CONCUSSION KNOWLEDGE AND EXPERIENCES OF LOCAL SECONDARY SCHOOL TEACHERS IMPLEMENTING ACADEMIC ACCOMMODATIONS

by

Julie-Ann E. Burton

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this case study was to understand the concussion knowledge and experiences of local secondary school educators as they implement return-to-learn academic accommodations for students recovering from a concussion. The theories guiding this study were Ajzen's theory of planned behavior and Bem's theory of self-perception as the study sought to understand what perceptions and behaviors educators had when implementing academic accommodations for the concussed student. The study design used an ontological philosophical assumption with a constructivist paradigm to guide the study. There were four research questions that focused on understanding the experiences: training, role, handling a concussed student in the classroom, and administrative assistance that teachers have when implementing academic accommodations for the concussed student. Ten teacher participants from a public school district in central Florida were interviewed individually, completed journal responses, and participated in the focus group interview. Data collected were analyzed utilizing NVivo12, a qualitative data analysis software. Six themes emerged from the data. The study found that the participants implemented academic accommodations for a concussed student from previous positive experiences dealing with academic accommodations and relationships with their students and teacher colleagues even though there were deficient implementation protocols, varying administrative support, barriers to implementing academic accommodations, and a need for best practices when implementing the academic accommodations. Results from this study may concurrently contribute to research of implementation of concussion academic accommodations in secondary schools and address the implementation gap for the concussed student's academic recovery.

Keywords: academic accommodations, concussions, return-to-learn, teaching relationships, cognitive recovery

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Dedication

Oh, the places you will go,

Oh, the things you will see,

Just trust in the Lord,

And He will take you there indeed!

First and foremost, I would like to thank my Lord and Savior for His guidance throughout this dissertation journey. There were times in which the journey had complications but as I neared the end, trust and patience were lessons learned from this process and realizing His purpose in my life led me to create the poem above. My Heavenly Father has a wonderful plan for me and for you. Relinquish your hesitations and ways to Him and look forward to the journey that is in store.

Secondly, I would not be here if it were not for my "work kids." Through my profession, I have encountered students of all personalities but noticed that at times they do not have someone to advocate for them or they do not know how to advocate for themselves, especially when dealing with a concussion in the classroom. This investigation is to educate those who may be dealing with a concussion in the classroom and how to navigate through the challenges and embrace what the injury is. While the concept is still emerging, my hope is that soon all will feel comfortable with what will be in place for concussed students. To continue with my "work kids," my hope is that you will never give up on yourselves and continue to seek better and seek the answers to the questions you may have. Never settle or be comfortable with what you have.

Acknowledgments

To my husband. Thank you for your love and support during this doctoral journey. While it was not easy and I was not easy at times, I could not have achieved this amazing accomplishment without you.

To my children. While you are young now, my hope is for you to see what I have done and use that as an encouragement to always keep pushing forward and never settle. Thank you for your daily love as it was a reminder that I am here to guide you through earthly life and life with God.

To my mother. Thank you for showing me what it means to be understanding and knowledgeable throughout this journey. Your ways have taught me what it means to be adapting and of grace no matter what the situation may be.

To my dissertation committee. Thank you for your support throughout this journey and pushing me to seek clarity with this topic. Thank you for the prayers and reminders that God has my back, and it will all fall into place. Thank you for being an inspiration of where I want to be in the future.

Table of Contents

List of Tables

List of Abbreviations

American Medical Society for Sports Medicine (AMSSM)

Centers for Disease Control and Prevention (CDC)

Florida High School Athletic Association (FHSAA)

Return-to-learn (RTL)

CHAPTER ONE: INTRODUCTION

Overview

The awareness for concussions recently has increased due to the high-profile cases in professional sports. As knowledge is increasing about concussions, it has been revealed that the consequences of a concussion are detrimental as an individual can experience lingering effects that may be seen for weeks to months (Halstead et al., 2013). To protect the youth athlete, all 50 states and the District of Columbia has passed legislation for the athlete to return to activity safely and without symptoms (Centers for Disease Control and Prevention [CDC], 2019). Even with this protection, these athletes are students first and will eventually need to transition into the classroom environment and return to school guided by physician return-to-learn protocols. As these protocols are increasing, teachers have taken on a new role as implementer of academic accommodations and may not have the knowledge or understanding of the role they are to fulfill (Graff & Caperell, 2016) This chapter discusses the background of concussion awareness, relationships within the school, the purpose and problem statements, the research questions, and definitions of key terms that will be used throughout the present study.

