of digital games literally provide educators hundreds of tools to choose from. This wide array of games may become overwhelming and must be mitigated carefully in order to remain relevant and applicable. Having the right selection of games, appropriate availability, and access to resources can greatly assist educators in formulating a thoughtful strategy around digital game implementation. Bella explained that sifting through the numerous choices of digital games can be time intensive, "I think a lot of it is trying to figure out what works and what doesn't work that I can bring to the

classroom, and then doing a lot more research into what can fill those gaps and provide better, not necessarily better instruction, but reinforce and practice…"

Certainly, smart mobile devices may be a thorn in the side for some educators, yet smartphones and computer tablets have emerged as preferred modes for learning aids in recent years.The introduction of the bring-your-own-device (BYOD) phenomenon introduces several considerations for institutions regarding infrastructure (Burns-Sardone, 2014; Imazeki, 2014). The most popular mode of delivery of digital games is mobile devices like cellphones and tablets, alluding to the fact that BYOD devices are certainly important (Newzoo, 2019). However, schools might also prevent students from bringing their own cell phones which can contribute to the hardware gap some of those schools face, as Jordan mentioned, "But here, kids aren't allowed cell phones. And I get it, you know, it's at a level where they don't, they may or may not, you know, take the proper care." Even if BYOD devices are successfully implemented into a ELL teacher's instructional curriculum, complex issues such as privacy and digital literacy also need to be considered, alongside connectivity and data usage in future.

Pedagogy

Centrally important is the pedagogical belief of ELL teachers in the role digital games occupy in teaching and learning. Furthermore, a recognition of the relationship between context and game play can create a bridge for educators to embrace a more pertinent role for digital games. Patricia Rogers (2003) asked a valid question about technology in education: "What is it about technology that makes some teachers run away in fear and others embrace every new instructional medium that comes along?" (p. 15). Thus, exploring those pedagogical principles will shed light on deeper beliefs about digital games in education.

Selection and use of words are important, because words convey beliefs and values (Howe & Lisi, 2018). When interview participants were asked about how they define digital games, some struggled to put it in words. For example, Ann said very reluctantly, “Any kind of a game that uses technology?” Suzy viewed digital games as encompassing all games, “I think it's any game. Like I said, it could be a group game using Kahoot and things.” Bella emphasized the interactive component of digital games as the defining factor, saying:

> Something on a device. Whether it's a computer or an iPad, [or] their phone. It would have to be like interactive, it's not like a quiz. So I wouldn't necessarily say that Kahoot is a game. It would have to be something more where there's more thought process going on. Or like you have to this wouldn't be for English. But in terms of math, you'd have to solve the problem to get to the next point in your game, the next level or something as opposed to here's four answers choose one.

Teaching Philosophy

The utilization of digital games prompts questions about implementation and possible barriers, such as teacher buy-in and widespread educational acceptance. It should be noted that the implementation of digital games without institutional support may prove frustrating and even futile for more educators wishing to move forward in the twenty-first century. The generational gap between teachers and their students might be a culprit for some ELL teachers, but not all. Bella, who is the youngest teacher I interviewed, said, “I know when I interviewed for the position, the one thing I wasn't confident about was my use of technology. I’m probably more old school in my language teaching than my age or experience would lead you to believe.” Jordan viewed that generational gap as something that will forever be inevitable unless technology is a passion, and she said:

> If I took the time to constantly be on social media constantly seeing…what's out there, what new technologies coming out like my husband loves technology. And when he's not busy with work, that's what he's doing. He's snooping around and seeing what's out there. Me on the other hand, I don't like social media, I barely am on it at all.

Teacher preparation programs, professional development, teaching experience, along with district and school guidelines influence these teaching philosophies. When Liz, who sees herself as a reading specialist, was asked why she does not use digital games, she said, "I've always really just focused on reading, writing and vocabulary and putting those things together." Her statement exemplified her opinion that digital games will not or cannot fulfill this goal.

The further a student advances in an ELL program, the more nuanced teaching becomes. Beginners require more involvement from the ELL teacher as explained by Liz, "It's hard to work with 16 level ones… because, you know, they need so much help." Guided Reading Levels are used by educators to describe where children are at on the reading spectrum and what books are most appropriate for each step in the learning process. Suzy described reading level challenges that some ELL teachers face "…there's one that was we're reading at a benchmark A at the beginning of the year now, he is at a G, so then I have to try to find a group that would work." This fast-paced progress renders some digital games useless in a short span especially when many ELL classrooms use targeted teaching to focus on specific underdeveloped or weak domains (i.e., listening, speaking, reading, and writing).

Curriculum

Scholars are split on the level of guidance that should be given to teachers. Some researchers believe that prescribed curriculum is paramount, while others believe giving freedom to the teacher to create their own curriculum will foster autonomy, creativity, and innovation.

Although many of the teachers I interviewed did not clearly distinguish between curriculum and standards, they expressed their frustration about not having a set of guidelines or curriculum to follow as a reason for not embracing digital games. Kate described this frustration by saying:

> And I don't like the word curriculum, but we're not really getting given a roadmap, like, hey, you have a new student coming in. Okay, let's give them a screener and see where they're at. Okay, so they're at level two. Now, where do we go with that? We don't have a formula for that. And so I'm always trying to find or, I feel like I'm always trying to find a way to put a formula to it…

Others suggest that alignment between teaching materials in mainstream classrooms and ELL classrooms will yield better results. Jordan echoed that sentiment when she said, "Well, let's just be real, [English as a Second Language] ESL is kind of a waste of a program. Only in the sense that we can't build our own curriculum, even though I do every day, but I shouldn't. What I should do is recycle of the curriculum that's already been given to them, because that's what they need help with." Jordan envisioned a 'recycled' model, which puts ELL teachers in a supporting role to reinforce what students are already learning in their mainstream classroom. The disconnect between the two learning environments is counterintuitive. However, pulling content from each grade level can be challenging to implement, because many ELLs are clustered by their language proficiency level, not necessarily by their grade level. Jordan explained the importance of the learner domain (Southgate et al., 2017), "The way that it's set up right now is just all mixed. And it's really, really hard to pull in content from other grades. Because I have like, one of my classes, I have sixth, seventh and eighth graders all in one." World-class Instructional Design and Assessment (WIDA) is a consortium of states that create standards for ELLs. WIDA English proficiency standards are the de facto standards in 40 states in the United

States. Bella told me about her method of dividing ELL students is also driven by a number of points, “They are pretty much divided into level based on how I pulled them. So it will be proficiency level mixed with their WIDA level mixed with their grade level… Mixed with when can I actually pull them from their class. So sometimes they're reading levels are a little bit further apart, but generally, they're as close together as I can get them.”

Jordan’s experience with Professional Learning Community (PLC) as a method for curriculum development in the past was extremely fruitful and she wishes that was the case for right now, saying,

> I wish I could do my PLC with them…that's what we did. We had a beautiful program, and things worked wonderfully. We met once a week where all of us came together. We all problem solved, we talked about things. We brought up things we were currently doing that were working. It was once a week, and, oh my gosh, I loved it! Now, if we meet once every two months, people are kicking and screaming saying, I have this. I have that. It’s frustrating because I don't even know what's being taught in high school. I don't know what I should prepare them for because I am all by myself.

Only one ELL teacher viewed not having a curriculum as an asset. Ann embraced that lack of curriculum, as it offers her the flexibility to tailor her teaching in a more intricate way, while still recognizing the level of involvement required. Ann described, “Because we know where each one of our kids are at and where they're reading at what they need next. It takes a lot more planning, and a lot more, you know, foresight into what they're doing. But I'd rather do it that way then be stuck on a curriculum and go, you know, this chapter just doesn't really make sense to these kids.”

Training

For the most part, the overall goal should be to base game selection on sets of criteria validating said game's attributes according to method, overall purpose, and obtainability. In addition, cost of use and licensing and distribution options are important, especially considering that students may want to use their own devices (BYOD) to participate actively within or outside of a class environment. Correspondingly, game selection is generally related to the teachers' training and experience in tandem with them having the devices that support it. Ann illustrated that by stating:

> We got a lot of SMART boards, like two or three years prior to that. So I did take some trainings back then. But I didn't retain it because I didn't have my own. So I never practiced it. So it was just kind of learning how to use it.

None of the ELL teachers I interviewed received training on how to use digital games in their teacher education programs. This lack of training can be explained by the year some of those ELL teachers graduated from their respective programs. Liz, who graduated in 1983, said, "You have to remember when I was a preservice teacher, there weren't computers." However, younger teachers like Bella, who completed her Bachelor of Arts in German in 2014 and Master of Education in English Language Learners in 2018, raise questions about whether teacher education programs could better prepare teachers. Bella said, "We did have a technology for teachers course it did not focus on games… So it's not something that I have been immersed in."

Professional development is one way to bridge the gap in knowledge for teachers. Suzy did not believe her district provided adequate training in the area of digital games, saying, "We haven't had a lot of training lately on specific digital games." This lack of training affected Suzy's level of comfort with technology more broadly and digital games more specifically, she

stated, “I don't feel comfortable...with it all...that's probably why I haven't incorporated [digital games], because I'm just not very comfortable with it.” Conversely, Kate believes that in her school district (separate from Suzy’s district), there are plenty of opportunities for teachers to use digital games, yet the lack of will and desire for teachers to pursue might be the culprit. “I feel as though there's adequate training for people that want it, or that look for it,” explained Kate.

The motivational impact of digital technology is well documented, and highlights the potential for English language learning to be accessible to students outside traditional teaching boundaries. Motivational impact is even reported to be the top reason teachers use digital games in their classroom (Takeuchi & Vaala, 2014). Kate shared that same sentiment when she said,

> They really like to play [digital games] and then play it for hours. And so there's something magical because to get them to sit in a classroom for hours is difficult. So they're doing something, right, because they're capturing that child's attention for an extended time. Whereas us teachers who are on stage for seven periods a day, are trying to do that for just 45 minutes of their day. And that's difficult to keep them focused, which is interesting when you think about ADHD, and keeping them on task. But you give them Fortnite and they could sit for hours.

Thus, demonstrating the role of digital games in the lives of her students to be central in capturing their attention. The motivational factor of digital games was reflected across all ELL teachers as one if not the main reason to want to incorporate digital games.

Implications For Practice

Although digital games could be an effective component in English language learning, not all games are suitable or beneficial for use in language classrooms, especially when viewed from an Instructionist Perspective lens (Kafai, 2006). Certain games do not provide any

educational benefit to the students which makes them inappropriate in learning environments. Some games may also not work for certain learners.According to Alyaz and Sinem, (2016) in-game elements are critical in determining the effectiveness of digital games in ELL classrooms. The results of this study demonstrated the difficulty ELL teachers face in incorporating digital games as part of their teaching and learning. Thus, a number of recommendations are intended to mitigate these challenges.

First, providing the needed technological resources and making them easily accessible to ELL teachers will greatly increase the chance of incorporating digital games. In many instances, ELL teachers lack access to many devices that could enable them to use digital games in their classroom, such as computers and iPads. If providing such resources in all classrooms is not feasible, shareable carts can be utilized, and schools must enforce the equitable use of these carts among teachers.

Second, providing the technological resources on its own will not shift instructional practices (Prince, 2017). ELL teachers need training and ongoing support to learn how digital games can be properly evaluated for appropriateness and purpose and then, effectively implemented. Many of the participants preferred teacher educators to model digital games before they implement it themselves, as a better way to retain the information. They also cited that their stereotypical view of digital games as entertainment tools or time fillers clouded how they might be used for educational purposes. Moreover, having enough ELL specialists in any given school will reduce the workload, time constraints they face, and allow for a mixture of push-in and pullout instruction.

Third, a more collaborative approach to curriculum development between ELL teachers across grade levels and content alignment with mainstream classrooms will equally benefit teachers and students. Collaborative curriculum development has shown to shift teachers' content knowledge, content belief, and teaching practice, while fostering a meaningful and task-oriented approach (Drits-Esser & Stark, 2015; Honigsfeld & Dove, 2019). ELL Teachers will be able to share materials with each other as language learning is largely similar across grade levels. These materials can include digital games, as well as building on content taught in previous grades; thus, reducing their time screening students and preparing materials. The extra time can allow ELL teachers to research and implement digital games.