Background

As an emerging topic in education, there is a new perspective of concussions in the classroom. Once an injury or illness that was silent, it is now understood that having a concussion can cause detrimental setbacks to the education journey of an adolescent (Baker et al., 2014; Halstead et al., 2013; McCrory et al., 2013). Concussion information has evolved over the last 15 years within the United States as the CDC launched a program to educate stakeholders within athletics about concussions and the aftereffects (CDC, 2013). More recently, in 2014, President Obama hosted a Healthy Kids and Safe Sports Concussion Summit to raise awareness

of concussions and traumatic brain injuries for athletes, military personnel, and others (Hudson, 2014). While there is support from the federal government to enhance the awareness of concussions and traumatic brain injuries, the following will explain the more recent history of concussions in athletics and education, the relationship of the teacher and student, and the theoretical context guiding this study.

Historical Context

In 2005, the CDC launched the first *Heads Up: Concussion in High School Sports* in collaboration with experts in the field (CDC, 2013). The material prepared and provided was made to inform and raise awareness for the stakeholders (high school coaches, athletic directors, parents, and athletes) to improve prevention, recognition, and responses to concussions (CDC, 2013). Two years prior, the CDC and 14 medical and health organizations published the first toolkit for healthcare professionals to utilize when managing and diagnosing concussions.

While there has been an increase in interest in concussions by the media, the interest in concussions within the medical field began to ramp up in the early 2000s (Meehan et al., 2010). From 2000–2009 more medical publications were published than in all the years prior; however, no original data regarding concussions were published during that time period (Meehan et al., 2010).

In 2009, Washington became the first state to pass a concussion law, the "Zackery Lystedt Law," mandating student-athletes be removed from activity if a concussion is suspected during activity (CDC, 2015; Lyons et al., 2017). Following Washington, all 50 states have enacted a similar law that if a student-athlete is diagnosed with a concussion, medical clearance is needed to return to play (CDC, 2015; Davies & Tedesco, 2018). In 2010, *Heads Up: For School Professionals* was published by the CDC (2013). The materials provided for the

stakeholders (school nurses, parents, teachers, and other school professionals) included information on how to recognize and respond to a concussion and how to help students return to school as they are recovering from a concussion (CDC, 2013).

In 2001, the first international conference on concussion in sport was held (McCrory et al., 2013). Thereafter, three more meetings were held with the fourth being in 2012. The 2012 Zurich Consensus Statement was published, updating the management of concussions and the recognition of youth concussions (McCrory et al., 2013). The statement also highlighted the importance of cognitive rest for the injured individual and limiting exertion that may exacerbate symptoms (Baker et al., 2014). In the management of concussion, school management was addressed on an international level stating that the child should be without symptoms within the classroom prior to returning to play (Baker et al., 2014; McCrory et al., 2013). For the adolescent, management is defined as modification of school attendance and activities to avoid provoking symptoms (Baker et al., 2014).

In 2013, the American Medical Society for Sports Medicine (AMSSM) released a position statement for concussion in sport. This was the first time that evidence-based best practices were published for physicians to use as a guideline in the evaluation and management of the sport-related concussion (Harmon et al., 2013). Because the focus was on the management of concussion and returning to activity, there were no standardized guidelines in returning the athlete to school (Harmon et al., 2013). Following the 2012 Zurich Consensus Statement, the position statement for the AMSSM also agreed with reducing the workload of the student if symptoms increased due to cognitive stress; prior to returning to play, the student-athlete should first return to their academic baseline (Harmon et al., 2013).

Social Context

As there is more research that is focused on the concussed student returning to the classroom in an appropriate manner, the teacher will be the direct conduit to supporting the needs of the concussed student in the classroom. The relationship between a student and teacher is instrumental to the success of a student. A student who sees and thinks that their teacher is caring will pay more attention in and during the class (Gehlbach et al., 2012). A teacher who is supportive and caring tends to have students who are motivated by effort and self-efficacy (Gehlbach et al., 2012; Roorda et al., 2011). When teachers have a positive intention such as connection, openness, and warmth toward their students, they are likely to have competence and achievement in their own work (Corbin et al., 2019; Timmermans et al., 2019). When teachers has a negative experience or student relationship, they may report emotional frustration, fatigue, and strain (Corbin et al., 2019). These stressors could be experienced when goals that are established are threatened (Split et al., 2011).

When teachers relate to their students, the relationship that is formed is enough to fulfill and aid in the motivation and wellbeing of the teachers' work (Split et al., 2011). To establish a good foundation to the teacher–student relationship, communication is an important tool that should be utilized beyond the classroom and school time (Elhay & Hershkovitz, 2019).

In addition to communicating with the student, the teacher–parent communication contributes to the success of the student. When teachers are able to communicate with the parents, appropriate advice is provided by the teacher so that the parent is able to support the academic achievement of the child at home (Kraft & Dougherty, 2013). Proactive measures through effective communication between student, teacher, and parent result in student success (Kraft & Dougherty, 2013; Murray et al., 2015).

The teacher–principal relationship is also important for the success of the student. Educational leadership affects the emotions, attitudes, and behaviors of teachers (Berkovich & Eyal, 2018). When teachers do not receive support from colleagues and leaders, the stress that they display can impact school children to continue the stressful environment within the classroom (Oberle & Schonert-Reichl, 2016). Principals at hand have a considerable sway over teachers' dedication to the job (Adams & Miskell, 2016). The trust that is formed between the district leaders, principal, and teacher contributes to the dedication and engagement a teacher has in fulfilling their commitment to the students (Adams & Miskell, 2016).

Theoretical Context

As educators are embracing their new role as an implementer of academic accommodator for concussed students, researchers previously looked at construct models based of Ajzen's theory of planned behavior. Register-Mihalik et al. (2013) looked to see how the theory related to the reporting behaviors of athletes who had sustained a concussion. Using this model, researchers have transitioned to see how the constructs of the theory affect the behavior and experience of a teacher who is implementing an academic accommodation.

When looking at formative assessments, when teachers have an instrumental attitude, subjective norm, and self-efficacy, the intentions to conduct the formative assessment are higher (Yan & Cheng, 2015). The constructs of attitude, subjective norm, and perceived behavioral control contribute to the intentions of performance of the teacher; when these constructs are more favorable, the stronger the intention is to perform the behavior (Dunn et al., 2018; Yan & Cheng, 2015). Perceived behavior control is a significant predictor of intention (Dunn et al., 2018). Variables of perceived behavior control include perceived inadequate skill, ability, talent, and

external factors such as lack of resources, cooperation of others, and opportunity (Dunn et al., 2018).

Biases of self-perception exist, especially for personality (Bollich et al., 2015). Individuals who are self-enhancers are more positively biased towards their skills than individuals who are self-diminishers and negatively biased towards their skills (Bollich et al., 2015). Individuals may not be aware of how motivation influences their self-perception, and this could lead to being inaccurate regarding mental processes (Bollich et al., 2015; Nisbett & Wilson, 1977). When individuals understand their self-efficacy, a positive motivational influence, they are willing to work with the difficult task as opposed to ignoring it or referring the task to another individual (Tschannen-Moran et al., 1998). Self-perception can change depending upon the influence that acts upon the beliefs and what is gained.