Finally, teacher education programs have a duty to embed technology and digital games throughout their courses. ELL teachers' pedagogical beliefs stem from their time as preservice teachers during which the role of digital games are formed (Turkay, Hoffman, Kinzer, Chantes, & Vicari, 2014). All participants unanimously said they never received any training on digital games as a pre-service teacher, and the one who did have a technology course took it as a standalone course. Gone are the days where a single course on the topic is enough. Teachers need to know how to incorporate technology in various subject matters, including language learning.

According to the Entertainment Software Association (2019), 65% of American adults play video games, mainly using their smartphones. There is no expectation that this number will decrease; therefore, it is fair to assume that this number is set to increase in coming years. The motivational impact is even reported to be the top reason teachers use digital games in their classroom (Takeuchi & Vaala, 2014). As technology moves forward, so shall interest in its scholarly use.

Future research should aim to address shortcomings within digital infrastructures in schools and educational institutions. Overcoming barriers for teachers who are reluctant or unable to embrace modern technological advances may also be of further interest, coupled with suggested methodologies and support structures for educators to overcome those barriers. Lastly, a detailed discussion of game-based pedagogy can assist in further developing some of the gaming points referenced here and create a roadmap for ELL teachers and students into an even richer digital learning experience.

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Article 2: ELL Teachers' Attitude Towards Digital Games

Abstract

Attitude refers to one's level of evaluation and how it affects the targeted behavior. For this reason, attitude is a critical measure, as it influences a person's intentions in performing or implementing a particular action based on their deeply held beliefs. In this work, six ELL teachers from two school districts in the upper Midwest of the United States were interviewed for a qualitative collective case study. Findings from this study show a clear bias among ELL teachers toward digital games. Even when some indicated the desire to incorporate them in the future, and after listing their potential benefits to their students, they are still cautious of their potential harm. The findings highlight the connection between time, access, support, and appropriateness in shaping ELL teachers' perception towards digital games. At the end, some recommendations were proposed for future research.

Keywords: attitude, English Language Learners, digital games

Introduction

Research shows that a purposeful implementation of technology to support teaching can positively impact the cognitive development of students in preschool (Revelle, Reardon, Mays Green, Betancourt, & Kotler, 2007); primary grades (Genlott & Grönlund, 2013; Mathison & Billings, 2008); upper elementary grades (Schmidt & Gurbo, 2008; Suhr, Hernandez, Grimes, & Warschauer, 2010); and middle schools. The majority of students' lives in developed countries revolve around technology; thus, some teachers find it necessary to teach students with certain aspects of digital gaming. However, other teachers do not have any background in gaming and are unable to appropriately use technology for learning purposes. In this case, educators have mixed reactions to the adoption of Game-Based Learning (GBL) in schools.

Previous research has not been consistent regarding teachers' attitude toward Digital Game Based Language Learning (DGBLL), ranging from positive (Li, 2017), unsure and negative (Kuhn, Kugler, Schmalen, Weichenberger, Witt, & Gallinat, 2018). Nonetheless, it is safe to say that the most commonly held belief among teachers is not always positive and they are not as enthusiastic as the learners in using digital games in classrooms owing to the generational divide (Alyaz & Genc, 2016). Research that shows teachers reporting positive attitudes toward digital games tends to have low digital game literacy and DGBLL pedagogy (Alsuhaymi & Alzebidi, 2019; Chandler, 2013; Karadag, 2015; Millstone, 2012; Yilmaz Ince & Demirbilek, 2013), which was observed especially with elder generation teachers (Blamire, 2010; Sandford, Ulicsak, Facer & Rudd, 2006).

In education, students are required to achieve definite learning objectives; thus, students can use GBL to achieve a goal, such as understanding complex mathematic equations, through simplified games. Moreover, digital games allow teachers to track the progress of each student to

ensure they attain the learning objective. The games are designed in such a way that progressing to the next level requires one to accomplish a milestone. In this instance, the teachers can identify students who struggle to complete a particular objective. Therefore, gamification can enable teachers to understand students' learning challenges.

Attitude refers to one's level of evaluation and its effect on the targeted behavior. For this reason, attitude is a critical measure, as it influences a person's intentions in performing or implementing a particular action based on their deeply held beliefs. Thus, an ELL teacher's attitude toward the use of digital games refers to the level of intent to use and apply DGBLL as a learning tool. The relationship between digital games and language learning has been documented to lower anxiety and improve motivation (Horowitz, 2019; Iaremenko, 2017; Reinders & Wattana, 2015; Vosburg, 2017) which makes ELL teachers' perception of them and the role they play in teaching and learning even more valuable. Several factors are involved with evaluating the level of a teacher's attitude towards digital games, including age of the teacher, experience, accessibility to technological resources, and support. Although implementation and use of DGBLL in classrooms might indicate how accepted digital games are by the teacher, not implementing digital games could also be a sign of other factors beyond teachers' attitude, such as limited resources and pedagogical knowledge. Thus, a teacher's opinion about gaming may determine whether he or she will implement digital games in the classroom.

Literature Review

Teachers' Attitude Toward Digital Games

Teachers are a critically important to the equation that influences academic achievement and performance of students (Steele, 2014). In modern society, some educators have found that learning can be challenging for students, because of how technologies are perceived to be

disruptive. In Petkov and Rogers's (2011) surveys, teachers shared their opinion regarding the use of technology in learning. Teachers raised concerns over students' dependency on technology to handle difficult and complex tasks. Nonetheless, in this digital era, technology changes the role of teachers. For instance, technology has changed the way teachers and students communicate thus making teachers collaborators and facilitators (Ritchtel, 2012).

Reasons for whether or not to embrace DGBL are diverse, depending on the perspective of each stakeholder. These perspectives proved critical, as they demonstrate how DGBL is conceptualized. Research conducted by Dodge, Barab, Stuckey, Warren, Heiselt and Stein (2008) showed that DGBL is an approach based on game technology. Digital games can help students learn, which happens predominantly through game play. Whenever players engage in gaming at their style and pace, they tend to learn. This learning can happen both in and out of the school environment. The self-initiated game play has helped students to develop critical thinking and social skills, while the teacher's role in the study was to guide students during DGBL (Barab et al. 2009). Teachers' view of DGBL as a pedagogical and technological innovation that can aid teaching and learning is essential to embracing that in their teaching. Although the viewpoint of DGBL, especially the pedagogical innovation approach is plausible, many schools have expressed various concerns regarding its use including scalability, logistics, and costs.

Assadourian (2016) noted that mainstream education systems maximize content mastery. The textbook learning culture benefits the classroom configurations, curricular plans, professional development, didactic teaching approaches, compartmentalization of subjects, and summative assessments thus enhancing the achievement of goals. Some teachers believe that textbooks are an indispensable technology, because they embrace content-mastery learning and teaching paradigm (Thomas & Brown, 2011). Textbook-based learning focuses on how teachers

teach and the content of the studies. It encompasses the views of stakeholders, including teachers, parents, students, and policymakers. It also equates learning to content mastery. Therefore, textbook learning culture reinforces and reproduces the dominant learning lens through schooling, assessment, learning, teaching, knowing, and using disruptive technologies.

In the 21st century, the learning paradigm has shifted to competencies, instead of content mastery – it is the arts and sciences in education. It would be imprudent to avoid understanding the roles of teachers. Based on the content mastery model, educators are content experts delivering content to students. However, in the modern learning environment, content expertise by itself cannot guarantee successful teaching and learning. This is because learning is undertaken through a designed-content model thus shifting the role of a teacher to more of a facilitator. Teachers, as practitioners, have learned and understood how students develop high thinking and soft skills so that the teachers can design relevant contexts (Barab, et al. 2009). This process implies that teachers are viewed as designers to the learners' experience, not content. Nonetheless, more research is still needed on the role of teachers who are no longer viewed as content experts (Kapp, 2012). Although teachers' knowledge about digital games is crucial and can give them an edge over their peers, it does not guarantee that they will use them properly in an educational setting. Teachers can use the knowledge and expertise of their students to develop their lesson plans, yet they have to be willing to do so (Sandford, 2006). This makes teachers' perception of digital games outweigh their knowledge.

Compared to studies about children engaging in DGBL outside the classroom, there are limited studies regarding the use of COTS games in the classroom (Calleja, 2007). Studies call upon educators to redefine the role of Information and Communication Technology (ICT) skills, collaboration, thinking, and communication skills in promoting engagement in learning

(Sandford, 2006). Based on the survey findings from Sandford (2006), many teachers questioned the use of computer gaming because they lack gaming experience and skills. Nonetheless, 60 % of teachers surveyed were willing to consider COTS in learning citing motivation to be the driving factor. Similarly, teachers noted that gaming is interactive and inclusive because it engages pupils in the learning process. However, to some teachers, the introduction of COTS digital games in the classroom would render them irrelevant. They fear the approach would reduce their educational value. Some teachers believe that many children play games during their leisure time, thus making digital games irrelevant to the learning setting.

Methodology

Study Design

The need for particpants' voices to be heard in this research was paramount. "…humans are storytelling organisms who, individually and socially, lead storied lives. The study of narrative, therefore, is the study of the ways humans experience the world" (Connelly & Clandinin, 1990, p. 2). Thus, a narrative collective case study was chosen for this research. It involves multiple cases in an effort to examine data results for likeness to offer understanding into a matter and enable exploration of a phenomenon, population, or general condition (Creswell, 2013; Glesne, 2005). Through interviews, it allows me to see similarities and themes to be examined to gain insight into the influences of ELL teacher perception and attitude of digital games. This study sought to answer the following research question: How does ELL teacher's perception of digital games influence their use and incorporation?

Participants

Six K-12 ELL teachers from two school districts agreed to take part in this study all of which are Caucasian females. All were from two communities that are divided by a state line making them two independent cities in the upper Midwest of the United States. Two participants were from the Urbanized Area of the west side of the city who both teach in the same middle school. The other four are from the Urban Cluster of the east side and are the entirety of ELL teachers in their district. The United States Census defines Urbanized Areas (UAs) of 50,000 or more people; and Urban Clusters (UCs) of at least 2,500 and less than 50,000 people (US Census Bureau). Their teaching experiences vary widely from being a first-year teacher to a 20-year veteran. Their educational backgrounds also vary, the majority having a master's degree with the exception of one participant, Suzy. They each chose a pseudonym to ensure confidentiality.

Table 1. Teachers' Synopsis

Name	Location	Grade level	Education
Suzy	Urban Cluster	K-2	Bachelor of Science in Elementary Education, 1992 Pre-Primary Licensure, 2006 English as a Second Language Licensure, 2011
Liz	Urban Cluster	9-12	Bachelor of Science in Education, 1983 Master of Science in Education, 1992 Literacy Endorsement, 1998 Administration Endorsement, 2014
Jordan	Urban Cluster	6-8	Bachelor of Arts in Spanish Education, 2015 Master of Science in TESOL (Teachers of English to Speakers of Other Languages), 2018
Bella	Urban Cluster	3-5	Bachelor of Arts in German, 2014 Master of Education in English Language Learners, 2018

Ann	Urbanized Area	6-8	Bachelor in Elementary Education with a Math Major ELL Endorsement Master of Education in Reading
Kate	Urbanized Area	6-8	Bachelor of Arts in Elementary Education, 2001 With Education Technology minor Master's in Special Education, 2012 K- 8th Teaching Certification ELL Endorsement

Data Sources and Analysis

For each participant, a series of two interviews ranging from one hour to 1.5 hours was the main source of data. The first interview utilized a semi-structured interview guide, while the second interview was developed from the transcripts of the first interview to probe for more elaboration and clarification. Each interview was recorded using an iPhone 8 Plus Voice Memos app and transcribed using Otter.ai and proofed by the main researcher. Each interview was transcribed and was read repeatedly led by intuitive and reflective introspection (Moustakas,1994). Open coding to follow putting categories with similar themes together with each being labeled according to the common characteristics of the units of meaning within the group. Data analysis included member checks and memoing. Since it will be almost impossible to share all the findings from the data, a "narrative sketch" (Connelly & Clandinin, 1990) can highlight the overview of the inquiry at hand which is attitude. Demonstrative mode, where the data does not necessarily speak for itself but instead is used in exemplary ways to illustrate the thoughts of the narrative writer, was utilized as a way to select data (Connelly & Clandinin, 1990).

Findings

This article is part of a larger study that examines ELL teachers' perception toward digital games. With that in mind, the findings of this work were written in narrative style for each participant, organized in a chronological order based on when the interviews were conducted. The overarching themes among all the ELL teachers' experiences with digital games can be either logistical or pedagogical. The former includes equipment resources, support resources, time, and game selection, and the latter include teaching philosophy, curriculum, and training.

Suzy

Suzy has worked in the same school district since 2008. Suzy was born, raised, and lived on a farm with her family in a small town in the upper Midwest. She currently lives with her husband and two sons; the oldest of which is a college student pursuing a degree in dentistry and the youngest is a senior in high school. As of 2019, she teaches 49 ELLs. Suzy was my first participant in the study who also was instrumental in recruiting other ELL teachers from the same district. Her large smile, every time I met her, radiated warmth and welcome.

Suzy has limited digital gaming in her classrooms because of what she calls "the time factor" – Last year, she was moving from one school to the other not giving her time to consider them. Suzy described her teaching last year as "surviving" given how limited her schedule was. "I was going from one classroom to the next so fast that we never really had the time. Last year, I was going from one school to the next and I think we were just surviving." However, ever since she settled in one school, she told me repeatedly that she is considering incorporating them; "it should be something I look into the last few weeks of school because it's nice to change things

up a little bit." But when asked what she was considering she told me "I don't know. It's hard because I only have 20 minutes [with students]. By the time I come and get them, I only have 20 minutes. I don't know. I haven't thought about what I could do as far as a digital game. I don't know." She recognizes that games are vital for maintaining a serene learning environment because they give children that are always active and talkative a chance "to be able to use their voice without talking in front of the whole class." Suzy's school, through their ELL coordinator, has tried to incorporate the use of computers into the curriculum but the move has stalled because of financial constraints. "We were going to do something that was all on the computer and it was all geared towards their level and I think it got a kibosh from the superintendent on the price. We even had a meeting this summer saying; 'okay, this is what you are going to do,' and then it never happened."

In particular, the curriculum administrator at Suzy's school is supportive of the idea of incorporating digital games into lesson plans to facilitate student learning. On several occasions, she has made plans and communicated to the teachers in the district that they would receive training on how to implement technological tools in teaching. However, the school's principal is unsupportive of the concept. The lack of support from the school, coupled with a shortage of funds, has made it difficult for Suzy and other teachers to acquire the much-needed materials and training necessary for teachers to use digital games.

Currently, the school district does have one person who is tasked with technology integration in the classroom. Suzy points out that she is the go-to person regarding using technology in the classroom "she would be probably be the one that I would talk to, because she just works with the school district trying to get technology in the classroom." Furthermore, there are two people on site to help teachers with their technical support. The school district offers a

variety of professional development courses for teachers but lack any specific to digital games. Suzy explains “we haven't had a lot of training lately on digital games. I think the reading has iPad time and then the math.” She is open to attend professional development or workshops that are geared toward digital games but whether she does that remains to be seen. The school district is accommodating to include workshops that are not offered “I think there's a lot of money that they [can provide] if you prove to them that this will benefit your classroom.”

Although she does not use any digital games in her classroom, Suzy is enthusiastically supportive of the idea. She repeatedly used the term “I should” when talking about digital games. She said it 19 times during the two interviews, so I asked her why. She told me

> Because the kids really like it. I mean, the kids love it. The kids love games. And I don't feel so bad because I'm not using it [because] they're using it all the time in their centers. I think the reading has iPad time and then the math; they have this math app I think three times a day. So, I don't feel so bad. I feel like they are getting a lot of digital games already.

As an ELL teacher, she recognizes the potential of digital games as edifying tools because they could offer an incredible opportunity for language learners to improve their spoken English, especially since it allows students to interact and talk to other people who are fluent in the language. Indeed, one would expect that with her enthusiasm for digital games, Suzy might be a causal gamer. Nonetheless, Suzy does not play digital games herself, but one of her sons is an ardent fan of the practice. “My one son loves the video games. Like the online computer games.”

Since Suzy considers regular board games to be developmentally and academically beneficial to her language learners, she uses games in class to stimulate student learning. In particular, since the school principal is rather unsupportive of any deviation from the core learning objectives, Suzy has set aside Fridays to be play days. Hence, “Fridays are usually a lot of the game times.” Suzy and her students typically take part in Go Fish, a game that she thinks is significantly beneficial to language learners especially at the kindergarten level. Suzy believes that digital games can be beneficial for her students once they cover all four domains – listening, speaking, reading, and writing.

> I really would have to make sure it has the four domains. It has to have reading involved; it has to have listening. It would have to have the speaking and the writing part. That's what I always have to look at it. It has four language domains in it. But I'm sure most digital games do except maybe the writing piece, but you can incorporate writing into a lot of those digital games, I'm sure.

Nonetheless, while Suzy is convinced that digital games could improve her language learners speaking and listening skills, she maintains that digital games need to have a larger emphasis on reading and writing, which remains a challenge for many of her kindergarteners. “I really need to focus on the reading and especially writing part and that's kind of hard to get that in. Because that's where most of my kids struggle with the writing piece.”

Despite the many challenges that Suzy faces when using digital games in classes, the ELL instructor acknowledges that gaming has a positive impact on vernacular improvement among schoolchildren. She believes that digital games can make a significant contribution to the four domains of language development, namely, reading, writing, listening, and speaking.

According to her, digital games can positively affect children's ability to develop conversational, calligraphy, listening, and reading aptitudes more so if they have all the four developmental domains in them. Nonetheless, Suzy has weighty reservations about the incorporation of digital games into her lesson plans. In particular, the mother of two may discourage gaming in the classroom context because it hinders teacher-to-student and student-to-student interaction and socialization, especially "if you do not use the digital games in the right way." She laments that many children do not know how to interact because of digital games, and suggests that the solution to the problem lies in developing games that allow learners to play as a group rather than individually.

Ann

Ann is a middle school ELL teacher. She has lived on a farm with her family on the outskirts of the city for the past ten years and commutes to school every day. She holds a bachelor's degree in Elementary Education with a Math major and a reading Master with an ELL endorsement. Ann is extremely self-reliant which she gets from her upbringing and it has trickled down to her teaching, learning, and relationships with others. She is soft spoken, meticulous with her words, and a veteran teacher. Ann is, how she puts it, "…not as technologically advanced as a lot of people." She thinks that her limited use of technology could be improved to accommodate students' needs.

The majority of Ann's students are Somali and Nepali with most of them being refugees while the rest come from a variety of other regions like Puerto Rico and Mexico. Most of them have been in the United States between three to five years with a few outliers. Most of the Somali students are not literate in their native language. Therefore, teaching them how to read and write for the first time in English is a major challenge for Ann. She tries to incorporate the

meaning of different words and phrases by asking the meaning of them in their native language to help them crossover, but she does not teach them how to read and write in Somali.

Technology is also a major challenge in her classroom because most of the students come from refugee camps with no prior exposure to the use of technology and when they do so they lack the proper supervision from parents and guardians to ensure the appropriate use of such technology, according to Ann. That being said, it seems that they learn how to use phones and computers very rapidly once they are here. After being in the country for roughly three years, most of her students will have access to technology through mainly phones and those who do not tend to visit the public library to access computers. Ann's students are fast learners, and they know how to use Chromebooks which the school provides one-to-one to all the students.

The other major challenge faced by Ann when teaching ELLs is using modern technology like the SMART board. Ann uses Whiteboard and her class seems quite technologically advanced compared to other similar classes. She is reluctant to depend on technology and advises her students follow suit due to their issues with reliability and cost to replace if broken. Therefore, she advises her students against taking the Chromebooks home especially when most of the families lack the necessary financial resources to seek a replacement. She suggests to install a citywide Wi-Fi as one solution which can be a double-edged sword. On one hand, it will help ELLs and their families connect to the internet regardless of their financial standing. However, ELL parents knowledge of technology is very importance in order to help their children use it appropriately outside the premises of school. The need to monitor what they access online and limiting their time on digital devices is crucial.

> It'd be nice if they could do more at home with the family with the computers. Parents can learn, the kids, and siblings could learn. The problem is they don't know technology.

So then a lot of it breaks and then it's expensive. So I hate to say, ‘oh, take your computer home.’ Because then if they break it, then the parents are out the money of the computer. And a lot of them don't have WiFi at home. Be nice if we had just citywide WiFi. Everyone can get on it.

Instead of implementing digital games that are designed strictly for entertainment purposes, or better known as COTS, in the classroom, Ann would rather use serious games or ones that are tried and true, like Minecraft, to assist students in their learning. Although Ann does not use digital games as part of her curriculum she incorporates Headsprout and Starfall both of which are reading programs and MobyMax which is marketed on their website as “helps struggling learners quickly catch up to grade level and closes learning gaps for all your students.”

The ELL teachers in Ann’s school district also meet at least four times each year to share their teaching experiences and share resources among other conferences like Building Bridges that happen once a year. Although these meetings are beneficial Ann is a little skeptical of how some of those teaching strategies and resources could be used in a different grade level such as middle school. She asserts that teachers just need to be creative to apply some of the shared strategies shared by her colleagues.

Ann feels that she could use more support in school. She elaborated by saying “It would be nice to have more support, like high school has four EL teachers. So they're able to have an EL science class or EL whatever. There's just two of us here and it's hard to branch into that. Because we have one period where you could do a co-teaching, well then why don't you do eighth grade science? Why don't you do sixth grade science? Why do you only do seventh grade, you know, it's like, hard to branch out when you don't have the extra staff for that.” The communication between her and administrators could be described as lacking. They are there for

her when she needs help and support but only when she asks for it which given her personality does not happen very often.

Bella

Bella is a first year elementary ELL. The school she is in has only third, fourth, and fifth grade. Before her current position, she served as an English teaching assistant in Germany for a year. Bella describes her first-year teaching to be "…drowning every day." Although her time in Germany was in a different setting with a different way of approaching teaching and learning Bella praises her experience to be beneficial to her growth as a teacher. Under her portfolio she has a total of 42 students, 26 of which she sees on a daily basis while the rest are under indirect services or monitoring status. The majority of her students are Somali with some Arab, Hispanic, and one Azerbaijani. She does not use digital games in her classroom which she attributes to her being new to the job and her need to master the basics before venturing out. However, she is considering digital games to be part of her class sometime in the future. "I haven't really done anything with games up to this point this year. Just limited computers, and I'm still trying to figure everything out."

The school has four carts of Chromebooks that can be checked out by teachers which Bella does not get to check out very often due to the high demand or scheduling conflicts. During her time in the school, she was only able to check them out on testing days which have to be done on the computer.

> We have four carts of computers, and that can be checked out throughout the day by different teachers. And then our fifth-grade classes have their own Chromebooks. So I have had fifth graders come in and do a lot of writing on their Chromebooks so they can

take or do it during free time in their class and stuff. And then we can go over the mechanics of all of it here. But generally, I don't get the opportunity to check out the computers that often.

In her classroom, she has a SMART board, projector, and a computer that did not work for the first half of the year. Bella tends to use her devices as a source of visuals for her ELL students as it aids them in comprehension "[I] generally [use them] for visuals. Especially with my lower level students who may have seen something, don't know the word for it, or heard the word, never seen it before making that connection." The school also encourages the use of board games to enhance student behaviors.

Bella believes using the appropriate digital games could help students in and out of the classroom. However, she emphasizes that digital games implementation needs to be purposeful and meaningful. "I think [digital games] serve their purpose. I think that sometimes they can be relied upon too much and be 'Oh, here you go. play this, do whatever,' and almost used as a crutch. But they, like I said, they serve their purpose. They can help, especially with repetition and exposure" Bella goes further to elaborate on the impact of digital games on her students and the prominent role it plays in many children's lives, "gaming is such a part of everyday life for a lot of my students, that would translate to how they think and how they learn."