Situation to Self

Athletics has been a part of my world for the last 25 years. Starting off playing soccer, I received my first concussion in the sport while in high school. During this time, I can vividly remember a teacher screaming at me in a joking manner because I had put my head on my desk. Because a classmate vouched for me, the teacher backed off but did not show compassion. The intrigue with concussions started then, and I held on to it as I became an athletic trainer. During my time as an athletic trainer, I have witnessed many athletes sustain concussions whether athletically or accidentally. I have a thorough understanding of how to return an athlete to activity and I know how an athlete is to progress in the classroom. Lempke et al. (2020) stated in their study that athletic trainers are vital in concussion management as athletic trainers are involved in the diagnosis, management, and return-to-play decision of a concussed student. Up-to-date knowledge of concussions, concussion assessment, and concussion management should

be done by the athletic trainer to assist when needed (Lempke et al., 2020). As return-to-learn accommodations are becoming more frequent, my interest was piqued through conversations with educators and the yearning to help them succeed with academic accommodations.

To conduct and interpret this study, a constructivist paradigm was used. Constructivism seeks to understand the meaning of the individual's experience (Creswell & Poth, 2018). This research was focused on constructing data based on the teacher's work world and the experiences teachers have when implementing academic accommodations. The experiences amongst the teacher varied, contributing to the subjective meaning of experience and adding rich information and data to the study (Creswell & Poth, 2018). Creswell and Miller (2000) best described the constructivist approach as open-ended and contextualized perspectives used towards reality. The reality of this study was constructed through the open-ended perspective of the participants by the data collection methods. This reality was used to construct an understanding of the phenomenon and its relation to the assistance of a concussed student going through academic recovery.

A philosophical ontological assumption was used to underline this study. Coupled with the constructivist paradigm, the ontological philosophical assumption relates to reality and the differing realities that can exist (Creswell & Poth, 2018). This study focused on gaining the insight of several secondary school educators and the implementation of academic accommodations for concussed students. Using this philosophical assumption, the participants' voices spoke for the perspective and allowed themes to emerge (Creswell & Poth, 2018).

Problem Statement

Concussion is an illness that can affect anyone at any point in life. However, when concussions affect school-aged children, they may have problems reintegrating into school based

on current symptoms. Because of this, common current practice is to place a student on an academic accommodation to assist in their academic recovery (Kasamatsu et al., 2017). It has been noted in research that educators need support to help a student who has been placed on an academic accommodation and to understand the role that they are in (Sarmiento, Donnell, Bell, & Hoffman, 2019). The knowledge of concussions that educators have varies; therefore, the support a student receives may not be beneficial for their academic recovery (Dreer et al., 2017; Kasamatsu et al., 2016).

The problem of inconsistencies in the implementation of care that is provided to a student who is on an academic accommodation from a concussion may hinder the recovery and potentially set back the student to returning to the classroom fully (Carzoo et al., 2015; Graff & Caperell, 2016). As return-to-learn accommodations are provided to the schools by the overseeing physician, the following problems are encountered: What does an educator do with the current information? If adjustments need to be made, who is responsible for them? (Graff & Caperell, 2016). The problem is how the experiences and knowledge of teachers implementing academic accommodations can help a student as they recover from their brain injury.

Purpose Statement

The purpose of this instrumental case study was to describe teachers' experiences and knowledge when implementing academic accommodations with concussive students from a high school in Florida. Experiences were generally defined as role, implementing, training, and interaction with a concussion academic accommodation (Dreer et al., 2017; Graff & Caperell, 2016; Kasamatsu et al., 2017; Master et al., 2012; McKinlay & Buck, 2019; Romm et al., 2018). Master et al. (2012) discussed the link and interaction that the teacher has between the student and their academic recovery as they are implementing the accommodations provided by the

student's physician or a formal 504 plan. The teacher should be able to recognize that the student will need to take breaks to not cause cognitive exertion and exacerbation of symptoms; however, while the teachers should be able to recognize this, from previous studies, teachers state that there needs to be training to understand and implement strategies to help the student who is recovering (Dreer et al., 2017; Kasamatsu et al., 2017; Master et al., 2012; McKinlay & Buck, 2019; Romm et al., 2018). For classroom management of concussions, the familiarity that teachers have of the role of implementer is unfamiliar in providing proper care of the concussed student (Graff & Caperell, 2016; Romm et al., 2018). In 2013, the American Academy of Pediatrics released a guideline for the management of concussions in the classroom (Graff & Caperell, 2016; Halstead et al., 2013). However, more research needs to examine the understanding the teachers have of implementing an academic accommodation and how to relate a concussion to the classroom (Graff & Caperell, 2016; Romm et al., 2018).