Another benefit of digital games from Bella's perspective is the building and strengthening of the relationship between students and teachers. Bella believes that even if you don't play those games, you should take the initiative to connect with your students. "I think that would be a positive aspect of bringing games to the classroom too just as a relationship builder you have a common piece that you're working with too."

Although students do not use digital games in her ELL classroom, DreamBox, an online math learning tool, is used extensively throughout her school. Bella elaborated that digital games have to be designed specifically for educational purposes. She argues that being educational does not necessarily mean not entertaining. “Definitely educational games. Unless it's recess, I don't think entertainment games are something we should do in school. I think educational games can be entertaining. They don't need to stare at a screen and be bored out of their mind. But I think there should be some sort of learning if it's a science game, you should be working on science, math, language, social studies, but they can still be fun.”

Bella is not a gamer. She likes to read instead which contributed greatly to her confidence level “So that is probably part of why I am not as gung-ho about bringing games in the classroom because I'm not used to it. So how can I bring something to my students that I'm not educated about? As much as I should be? Or would want to be?” Although Bella has limited experience in using digital games, she attests that they are very instrumental in helping students learn. With the preface that those digital games should not contain violence and that they meet the ELLs’ developmental and language level that gradually build in complexity.

> I would look at how the game can adjust to the student. Is it, this is the game nothing else is going to happen? Or is this game going to get more difficult with the ability of my students or come back down to my students’ level? Because the students vary so much, and what they're ready to do or what they're not ready to do that if we set it up one level, some of them would be lost, and some of them would be bored.

Bella more often seeks advice from other ELL teachers in her district and those in neighboring districts. She also visits other schools to observe ELL teachers as part of her

probationary development plan that is mandated for teachers with less than three years of experience. They are only an hour long and twice a year, but Bella gets a chance to ask pertinent questions from experienced ELL teachers. In her district, ELL teachers meet once or twice a month. These meetings are Professional Learning Community (PLC) that are grouped by grade level. “Each grade level would do a PLC at least once a month.” Bella uses those experiences to improve teaching and learning in her classroom. Bella pointed out that she receives support from her school’s administration but recognizes the need on her part to communicate more. “I think on my end, I need to communicate more. That's kind of the first-year teacher going ‘I don't want to be incompetent’ so I think if I reached out more, I would receive more.” Furthermore, the limited digital devices in her classroom makes her wish for more

> I would really appreciate to be able to have even three or four laptops or iPads. I think most of the classroom teachers do and I don't know if they've purchased those over the year through their allotted money each year or not, but I think especially for EL students, there's different programs that we've sent information home with, where they can hear the story, follow along and read with it and just doing things like that. Like I have a group that I'm doing guided reading with and everybody else is doing independent work. My lower level students lack a lot of independence. So having that technology there even something as simple as looking up a word would be incredibly beneficial for their learning.

Most of the technology Bella learned during her time as a preservice teacher involved developing a Google Classroom. The course was called Technology for Teachers which she took early in her preservice teacher program. The course did not focus on digital games but rather on employing different forms of communication tools to enhance communication between family,

teacher, and student. Although what was taught in the course was helpful, she did not get to implement much of it in her classroom. Language barriers and technology divide contributed to that. “Families don't necessarily have access to the internet. So it would end up being more you'd have to make phone calls and contact translators and family don't read English.” When it comes to professional development, her district has not offered any based on technology for the year. Even if her district offered professional developments in the area of technology or digital games, Bella is unsure she would pick them

> If it was an either/or I would honestly probably pick something else. If I could do both, then I'd be up for it. I can always go and talk to my IT person about technology, though. So it's what's going to help the overall development of my students versus what am I going to learn about something that I might implement one day a week? Because I don't want my classroom to run solely on technology. I'm scared of it not working.

Bella pointed out that the major challenge of using digital games in her classroom is the limited technology. She also pointed out that keeping up with the profession as a first-year teacher is overwhelming. Furthermore, having only one ELL teacher in the school makes it difficult to expand or use new strategies that will require more research and planning.

Jordan

Jordan is a middle school teacher in the rural side of the city. Her enthusiasm is contagious, and she is always smiling. She has such an upbeat and outgoing personality that I did not know she had a concussion on our second meeting. She has an extensive background in ELL and language learning more broadly. Throughout her career, Jordan has taught in multiple levels, such as teaching Spanish in grades 6-12 and ELL in grades K-8 and university students. Jordan

has even taken on the role of an ELL coordinator during her teaching career. As a result, her experiences and first-hand exposure to language learning, as Spanish is not her first language, have enabled her to be more confident in her position.

Jordan only uses Kahoot in her classroom. “At this point, the only type of digital game that I use and it's not very often, is Kahoot.” She is very wary of the impact of cyber bullying particularly on her middle school students “Well, I don't know if [cyber bullying] particularly happened here. But I know, the school I just came from, is a huge issue. And they actually had to put a cell phone policy in order.” Students’ misuse of technology makes her vigilant in how she implements different technologies in her classroom. Jordan tells a number of stories of how cyber bullying manifested in her school.

> Snapchat, for instance, I'm not on it enough but I guess you can see how many people view your stuff, how many people like your stuff, and people run with that. And so the more people you have, or the more followers, the bigger group that you're in. And if you're not in that cool group, then you're nobody kind of thing. And it's basically like when you and I went to school, you know, how there was that cool table that everyone sat at, and everybody else was jealous. Now, it's just cyberspace. Now, it's just on their cell phones, on different apps, on Instagram, on Snapchat, you know, where there's this crew of people, and they'll sit and I have heard of people, like, bashing in these groups, other people saying a lot of bad things. And I've seen that here where kids take pictures of the kids and say nasty things and then send it off to a billion people.

Jordan is still conflicted between the benefits technology brings to her classroom while also limiting their potential drawbacks. In her school, for instance, cellphones are banned. Yet,

she lists the many things she did with a cellphone in the past “I constantly resort to my phone, because guess what's on there? A whole language that I can use as a resource when I need to look up a word, or how do I spell a word or what does this word mean? Can I see it in a sentence, because I still don't understand the definition? But here, kids aren't allowed cellphones. And I get it, it's at a level where, they may or may not, take the proper care of them.” Given her students level, she acknowledges the need to build digital literacy for her students first in order for them to be used again in her classroom.

Out of all the participants, I found Jordan to have the most technology use and incorporation. She does have a cart of Chromebooks permanently placed in her classroom, a projector, and a computer for her. Furthermore, she gets to keep her students for a little longer than other ELL teachers I interviewed averaging two hours. Jordan has roughly 36 students under her portfolio some of which are under monitor status. At any given period, she has a maximum of nine students. With all of that, she still thinks that she is way behind her students.

> One of my kids is a little wizard because he's got a Chromebook. He's an eighth grader. So he gets to keep his Chromebook, take it home with him. And he knows all the little tricks on how to flip your screen around, how to turn it black, how to turn it white, the inverse colors, and how to hide the screen so teachers don't see what you were looking at, because they only see the tab that you have up. But there's hidden tabs that you can't see somewhere… He showed me all these little cheats, but it was a crash course so none of it sunk in.

Jordan hopes to incorporate digital games other than Kahoot in the next school year. “I'm hoping next year I can start getting more acquainted with [digital games].” She does play digital

games periodically at home but does not see herself as a gamer. She mainly plays racing games like Mario Party on her Nintendo Switch and puzzle games on her smartphone. Her husband on the other hand, is an avid digital game player. With that in mind, Jordan believes digital games to be very beneficial for her students.

> I don't mind it because I know video games can teach kids a lot. Probably I am biased. I have a lot of gamer friends. But I know, for instance, the games that my husband plays they can be very strategic and you have to think a lot about what you do and figure things out and plan things out, and it's pretty impressive, especially because my husband plays those types of games and one of my best friends plays those types of games too, so I know they can teach you a lot and I know I've met people who have learned to speak other languages just purely through games because they've talked with people who speak different languages and they've learned like one of our buddies learned Korean.

The number of benefits digital games bring to the people in Jordan's life makes her enthusiastic about their prospect as educational tools. Her environment is very impactful in shaping her views and attitudes towards digital games.

Kate

Kate is a middle school ELL teacher. She lives with her family and has an eight-year-old son, who she believes is very drawn to digital games. Kate is an experienced teacher who incorporates technology in her classroom. Kate is a calm and soft-spoken person focused on her education profession. She does not consider herself to be as technologically advanced as others, despite her extensive background in technology. For a while, she worked as technical investigator in an engineering firm working on accident reconstruction. Her time there helped her

tremendously with her computer skills. Kate is currently a team leader, and she gets challenged by her team members on technology use. She learned a lot about computers in her undergraduate and masters training and has applied the skills in different areas.

Kate teaches a range of students that are Arab, Somali and Nepali. The teacher's concern is that the children are still new to the United States and do not speak fluent English. Most of the immigrants' children are just beginning to learn English and are finding challenges in learning how to read and write. In many instances, Kate advises students to speak English only, which she is very conflicted about. "I feel bad saying 'English only' sometimes. Because I do want them to keep that bilingualism. In the same sentence, they're middle schoolers, and I know they're talking in Arabic, or they're talking in another language, because what they're talking about is not appropriate. I'm not naive to that. It happened several times today with my Somali students and they were just talking. I'm like, English, please. 'Well, it's a secret.' Yeah, not in here. It's not."

Kate allows students to use a translator when learning new words and incorporates technology to facilitate the learning of language. Most of her students, particularly those who come from a refugee background, lack technology exposure, which can put them at a disadvantage. "I think it's their conformity to the American [culture]. They'll play Roblox and Minecraft, and now Fortnite because they're just trying to fit in." Nonetheless, Kate's students are fast learners, except that their parents do not supervise them on technology use. After moving to the United States for a short time, many of her students develop an interest in digital games and might find it difficult to balance that with other tasks in their lives. Kate voiced both her admiration for digital game designs to keep children engaged for an extended time as well as frustration at students' current attention span in school.

> There’s something magical [about digital games] because to get them to sit in a classroom for hours is difficult. So they're doing something right because they're capturing that child's attention for an extended time. Whereas teachers who are on stage for seven periods a day trying to do that for just 45 minutes of their day. And that's difficult to keep them focused… But you give them Fortnite and they could sit for hours.

The school offers one to one Chromebooks for all students. “In my classroom, it's basically used for Google Classroom, we do Kahoot, we do quizzes, we have access to a program called Raz-Kids, and Reading A-Z.” Kate also has a school issued laptop, a SMART Board, overhead projector, TV, DVD player, and a VHS player. Her situation this year is a far cry from what she was doing last year as she did not have her own classroom. “I just went into whatever room wasn't being used during that period. So I would go from seventh grade, to eighth grade, whatever was open.” The technological resources in Kate’s classroom allows her to integrate technology in her lessons and to encourage kids to learn and interact using them. Even with one to one Chromebooks, Kate finds it difficult for many of her students to do work at home. “Some of our families don't have internet, or they don't have a computer.” Another challenge is how parents might lack the digital literacy to support and guide their children to use devices properly.

Kate supports the use of digital games in schools, although she advocates for precautionary measures to avoid adverse outcomes. Professionally, Kate believes that digital games have many benefits in teaching and learning, more so to beginners in learning English. The teacher has introduced her learners to different educational websites as well as how to type. She noticed when using Kahoots in instruction, the students become very competitive making their goal to get points rather than assessing their knowledge and comprehension. Through the

process, students develop an attitude that "they want to win, and so it forces them to use the skills learned prior."

For math lessons, Kate uses Kahoot to introduce topics, make students practice, test skills, and give responses. For instance, when having a multiplication lesson, Kate would provide Kahoot to get learners familiar with new concepts before the class and later use the games to evaluate understanding. The good thing is that Kahoot offers different tasks that encourage independent logical thinking.