There were two theories guiding this study: Ajzen's (1991) theory of planned behavior and Bem's (1972) theory of self-perception. The theory of planned behavior understands how attitude, intentions, and perceived control behavior influence a behavior (Ajzen, 1991). The theory of self-perception looks at how individuals develop their attitude and emotions from observation (Bem, 1972). The theories look at the perception a person has and how it influences a behavior or experience.

Significance of the Study

The purpose of this study was to provide a present description and understanding of the concussion knowledge and experiences secondary school teachers have when implementing a concussion protocol or academic accommodation. The majority of the information regarding adolescent concussions and the recovery process in the classroom is quantitative in nature and

found in health and medical journals. This study seeks to obtain an understanding of the experiences and perceptions teachers have to add information that is relevant to education and to enhance education practices. Studies on teacher perceptions and knowledge of concussions have shown that there is a need for increased training and development; however, research has not focused on understanding the experiences teachers go through when implementing a concussion return-to-learn protocol (Dreer et al., 2017; Graff & Caperell, 2016; Romm et al., 2018). Romm et al. (2018) found that personal experiences mediated the perceptions a teacher had of concussions and the implementation of return-to-learn academic accommodations. The tasks that teachers must implement throughout their day is plenty.

Qualitative methods were used in this study to explore the experiences and concussion knowledge teachers have when interacting with a concussed student in the classroom. Analyzing the role, perceptions, training procedures, implementation of academic accommodations, and interactions a teacher has with a concussed student added depth to this study. The studies on the perceptions and experiences teachers have dealing with concussed students are few. Kasamatsu et al. (2017) and Romm et al. (2018) expressed in their respective studies that capturing the beliefs and perceptions teachers have of concussions is essential to understanding their experiences as they implement return-to-learn protocols in the classroom and deal with the concussed student. There are several relationships that teachers will encounter as they deal with a student who is on an academic accommodation. The teacher–student relationship is important for the success of the student as they are on this academic accommodation (Corbin et al., 2019; Timmermans et al., 2019). Communication is important for the teacher–parent relationship to succeed (Kraft & Dougherty, 2013; Murray et al., 2015). The teacher–administration relationship is also important for the success of the student as the teacher relies upon support from the

administrators (Berkovich & Eyal, 2018). Teachers tends to have better implementation when they have a positive experience as opposed to a negative experience with the task. To the education field, this qualitative case study adds much-needed empirical knowledge understanding the perceptions and experiences teachers have when implementing academic accommodations for the concussed student.

Using the theoretical lens of the theory of planned behavior and self-perception theory, this study examined the concussion knowledge and experiences of secondary school teachers when implementing academic accommodations for concussed students. The theory of planned behavior looks at the behavior that individuals have when they formulate a perception. In this study, if the teacher has a positive experience implementing a concussion protocol, the theory would attempt to explain how this positive experience relates to perception (Dunn et al., 2018; Yan & Cheng, 2015). The theory of self-perception looked at what biases a teacher may have. If the teacher is a self-enhancer, they will react positively towards their skill and will feel comfortable in performing an academic accommodation plan (Bollich et al., 2015).

Research Questions

Secondary teachers' knowledge and perceptions have been identified through quantitative and some qualitative studies. However, the experiences of the teachers implementing concussion academic accommodations have few qualitative research studies. The following questions were developed to look into what previous literature has identified to the experiences and knowledge of teachers:

1. How do educators describe the training they receive for handling a concussion in the classroom?

Teachers are an integral component in the implementation of academic accommodations. Training, whether it is prior to the school year beginning or during, is needed for the implementation of academic accommodations (Dreer et al., 2017; Glang et al., 2015; Kasamatsu et al., 2017; McKinlay & Buck, 2019; Sarmiento, Donnell, Bell, & Hoffman, 2019).