Liz

Liz is a high school ELL teacher. The mother of one, started her teaching career in 1985, a period when digital technologies were not even around. “You have to remember when I was a preservice teacher, there weren't computers. Where I did my grade book with a calculator. So no. I decided I didn't ever use computers.” She is currently in her third year in her current district, having spent the last 25 years of her career in another school in Western side of the United States. Liz is the most experienced teacher among my participants. Her background as a reading specialist guides many of the things she does in her teaching and learning. “As a reading specialist, I've always really just focused on reading, writing, and vocabulary and putting those things together. Not that we can't do it in a fun fashion.” The idea of integrating digital games, is not something she is currently doing or thinking of doing in the future; however, she uses Kahoot periodically which she is not sure if it counts as a digital game. Liz holds strong views and beliefs about digital games. For instance, when asked about how digital games made her feel she said, “I think it's better off than going out and getting into trouble.”

Liz notes that the student demographics are undergoing significant changes over the years. She observes that most of her students now are Somali refugees and only three Arab students. The school has nearly 50 ELL which some of them have been in the United States for several years and are working their way through various levels of the English program. The complexity of the Somali language does not compare to the Spanish that Liz encountered during her time in her previews school. She further notes that most of these students have not had and do not have access to computers, making it difficult for them to study using these proposed learning models. Some students borrow school computers because they do not have ones at home. “Not very fair. I have kids come to me in tears worried about their assignments. It's only on Google. It's only something they can do on the computer. And [they] don't have one or have access to one.” Lack of access to resources reinforced Liz’s idea that digital educational material must be reviewed with a critical lens before incorporation in the classroom.

Liz cites that, at her age, she will not get better at technology, and she would appreciate the introduction of younger educators who could incorporate more technology than her. “I'm 58 … the computer skills aren't my strong suit.” Liz describes the transformational changes in education as critical for the students who can gain more academic and life skills. However, Liz emphases the role of the educator in filtering what the students read or skip. For instance, she notes that every resource book has relevance in the classroom but not in its entirety. The educator must select relevant material according to their class’s level of comprehension of the content. Similarly, digital games and other digital learning resources should be evaluated for congruency with the rest of the class material.

Liz adamantly believes that the traditional model of education is the most effective because it instills practical knowledge. However, she is not against technology in the classroom

seeing as she has a projector setup and actively engages students in Kahoot! She points out that the introduction of technological resources should follow a process of thorough review before implementation. The process should guarantee that the resources are appropriate and academic. Therefore, each student at different academic level can gain benefit from interacting with these digital resources. Liz reminds us that it is important to note that parents also play a role in ensuring that their children have access to academic resources. They also have a role as guardians to supervise the content that their children are exposed to and reduce the potential of inappropriate content.

Discussion

Findings from this study show a clear bias among ELL teachers toward digital games. Even when some teachers indicated the desire to incorporate games in the future and after listing their potential benefits to their students, they are still cautious of their potential harm. Surprisingly, age did not play a big factor in how they perceive digital games, but rather their comfort level with technology and personal use which was echoed in other research (Chandler, 2013; Karadag, 2015; Millstone, 2012; Yilmaz Ince & Demirbilek, 2013). It is evident that teachers' perception influences their choices, not *if* they use digital games, but *how* they use them. If Fortnite is seen strictly as an entertainment tool, then that will be reflected in how we incorporate it in the classroom, if it is incorporated at all. The finding highlights the connection between time, access, support, and appropriateness in shaping ELL teachers' perception toward digital games.

Time

Time is a major factor influencing ELL teachers' attitude. Ucus (2015) noted that integrating digital tools in education results in a complex system that can consume a lot of time before, during, and after lesson. Unlike traditional lessons, digital games require teachers to approach it differently. Nonetheless, the ELL teachers I interviewed work with students for a short time, which makes them question the viability of digital games. In order to use a digital game, the teacher has to prep them for the games and familiarize them with new vocabularies, which requires a lot of time (Cheng, 2018). Having students for such small increments makes ELL teachers very selective when it comes to what they teach and how they teach it.

In many instances, the ELL teachers need to allocate additional time for low English proficiency students if they want the whole group to progress at the same pace. Time spent with these students from pre-teaching to how to play the game is time taken away from the rest of the group. Honigsfeld and Dove (2019) explain that while pullout approach, which is the approach used by all participants, is useful in helping learners, it is time-consuming and makes learners miss ongoing lessons in general education classrooms. This was echoed by the participants as ELL students could miss crucial lessons or down time such as recess.

Access

Most schools face a shortage of resources, particularly in rural schools. According to Renth, Buckley and Puchner (2015), many schools lack crucial resources ranging from instruction materials to computers. The ELL teachers I interviewed lacked important resources such as computers. As a base line to determine if the ELL teachers I interviewed will incorporate digital games, they must have the needed technical resources.

Renth et al. (2015) believes that it is the lack of resources that creates an academic performance gap between low-income and higher-income students. Students in wealthy places have enough facilities for lessons, whereas those learning in remote areas must share the few available resources, if they exist at all. “Some schools do not have money to buy any game or games that meet teacher needs, and some schools only have money to purchase very basic stuff” (Watson & Yang, 2016, p 236). In many studies, teachers mention inadequate facilities and technological glitches, and nearly all educators with such problems cite insufficient financial resources as the main barrier for improvement (Renth et al., 2015). This lack of access characterizes the experience of many of the ELL teachers in this study. The lack of sufficient resources could be another explanation as to why teachers were hesitant to use DGBL in this study.

Support

Most of the ELL teachers interviewed find it challenging to integrate digital games into their lessons due to a lack of qualified teachers and technicians. Warschauer, (2003) groups crucial resources that education institutions require to integrate technology in education in to four categories: Physical resources (i.e., computers and Internet), digital resources (i.e., software and digital material), human resources (i.e., trained teachers), and social resources, which refers to community, institutional, and societal structures. Lazem and Jad (2017) clarify that recent educational reforms to enhance creativity in schools target physical and digital resources by developing computer labs and establishing internet connections. Commenting on the same issue, Sánchez-Mena and Martí-Parreño (2017) claims that developments in “game-based learning has been largely ignoring the important role teachers play in spite of their significance” (p 435). The problem has made many schools rely on teachers without adequate technical training, and the

few skilled teachers available end up with an overwhelming number of students. Gros (2015) observes that many educators view investment in digital games as a leisure time activity that is not worth undertaking. The scholar stresses that “teachers’ facilitation plays an important role in an effective use of instructional games in the classroom” (p 8).

Insufficiency of training and experience in using digital games accounts for the lack of confidence in many of the teachers (Bourgonjon et al., 2013; Huizenga, ten Dam, Voogt & Admiraal, 2017; Koh, Kin, Wadhwa & Lim, 2012). Despite the benefits that digital games can offer to students, most teacher education programs do not provide training on the use of digital games. Teachers' knowledge and experience determines the games they select and the teaching mechanisms they adopt with the tools. For the most part, the selection of a game should rely on game attributes, lesson goals, and obtainability. Besides, cost plays a crucial role in game selection since most schools do not have BYOD policy (Cheng et al., 2016). Despite the significance of the factors, teachers’ choice of a game greatly depends on their experience and skills in using digital tools. Sánchez-Mena and Martí-Parreño (2017) shows that most teachers avoided using digital games due to a lack of computer skills required in managing the systems. While digital games can offer language learners with linguistic and visual support that is applicable in real life, the lack of knowledge prevents many teachers from using them as in the case of my participants.

Implications for Future Research

Research is still needed regarding methods for encouraging ELL teacher’s desire to incorporate digital games. The benefits of DGBLL are clearly supported in the literature, for those educators who want to increase student cognitive, motivational, emotional, and social development of their students (Gee, 2003; Granic, Lobel, & Engels, 2014; Griffiths, 2002;

Primack et al., 2012). While it would be beneficial for more educators to seriously consider digital games as a learning tool, there were many participants in my study who believed in the negative impact of digital games. These opinions were largely formed without direct experience, as none of them had played those games (e.g., Fortnite and APEX Legend) that received the most criticism.

Most of the hesitation toward using digital games comes from the myriad of challenges faced by ELL teachers (Alshaya & Beck, pending). ELL teachers can gather students' input to help select, evaluate, and implement digital games in their classes. Digital games have the potential to enhance learning and develop critical skills in children, all of which will help them play more responsibly, as well as mitigate their potential harm as long as ELL teachers are willing to do so.

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Article 3: The Perceived Appropriateness of Digital Games from ELL Teachers

Abstract

In today's era of technological advancement, nearly all aspects of society require the use of technology. Hence, the integration of digital games into learning curriculum aligns with society's needs in the 21st century. Although research shows that digital games have numerous benefits for students, such as psychological and language improvements, some teachers are skeptical of using digital games for classroom activities, due to their perceived negative impact. In this study, six ELL teachers in the upper Midwest of the United States were interviewed to examine their perceived appropriateness and best practices of digital games in teaching and learning with diverse populations. Findings indicate that the majority of the ELL teachers interviewed perceived serious games (games that are designed specifically for educational purposes) in a positive light, while they unanimously agreed that violent digital games could have a negative impact on a child's psychological, emotional, and social life. The teachers highlighted the rate at which children play those games, their violent nature, appropriateness, cyber bulling implication, and the need for an oversight from parents and teachers as reasons why. Those beliefs were formed not on the bases of playing those digital games, but rather from people in their lives that influenced their perception about them.

Keywords: digital games and violence, teacher's perception, English Language Learners

Introduction

The primary goal of using technology as an educational tool is to support students' development and enhance their learning outcomes. A combination of both traditional and technology-based learning strategies can significantly improve students' education. Moreover, according to research by the The Pew Research Center (2018), 84% of children between the ages of 12 and 17 play digital games, thereby creating a gaming culture. In this regard, children are more content with an interactive learning approach that allows them to solve problems. For decades, students have struggled to stay motivated in school (Dichev & Dicheva, 2017). Without a digital strategy to our approach to education, there is a disparity between learners' preferences and teachers' methods. In recent decades, an emerging approach known as Digital Game-Based Language Learning (DGBLL) has proposed a fresh look into language learning. When teachers lack the pedagogical knowledge of digital games they might not appreciate the potential of DGBLL. Consequently, some teachers are bound to be skeptical of using digital games for classroom activities, because of their perceived negative impact. The literature around DGBLL is scarce, despite the clear connection between digital games and language learning (Gee, 2007; Peterson, 2013; Reinders, 2012; Thorne, & Watters, 2013). Research shows that digital games have numerous benefits for students, such as psychological and language improvements (Hung, Yang, Hwang, Chu, & Wang, 2018); therefore, ELL teachers should thoughtfully consider implementing them in their own classrooms.

Digital games can help modern-day ELL students thrive in the classroom. According to Mozelius, Harnandez, Sallstrom, and Hellerstedt (2017), the use of digital games as an instructional tool in several subjects has improved students' learning outcomes. Furthermore, language teachers have reported that digital games have developed students' cognitive skills,

motivated students to engage and participate in classwork, and indicated that using digital games as an instructional tool is shown to be an effective teaching strategy (Li, 2017). The relationship between digital games and language learning has been documented to also lower anxiety and improve motivation (Horowitz, 2019; Iaremenko, 2017; Reinders & Wattana, 2015; Vosburg, 2017) which makes ELL teachers' perception of them and the role they play in teaching and learning even more valuable. Twenty-first century children were born into a technologically advanced environment that enabled them to become digitally savvy, meaning that students in the contemporary world have different styles, approaches, and needs for learning compared to previous generations. Digital Natives, a term coined by Marc Prensky, (2001), describes those who grow up in the digital world that are "'native speakers' of the digital language of computers, video games and the Internet." (p.1). Thus, ELL teachers face challenges when they try to adapt to these new learning attitudes. Using diverse teaching styles and approaches is paramount to their students becoming more engaged and motivated to learn. Therefore, ELL teachers perceived appropriateness of digital games can influence their use and implementation in teaching and learning. This work is part of a larger study that examines ELL teachers' perception of digital games.

Teachers who are wary about digital games more often cite the probability of games causing aggressive and violent behavior in children. The literature is split on the issue with some strongly believing in the connection between digital games and violent behavior (Anderson et al., 2010; Anderson & Bushman, 2001) while others report no significant changes were observed from playing violent digital games in youth (DeVane & Squire, 2008) and adults (Kuhn, Kugler, Schmalen, Weichenberger, Witt, & Gallinat, 2018). The common claim is that certain digital games contain harmful content that might trigger violent behaviors in children. As the number of

mass school shootings and murders continues to increase in the United States, some teachers are attributing violent games to be the trigger. In the wake of two mass shootings in El Paso, Texas and Dayton, Ohio in August, 2019 Donald Trump said "We must stop the glorification of violence in our society -- this includes the gruesome and grizzly video games that are now commonplace. It is too easy today for troubled youth to surround themselves with a culture that celebrates violence. We must stop or substantially reduce this and it has to begin immediately." 82% of Americans age 65 and older believe violence in digital games contributes a great deal or a fair amount to gun violence while 42% of those age 18 to 29 also shared that feeling (The Pew Research Center, 2017). The current public debate may skew the opinion of many teachers to the true impact of not only digital games and violence but digital games more broadly. The way ELL teachers perceive digital games can greatly influence their pedagogical belief about them which in turn can dictate their use and implementation.

Literature Review

Digital games enhance students' motivation and engagement (Gee, 2003), utilizing Vygotsky's (1978) zone of proximal development for a meticulous calibrated scaffolding for students. Hence, digital games are growing in popularity as an effective teaching and learning tool. Additionally, some studies suggest that the majority of teachers have a positive attitude towards digital gaming as part of the learning curriculum in the United Kingdom (Sandford, Ulicsak, Facer, & Rudd, 2006) and the United States. Nonetheless, Van Eck (2006) cautions about the danger of repeating the message about digital games' benefits in education, which could send a sign that "all games are good for all learners and for all learning outcomes, which is categorically not the case" (p. 2).

The application of digital games in language learning benefits both students and teachers. Digital games can accomplish many learning outcomes like systematic thinking, learning by building, creativity, collaborative and individualized problem solving, memorizing, information processing, and co-constructing and sharing knowledge (Wu, 2015). Digital games have shown to have a positive impact with instructional advantages over traditional methods in all the four language domains: listening skills (Bernert-Rehaber & Schlemminger, 2013; Chen & Yang, 2013; Levy & O'Brien, 2006), in vocabulary (Chen & Yang, 2013; Kocaman & Kizilkaya-Cumaoglu, 2014b; Li, 2017) and writing skills (Levy & O'Brien, 2006; Neville, Shelton & McInnis, 2009) in communication, grammatical accuracy and writing skills (Berns, Palomo-Duarte, Dodero & Valero-Franco, 2013) and in learners' general fluency, pronunciation and reading skills in the target language (Chen & Yang, 2013; Levy & O'Brien, 2006). The positive impact also extends to increasing students' intercultural awareness and intercultural communicative competence (Guillén-Nieto & Aleson-Carbonell, 2012; Levy & O'Brien, 2006). Benefits of digital games in academia are clear and well documented in the literature, but what about opponents of digital games?

Digital Games and Violence in Children

Technological advancements have brought with them various forms of entertainment, including digital games. Some of the earliest digital games to be introduced were Frogger, Space Invaders, and Pac Man. Today, different types of digital games have been created to meet a wide variety of interests from puzzles, racing, and adventure to first person shooters (FPSs), role playing games (RPGs), and Massive multiplayer online role-playing games (MMORPGs) to name a few. Since their inception, many people have warmed up to digital games as a form of entertainment. Glaubke, Miller, Parker and Espejo (2001) stated that in 2000, about 60% of

Americans were playing digital games, while the practice being more prevalent in children than adults. In 2000, research studies had not established the impact that violent digital games had on children, but in recent years, researchers have conducted studies meant to assess the impact of violent digital games on children. Some scholars believe that digital games can enhance the cognitive abilities of children, while others are skeptical due to the impact of violent digital games in nurturing unacceptable and unhealthy behaviors among children (You, Kim, & No, 2015; Glaubke et al., 2001). However, there were insufficient empirical evidences that digital games produce aggressive outcomes, criminal behavior, or delinquent behavior (Calvert et al., 2017) while others even suggested that they decrease crime and death rates (Markey & Ferguson, 2017; Ward, 2011).

Perceptions Regarding Digital Games

They Lead to Violence in Children

"No single risk factor consistently leads a person to act aggressively or violently. Rather, it is the accumulation of risk factors that tends to lead to aggressive or violent behavior…violent video game use is one such risk factor" (Calvert et al., 2017, p. 141). Bushman et al., (2016) lists those risk factors to including family environment, neurobiological factors, low academic achievement, access to guns, alcohol and drug abuse, social rejection from the normal peer group, poverty, and mental illness. They also make a clear distinction between violent behavior and aggressive behavior. The former includes physical force that intend to inflict harm towards others or damage properties while the latter can be simply define as anger. With that in mind, Glaubke et al. (2001) argued that top ten most selling digital games at the time have negative messages that are likely to influence the behavior of children. They established that 41% of those digital games are rich in violence, which encouraged aggressive behavior in children (Glaubke et

al., 2001). For example, actors who killed others in the game were not punished, which creates an impression that killing is right or that one can kill and get away with it. Glaubke et al. (2001) further indicated that killing of player-controlled characters was justified (91%), while killing by computer-controlled subjects (75%) tended to be unjustified. Some games have been designed such that a player is rewarded for killing; thus, one can argue that those type of digital games teach children to associate human suffering (death) with pleasure since they are rewarded for killing certain characters.

According to You, Kim, and No (2015), aggressive behavior among elementary school children in South Korea was influenced by playing digital games. These scholars revealed that there was an indirect relationship between playing violent digital games and aggressive behaviors. Although they did not establish a direct connection like some of the previous studies, their findings indicate an indirect connection between personal characteristics like behavioral self-control, emotional regulation, and empathy. In their study, they discovered that playing digital games rich in violent scenes reduced these characteristics by a greater margin. Consequently, this experience exposed children to aggression and reduced pro-social behavior (You, Kim, & No, 2015). They concluded that aggression could be mitigated by limiting exposure to violent digital games instead of struggling to improve the emotional competence of children. They also emphasized the cultural context of the child plays a bigger role in our approach to intervention.

A study by The American Psychological Association Task Force (APA Task Force) supported these findings by indicating that increasing exposure to violent digital games leads to increased levels of aggression “composite aggression score; increased aggressive behavior; increased aggressive cognitions; increased aggressive affect, increased desensitization, and

decreased empathy; and increased physiological arousal" (Calvert et al., 2017, p. 126). Although, the APA Task Force also cited insufficient studies to link violent digital game use and delinquency or criminal behavior. Children usually learn through imitation; therefore, they will try to imitate everything they see. Since some commercial off-the-shelf (COTS) digital games can be rich in belligerent acts, it's believed that children end up transferring what they see into their real life. Furthermore, children are likely to imitate and practice actions that attract rewards. Since some of these COTS digital games reward players when they commit acts of aggression towards other characters, children end up doing the same to their friends thinking that aggression also attracts rewards in real life.

They Create Imaginary Worlds

On the contrary, other scholars have suggested that digital games have little or no influence on children's violent behavior. A study by DeVane and Squire (2008) examined the violent digital game *Grand Theft Auto: San Andreas* indicated that there is no direct correlation between digital games and unethical social behaviors in children or adolescents. In this study, the researchers used three categories of individuals with three different cultures, casuals, gamers, and athletes. The results pointed to the fact that the gamers perceived digital games in terms of accomplishments and the challenges faced. For this category of individuals, games were taken to be an opportunity to accomplish a particular goal (DeVane & Squire 2008). Moreover, they offered a chance to learn specific gaming skills that would enable them to complete missions as fast as they could. They also perceived that only those with loose moral standings could be impacted negatively by violent games. Just like the gamer group, the athletes believed that playing digital games was not the cause of aggression in children and adolescents. The athletes believed that the violence in the game was not real and meaningful. The comparison between the

virtual (digital games) and reality was nonexistent because humans have the capacity to distinguish between reality and fiction (DeVane & Squire, 2008). The findings of this research imply that games have different meanings to every individual based on their cultural models. Some people use them to acquire particular life skills while others perceive them as entertainment tools. In order to establish the real impact that playing digital games has on individual's lives, it would be important to undertake extensive studies in naturalistic settings.

Ferguson, (2013) stated that people used to believe that digital games were the primary cause of violence. The case of *Brown v. Entertainment Merchants Association (EMA)* can be used to justify the need for further studies in naturalistic settings. Digital games, like *Death Race and Custer's Revenge*, were perceived to be the leading cause of social decay. Due to such perceptions, states, like in the case of California, attempted to regulate the use of digital games particularly among youths (Ferguson, 2013). These led to the *Brown v. EMA* case. Reports at that time contradicted the impact of digital games in society. For instance, a resolution by the American Psychological Association (APA) indicated that digital games promoted violent behaviors, enhanced aggressive thoughts, increased anger, increased physiological arousal and decreased pro-social behavior. In contrast, the same report also showed that digital games had a more positive impact on learning than passively watching TV (Ferguson, 2013). Besides, the evidence that was presented to the courts in California did not provide direct evidence or link to indicate that playing violent digital games had harmful effects on children. Therefore, the court ruled that the effects of playing digital games were minimal on children. Moreover, that digital games have the same effects as those produced by other sources of media. In this respect, it is important to examine evidence from various sources and conduct further well-grounded research to justify the impact of digital games on children's behavior (Ferguson, 2013).

In another article, Ferguson, (2011) stated that there is no direct relation between playing digital games and criminal acts (both aggressive and non-aggressive) which is also backed by the APA (Calvert et al., 2017). In his research, he found that the consumption of violence from media correlated with antisocial traits. However, adolescents with low antisocial traits were less likely to be involved in criminal behavior after being exposed to media violence. On the contrary, children with more antisocial traits are likely to participate in violent crimes after being exposed to violent digital games (Ferguson, 2011). Such information shows that long-term prediction of aggression in children and adolescents remains a serious challenge to practitioners due to inconclusive studies.

Gentile & Gentile (2008) provided detailed information regarding the importance of digital games in a learning environment. According to these authors, digital games have specific characteristics that positively influence the learning process. First, they have precise, manageable, and obtainable objectives, appropriate rewards and encouragement, as well as and various levels of difficulty. In order to navigate through the various levels, one needs to have particular skills and knowledge. In this regard, educators can develop strategies that match goals and pace with a learner's abilities. Secondly, digital games require a person to be active in order to excel. It involves practice, feedback, and repetition to ensure mastery. The same principles can be applied in a classroom setting to achieve better results. Lastly, digital games require overlearning (Gentile & Gentile, 2008). These concepts require the learner to constantly practice, to ensure that knowledge and skills are absorbed in the memory.

Digital games are known to reinforce particular objectives through extrinsic and intrinsic means, such as better weapons and advancing to the next stage, respectively. Educators can adopt the same strategy by rewarding children whenever they demonstrate appropriate behaviors.

They can also give them rewards to encourage them to act in a particular way. Similarly, digital games have been developed in a way that complexity increases from one level to another (Gentile & Gentile, 2008). The success in each level is dependent on the ability to master specific skills. Learning should be designed such that it has prerequisites that only allow one to progress to another level that is a bit more complicated after completing the previous level successfully.

Methodology

Study Design

Phenomenology, the essence of a person's lived experience, was chosen for a realistic feel of the world obtained in situations where experience cannot be expressed in numerical form, thus promoting insight, discovery, and interpretation (Creswell, 2011; Merriam, 1998). Husserl (1931) explained phenomenology by "set[ing] aside all previous habits of thought, see through and break down the mental barriers which these habits have set along the horizons of our thinking ... to learn to see what stands before our eyes" (p. 43). My intention during this research study was to seek the *essence* of ELL teachers' perceptions and lived experiences towards digital games. The Framework to Guide Teachers in Using Serious Games in K-12 Classrooms outlines a protocol through five domains that include teacher's pedagogy, the learner, assessment, technical context, and the curriculum. Therefore, this framework will be utilized as the parameter of this study (Southgate et al., 2017).

Participants

Six K-12 ELL teachers from two school districts agreed to take part in this study all of which are females and Caucasian. All participants were from two towns that is divided by a state line, making them two independent cities in the upper Midwest of the United States. Two

participants were from the Urbanized Area of the west side of the city who both teach in the same middle school. The other four are from the Urban Cluster of the east side and are the entirety of ELL teachers in their district. The United States Census defines Urbanized Areas (UAs) of 50,000 or more people; and Urban Clusters (UCs) of at least 2,500 and less than 50,000 people (US Census Bureau). Their teaching experiences vary widely from being a first-year teacher to a 20-year veteran. Their educational backgrounds also vary, the majority having a master's degree with the exception of one participant, Suzy. They each chose a pseudonym to ensure confidentiality.

Data Sources and Analysis

For each of the six ELL k-12 teachers, a series of two interviews was the main source of data. The first interview utilized a semi-structured interview guide, while the second interview was developed from the transcripts of the first interview to probe for more elaboration and clarification. Each interview was recorded using an iPhone 8 Plus Voice Memos app and transcribed using Otter.ai and proofed by the main researcher. Each interview was transcribed and was read repeatedly led by intuitive and reflective introspection (Moustakas,1994). Open coding to follow putting categories with similar themes together with each being labeled according to the common characteristics of the units of meaning within the group. Data analysis included member checks and memoing.

Research Question

How do ELL teachers define the best practices for digital games in order to promote language learning?

Findings

Many times, during my interviews with the ELL teachers, the conversations switch from just talking about digital games to technology more broadly. I suspect that was because of two factors. First, their lack of digital game use in the classroom; thus, they divert to other technology that they were more familiar with. Second, they feel that once they expressed to me their frustration, lack of knowledge, and/or limited access to technology, I will surely understand where they are coming from. The findings show those three obstacles to form the basis of this section.

The Definition of Digital Games

All six teachers reported not using digital games; however, many of them were not clear on what constitutes a digital game as I noticed some of them using tools that can fall under that category like Kahoot. Suzy defines digital games very hesitantly as “any type of computer games is a digital game, don't you think? Kind of?” She expands on that by saying that it has an online element, similar to tumble textbooks, which are animated, speaking picture books that teach children how to read in a fashion that they enjoy. Bella defined digital games as anything that can be played using a PC, iPads or a Smartphone. It is the interactive nature that can be the defining factor.

> Something on a device whether it's a computer or an iPad, their phone. It would have to be interactive, it's not like a quiz. So I wouldn't necessarily say that Kahoot is a game. It would have to be something more where there's more thought process going on. Or like you have to this wouldn't be for English, but in terms of math, you'd have to solve the

problem to get to the next point in your game, the next level or something as opposed to here's four answers choose one.

This statement is similar to the way Kate defined digital gaming, highlighting the interactive element of games, as users "have to do something to make computers react to it." Jordan defines digital games as, “Fun. But for me, I can find a lot of things fun other people might think are boring. But to me, the way that I view it is, if it’s fun. If you guys can go through the motions of doing that activity and if the kids at the end of it have fun. I say yeah, it is a game.” Many of the participants even asked me what I thought the definition of digital games was. I declined to answer because the goal was to see how *they* defined the term. The term is fluid and can be molded based on one's background, views, environment, and attitude to name a few.

Frequency of Play

Many of the participants had a degree of uncertainty related to how they feel about digital games. They all tout digital games’ unparalleled benefits that they bring to their students particularly with motivation but struggled to list their applicability to language learning. The first concern when talking about digital games is the frequency at which they get played. Suzy, whom is an elementary school ELL teacher, believes that her son plays digital games a little too much. She even describes it by saying “I don't know. I think he plays too much. I think it gets to be too much. I think. And it's so addictive. I think.” She believes that they can learn something from some of those games they play but not from all of them. In particular, Suzy thinks that some digital games could be valuable because of their complexity, which enhances logic and critical thinking skills. A digital game to her is academically and developmentally appropriate for a child only when it stimulates reasoning. However, when a child engages in gaming just for fun, then it

loses its educational significance particularly commercial off-the-shelf (COTS) digital games. “Some of the digital games that they're playing at home, I think are inappropriate. I mean, all or most of the digital games that they're playing at home are probably not the ones that they should be playing.” She explains her reasoning saying “Because they're playing all the fighting and violent games. And they're not choosing the games that are the educational ones.” When probed for how she defines ‘educational games’ she said “I don’t know. Where they're learning something.” She gives the example of Fortnite, which is an online first-person shooter (FPS) multiplayer digital game that is massively popular among gamers. Epic, the parent company of Fortnite, revealed that it has 250 million registered users. Suzy cites violence as the primary reason why Fortnite is inappropriate. Furthermore, her views of digital games are a secondhand account of what her sons told her as she never seen it herself “I just know just by what my boys say that it probably will not be appropriate for first and second graders.” This idea of ELL teachers forming their opinion without interacting with the game in question was echoed across all participants. This stems largely from what they have seen on TV or what they heard from people in their lives. None of the teachers I interviewed had played any of these games they considered to be inappropriate.

Violence

Bella, whom is an Elementary ELL teacher, also said that most of her students love to play the massively popular digital game, Fortnite. She holds mixed feelings about shooter games more broadly as she believes they affect her students on a deeper level. Bella observes that “they're up until midnight playing Fortnite.” Bella wishes that her students are up all night playing language games or math games instead of Fortnite or Assassin’s Creed. Such games, in her opinion, are inappropriate for her students in and out of the classroom. The storyline and

designs are not ideal for young children because of their violent nature. She recognizes some of their potential benefits but believes their negative impact outweighs that.

> I don't think that a game like [Fortnite] would [be appropriate], I don't know a lot about it. But I think that, it's a shooter game, I think. And I think you can team up with different people if I'm remembering. And so that aspect of cooperation would be good, but I think shooter games have no business in the classroom. So if we can find other games that interest them that work on social skills or academic skills, that would be fantastic.

Another dangerous aspect of COTS games is the idea of a second chance. When a player's character 'dies' in a game and is rejuvenated it could send the wrong signal to the child.

> I think the idea that students have another chance to do everything all the time. 'Oh, I made a mistake, and I don't have to really pay for it.' I think that is forming some habits, or perspective that aren't positive for their futures, you don't always get a second chance like you may get a chance to redo your math problem. But if it becomes more serious, you don't get a chance to make the decision to not jump off the playground equipment and get hurt. You don't get a second life to try that again. And I don't think those processes are forming correctly.

Kate, a middle school ELL teacher, has a lot to say about the negative impact of technology more broadly from a social, cognitive, and emotional perspective. She believes that we are so attached to our phones that we need to establish boundaries. "I think that's important to allow your brain to just kind of downshift and get some real good sleep and not be constantly. 'Oh, who's calling?'" However, when asked to list some of the positive aspects of digital games like Fortnite or APEX Legend, two of the most popular digital games right now, she said, "I

don't know, because I've never played it to be honest." She believes that many digital games are making students more reactive. "They're so much more reactive. They don't even think, they just react." Playing some games can cause children to develop some unintended behaviors. She gives the example of one of her students punching another student because of how digital games make students volatile. She is unsure if it is digital game related but can see how they could encourage that behavior.

Appropriateness

On the other end of the spectrum of acceptance to digital games was Liz. She notes that she has never considered technology as a viable replacement for traditional teaching techniques that are tried and true. Her belief comes from the realization that some digital devices proposed for classes are not in alignment with student's language proficiency and curriculum goals. "I'm not trying to sound arrogant, but I have always raised reading scores in the top 10% of every state I have been in every year. So what I do works. Now, I'm not saying I wouldn't incorporate some of them. But I would have to look at it." Liz has largely avoided using these digital resources in her classroom. She has a SMART board that does not work and projector set up in the classroom. She admits that she is not technologically savvy which contributed to how she views them.

Suzy also shared similar feelings about digital games. Her comfort level with technology combined with her age were the two reasons she cited for not using digital games. "I don't feel comfortable with it all. That's probably why I haven't incorporated [digital games], because I'm just not very comfortable with it." Ann also shared those ideas "…[I'm] not as technologically advanced as a lot of people." The comfort level is crucial in understanding perception and

acceptance of digital games. One can argue that these teachers graduated from their program before technology was part of their lives. However, Bella emphasized that was not the case. She is the youngest in her early 20s and the most recent ELL teacher to graduate. “I'm not used to it. So how can I bring something to my students that I'm not educated about? As much as I should be? Or would want to be?” There is a clear disconnect between what is expected from ELL teachers and what teacher education programs are doing to prepare them for those realities.

Oversight

Ann is a firm believer that it is important for parents and teachers to what she called police what their children access online. If not properly monitored, most of the students would end up consuming most of their time to access social networking sites like Snapchat, Instagram, and Facebook or games. Ann advises parents to switch the internet off and on at home at a given time to allow for children to disconnect and allow for a restful night. Ann also encourages parents to ensure that their children spend their free time in other recreational activities that do not involve technology. Assisting with chores, riding horses, and playing with goats are some examples she has for her children. Furthermore, spending too much time on digital games or social media could end up negatively influencing their behaviors and ability to learn. Ann does not overlook the role of digital games in assisting children to learn but observes that they need to be constantly policed by the classroom teacher, and parents or guardians at home which prevents her from fully embracing the technology in her classroom. “But sometimes, you don't have time for everything. And sometimes it takes more time to police them on the computer, not going on to gaming sites, and you know, whatever Fortnite or whatever it is, you know, or YouTube. Sometimes it takes more policing and classroom management, I suppose, to have them beyond technology.” One common complaint from ELL teachers is that their students watch others play

digital games on YouTube which they find preposterous. The notion of watching someone else play a game that you could play yourself defeats the purpose.

Jordan, who sees herself to be a pessimist, viewed the responsibility of the parents to be that of a role model. Children learn from their parents based on how they approach difficult situations. “It doesn't help that people's parents are mean. And if people's parents do one thing, they teach a kid that one thing and then it doesn't matter if you call the parents and the parents still reinforce it.” Kate reinforced that the bulk of the responsibility falls on the parents “I think the parents are ultimately responsible for what, I mean, you have to be involved, you have to know what your children are watching.” She views technology as a privilege, not a right. The parents are the ones who control that privilege and monitor what their children do on their devices. Bella went into detail on why parents are ultimately responsible for their children,

> They're not playing the video games in front of me. So a lot of it does come down to parents and what they're willing to do and not do with their [children]. If they're sitting in the same room while their child is playing this game. And they say you know what, you need to put that on pause for a second, we have to talk about this, then that's fantastic. But if your child is locked up in their bedroom and playing for four hours, and not having conversations about scenarios or interacting with other people, then you're losing a lot of your time to develop those skills and understanding. And we see that in the classroom every day, we see a lot of not being able to focus. Nothing's exciting enough.

In order for children to develop those healthy relationships with technology, parents are the ones to instill those beliefs and values. Although many ELL teachers recognized the role of schools in that process, they see that is being learned at home overshadow everything else.

Jordan, a middle school ELL teacher, is more wary about the impact of cyber bullying particularly on her middle school students "Well, I don't know if [cyber bullying] particularly happened here. But I know, the school I just came from, is a huge issue. And they actually had to put a cell phone policy in order." Students' misuse of technology makes her vigilant in how she implements different technologies in her classroom including digital games. Jordan tells a number of stories of how cyber bullying manifested in her school but many of the example she gives pertain to social media.

Conclusion

Perception creates each person's reality, even when that reality may not be objectively accurate or aligned with factual evidence. The way that teachers perceive digital games will undoubtedly influence their pedagogical consideration in teaching and learning. A psychological theory of human social behavior called the theory of reasoned action (TRA) remind us that attitudes, beliefs and subjective norm underlie behavioral intention (Fishbein, 1980). Studies have shown that teacher's belief impact how they perceive knowledge and how they implement that knowledge (Deng, Chai, Tsai, & Lee, 2014; Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012; Fives & Buehl, 2012). Although all participants agreed that serious games, digital games that are specifically designed for educational purposes, do not negatively impact children and appropriate, they felt that COTS digital games, particularly those that include violent elements like shooter games, are not appropriate. They also cite frequency (length of play), vulgar language, explicit images, cyber bullying, and the need for oversight by teachers and guardians as reasons to why they are not appropriate for children. These perceptions were not built on concrete evidence, as we should not expect teachers to find the time to locate, review, and synthesize findings from scholarly publications (Becker, 2007), nor they were real

interaction with the game in question, but rather a secondhand account of how others in their life that influence them. This discrepancy is indicative of how a person is a product of their own environment.

The use of digital games in the classroom is not a new concept. Many institutions and teachers are incorporating it into their curriculum to create a more engaging class. Nevertheless, the implementation of digital games can be resource-intensive, but its benefits, such as improving cognitive capabilities, collaboration, and motivation, can outweigh the barriers. There is a disconnect between participants pedagogical knowledge and digital games. More than ever, learning outcomes are reliant on the pedagogical methods that teachers employ. Previous research points to teacher education programs not preparing teachers. Becker (2007), describes the state of digital games by saying, "Although interest seems high, there are significant genuine barriers to adoption, which include a lack of resources (time and equipment) as well as a lack of understanding of how to use games. In other words, there is interest in using games, but there is also uncertainty" (p.479). A little over 10 years later from Becker's statement, we still face the same challenges in the field.

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CHAPTER VI

Conclusion

This work is not done, but rather just beginning. I walked into this study with many assumptions that were immediately dispelled. A prime example is the idea that all teachers in the United States are using digital games or even technology more broadly in their teaching and learning. It is clear that was not the case here, nor it is for many teachers across the country. It is more nuanced and complex especially when we are talking about ELL teachers.

Culture

By far, culture is central in understanding adoption and acceptance of technology. Our society opted to use different terminology to describe our heavy use of a particular thing. For instance, when people watch a TV show for an extended period of time, we describe that action as "binge watching," while the same action with digital games will be described as an addiction. In this work, we find that the culture of the teacher is connected to their attitude which in turn impacts their pedagogical consideration. One example of this is evident in how teachers formed their opinion about digital games. They were based solely on the views of others in their lives without ever playing or watching the game in question themselves. Thus, impacting their personal outlook of digital games and their place in teaching and learning. Furthermore, the culture of the student influences the relationship between them and technology. When a child does not have the support structure at home or does not have the background that taught them the role of technology in their life, that will undoubtedly impact how they use them. Many of the ELL students were from a refugee background posing a complex upbringing with limited healthy exposure to technology. Finally, the culture of the school itself will trickle down to how each

teacher conducts their classroom. When digital games are not talked about, encouraged, and implemented teachers will feel reluctant to go out of their way to explore a new avenue. Between teaching, lesson planning, connecting with ELL families, as well as acting as cultural brokers in their schools (McCarty, Cervantes & Stirtz, 2009), ELL teachers do not have the luxury to explore what could be perceived to be more important.

The Role of The ELL Teacher

We know that the effectiveness of digital games depends heavily on the teacher and how well they utilize them for their intended purpose. Kwah (2012) reminds us of the need to establish how digital games could be incorporated in an educational setting and how teachers can facilitate learning through such tools. For a digital game to achieve the desired results, a thorough and thoughtful lesson plan with clear content and language objectives is essential. Teachers, as practitioners, have learned and understood how students develop high thinking and soft skills so that the teachers can design relevant contexts (Barab, et al. 2009). This implies that teachers are viewed as designers to the learners' experience, not content. Digital games complement and enhance traditional teaching techniques, they do not replace them. The tendency to only use digital games as a time filler or as a reward discredits their educational value. For instance, some digital games may require the teachers to pre-teach vocabulary to prepare students for the game.

ELL teachers' understanding of the digital games and their own role in the process is paramount. In particular, the teacher's understanding of whether a digital game requires the use of traditional teaching techniques before it can be introduced in the classroom is crucial (Klimova & Kacet, 2017). de Haan, Reed & Kuwanda, (2010) suggests ELL teachers'

involvement should be in three stages: before, during, and after digital game play. Scaffolding is critical for preparing students to play the game, while also balancing game play and language learning. Placing students in pairs that rotate between game play and watching is one way to balance gameplay and linguistic analysis. Incorporating a writing piece at the end of the game play can also help tie it all together which could take the form of writing the definitions of words, writing the original sentences, or creating a cheat sheet for other players. These are some of the many ways we can use digital games in our curriculum.

Digital Game Implementation

The use of digital games in ELL classes can be done through game-enhanced learning or game-based learning. The former entails the use of commercial, off-the-shelf (COTS) video games to enhance learning, while the latter involves the use of digital games that have been explicitly developed for the teaching and learning of languages (Sykes, 2018). Although students learning English through digital games might appear to focus more on playing the game than learning the language, the language plays a big role in the process. Vygotsky's zone of proximal development theory reminds us that learning can occur outside the confined of what we consider to be 'educational.' Some of those games will offer new words to be acquired, expressions, semantics, and sentence structure even when the game is not explicitly focusing on those areas. For learners to obtain, create, use, or manipulate items within certain digital games, they need to learn a certain level of English. The English language also plays a role if the gamers are to understand the quests or if they need to communicate effectively with their challengers and other participants. The secondary role of English in these digital games facilitates language learning (Ebrahimzadeh & Alavi, 2017).

Finding a way to integrate digital games into classroom practice to enhance language learning has also been contested. This is also true with findings from this study. Many of the ELL teachers recognize their educational value and yet grapple with their perceived impact. While the interactive nature of digital games makes them learner-centered and motivates ELLs to participate, it may also act as a hindrance. While playing a digital game with some English vocabulary may help the players to remember this vocabulary, the interactive nature of these digital games may impose an extraneous cognitive load on the players, which in theory, could limit their language learning. In such a situation, players tend to concentrate more on the game play and find it difficult to master and remember the vocabulary encountered while playing. In such instances, other students watching the game but not playing may be in a better position to recall the vocabulary than the player (Klimova & Kacet, 2017). Researchers have also pointed out how digital games support learning, children's identities, building communities, and collaboration in classrooms (Dodge et al., 2008). Thus, teachers' knowledge and understanding of digital games along with their strengths and weaknesses is paramount in evaluating digital games and how they can be best used.

Wrapping Up

If it has not been obvious, not all digital games are appropriate for all children especially in an educational setting. Some digital game content may be inappropriate or cannot be related to the learning materials. It is our job as educators to weed out those that do not belong there and choose ones that align with our material. Even serious games can run the risk of, what Gerber et al. (2014) called, "edutainment features" appearing as game-like imposters. Similarly, serious games can be expensive because they are designed to serve a specific purpose. The primary

reason for their higher cost is that DGBL draws higher emphases on environmental awareness in such games.

The findings from this study highlight ELL teachers' struggle with the many barriers that make it difficult to incorporate digital games in schools. The biggest barrier is the lack of access to relevant technologies and equipment that can run digital games. Furthermore, some teachers find it difficult to incorporate digital game materials into the curriculum and coping with different lesson lengths, assessments, and student abilities.

Digital games often give feedback after an initial attempt (Ferguson, 2011). The feedback allows the player to adapt; the same strategy can be deployed in a learning environment to improve learning outcomes. Additionally, digital games use visual images that help in creating better memory compared to the information that is provided verbally (Gentile & Gentile, 2008). This is important as ELLs need visuals to make connections and learn new ideas.

> I want to end this chapter with a quote from Gee (2007) who started his book saying;
>
> Today, culture sometimes goes backwards. We adults pick it up from our children, rather than the other way round. That's how I became a gamer. Five years ago I had no real interest in video games. Today I play them and write about them a good deal because of my son, Sam. When he was three, Sam played games like *Dr. Seuss's Cat in the Hat* and *Winnie the Pooh*, eventually moving on to games like *Pajama Sam* and *Spy Fox*. I played *Pajama Sam* myself so that I could help him play it and found the game fascinating. It involved a colorful and entertaining world, lots of humor - including lots of play on words - and thought-provoking problems. Of course, I discovered that Sam didn't really need my help and often had to help me (p.1).

I also never played digital games growing up. It was not part of my upbringing. Yet, here I am, in the midst of it all, learning where digital games fit in our teaching and learning paradigm. I still have a long way to go – to learn, to mature, to understand – so this only the beginning of my journey ahead.

References (conclusion)

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APPENDICES

Appendix A

Survey Questionnaire

1. What is your name?
2. How old are you in years?
3. How long have you been an ELL teacher at your school?
4. How long have you been an ELL teacher?
5. What experiences led you to be interested in teaching at your school?
6. Briefly describe your educational history.
7. What did you do before coming to this school?
8. Do you play digital games?
9. How often do you play digital games?
10. If you do play, are you proud, ashamed, or indifferent?
11. Do you enjoy playing with others online or in person? Neither/Both?
12. Do you use digital games in your classroom?
13. When did you first start using digital games in your classroom?
14. Why did you start using digital games in your classroom?
15. What type of digital games do you use in your classroom?
16. Would you like to be interviewed for this study?

Appendix B

Interview Guide

Thank you so much for participating in my study. I know that your time is valuable, and I appreciate you taking the time to speak with me today. Before beginning the interview, I want to tell you more about the purpose of my study, let you know what kinds of questions I'll be asking you, and address issues of confidentiality.

My purpose for this research is to explore how and why ELL teachers use digital games in the classroom as well as the relationship between digital games and language development/learning. During our conversation, I will ask you questions about your professional and personal background to help me better understand who you are and your experience at your school. There are no right or wrong responses. Instead, I am interested in learning about your perspective.

As a researcher, I will write about what you tell me. When I write about your experiences, I will use a pseudonym of your choosing. I will quote things that you say in my dissertation, but I will never use your name. You do not need to answer every question. You can decide to skip a question, ask me to clarify a question, or help me develop a better question.

In order to be able to make sure that I can give you my complete attention during the interview, I will only make occasional notes. With your permission, I will digitally record our conversation so that I can have the interview transcribed by a professional transcription agency. I want you to know that the only people who will listen to the recording will be me and a professional transcriber who is bound by a contract to only listen and type out our recorded conversation. I will also provide you with a copy of the transcript for you to look at.

Interview Questions

Gaming background

1. How has gaming affected your life?
2. How does playing games tend to make you feel?
3. Have you learned anything from gaming?

Gaming at school

4. Walk me through your process of choosing a game.
5. Elaborate on whether you plan your lesson around a game or the other way around?
6. Describe to me how you believe your students feel when they play these games? What behaviors or conversations have you seen or heard that support this?
7. What are the learning objectives of these games? Please give examples.
8. How have digital games affected your students' learning? Can you provide examples?

ELL and video games

9. How do you think digital games connect to your students learning?
10. In what ways do you see digital games impacting language learning?
11. How do you see digital games supporting students in their listening? How about speaking? Do you think it supports reading and writing? Please provide examples.
12. How do you consider whether a game is developmentally and academically appropriate for a child? Please give some examples.
13. What are the types of assessments that you use to evaluate how and when students meet learning outcomes?

Support

14. What kind of support do you receive from the school district?

15. What kind of support do you receive from your school?

Teacher Education

16. What type of training or teacher preparation have you received on how to use or implement digital games into your teaching?
17. What kind of professional development does your school provide to support digital games as a way for students to develop language?
18. What do you wish you would have had in order to use digital games more effectively?

Challenges

19. What challenges might you face when you use digital games in your classroom?
20. What do you do to overcome these challenges?

Opinion

21. When I say, ‘digital game’, what is the first thing that comes to your mind?
22. What do you believe are some of the benefits and drawbacks from playing digital games?
23. What are some of your arguments for encouraging or discouraging digital games use? Why or why not?

Appendix C

Second Interview Questions

1. What have you changed in your teaching/classroom since our last interview?
2. In your opinion, what makes a digital game a digital game?
3. In your opinion, what are the characteristics of a digital game? What constitute a digital game?
4. What do you think are the connections between digital games and culture?
5. Walk me through a story where a student helped you with technology?
6. What do you think is the impact of digital games on ELL students?
7. In your opinion, do you think ELL teachers should use digital games? Why or why not?
8. Talk to me about when or under what circumstances you think digital games could be inappropriate?
9. Talk to me about when or under what circumstances you think digital games could be appropriate?
10. Even if you haven't personally used many digital games yet, what are some instances where you could see digital games in your classroom?
11. Explain to me how comfortable you are with technology and why?

Hypothetical game use situation

12. Walk me through the process of choosing a digital game?
13. How do you think you would be able to evaluate that game?
14. Who would you ask for support with the game?