2. How do educators describe their role in implementing concussion academic accommodations?

The knowledge of management of a concussion in the classroom and adjustment from the teachers is unknown. When given an assessment, teachers have shown improvement of knowledge, but implementation is still unclear (Graff & Caperell, 2016).

3. How do educators describe how they handle a concussed student in the classroom?

Teachers understand symptoms and initial effects on the brain, but there is a gap in their understanding of the helplessness and difficulties of a student following a concussion and return to school (Carzoo et al., 2015; Graff & Caperell, 2016; McKinlay & Buck, 2019; Sarmiento, Donnell, Bell, & Hoffman, 2019).

4. How do educators describe the assistance they receive from administration for handling a concussed student in the classroom?

Administrators need to be included in the management of a student with a concussion in the classroom. When consulting with administration, a comprehensive policy for concussions in the classroom can be implemented and understood amongst the staff of a school (Glang et al., 2015; Kasamatsu et al., 2016; Lyons et al., 2017).

Definitions

1. *Academic accommodation* – Temporary academic support for the concussed student (Dreer et al., 2017; Glang et al., 2015; Kasamatsu et al., 2017; McKinlay & Buck, 2019; Sarmiento Donnell, Bell, & Hoffman, 2019).
2. *Experience* – The role, training, implementing, and interaction of a concussion academic accommodation.
3. *Barriers* – Issues that may arise that will hinder the implementation of an academic accommodation (Sarmiento, Donnell, Bell, Tennant, & Hoffman, 2019).
4. *Assistance* – Support needed to fulfill academic accommodation (Glang et al., 2015).
5. *Concussion* – Clinically diagnosed brain injury that is sustained from a trauma (Hall et al., 2015).
6. *Return-to-Learn* – Protocol for students involving academic accommodations to return to school safely (Baker et al., 2014; McCrory et al., 2013).
7. *Return-to-Play* – Protocol for student-athletes to return to activity safely and without symptoms of the concussion (Lyons et al., 2017).
8. *Attitude* – Beliefs or feelings towards the behavior (Ajzen, 1991).
9. *Perceived Behavior Control* – The perception an individual has regarding the ease or difficulty in performing a behavior (Ajzen, 1991).
10. *Subjective Norm* – The influence of the environment or expectations of others on the behavior (Ajzen, 1991).
11. *Intention* – The probability that an individual will engage in a given behavior (Ajzen, 1991).

12. *Behavior* – The manner in which an individual will conduct themselves towards implementation of academic adjustments (Ajzen, 1991).

Summary

The theory of planned behavior has been incorporated into this study to understand the intentions of a behavior that an individual may have regarding concussions. The theory of self-perception has been incorporated to understand if the preconceived bias affects the skill to be performed. As the return-to-learn accommodations are seen more often in schools, literature published looked to see what knowledge a teacher has and what can be created to assist them in knowledge. The present study sought to discover the knowledge a teacher has as well as experiences a teacher has when implementing a concussion academic accommodation.

CHAPTER TWO: LITERATURE REVIEW

Overview

Research on educators' concussion knowledge is emerging and can be found in journals pertaining to medical professionals, school nurses, school psychologists, and the pediatric population. Concussion knowledge of the educators has been identified but what has not been identified is the experiences these educators have implementing return-to-learn protocols when the student athlete returns to the classroom. There is a lack of peer-reviewed journal articles pertaining to the student's return to the classroom, but there are journal articles pertaining to the student having a sports-related concussion. The information of this literature review will explain what has been identified from medical professionals in relation to the sports-related concussion.

This literature review provides an understanding of concussion perceptions and knowledge held by educators in the classroom. Ajzen's (1991) theory of planned behavior and Bem's (1972) self-perception theory were used as the theoretical framework. These two theories were used to identify and explain and further understand the experiences of educators implementing return-to-learn protocols. The body of this review highlights common themes that are seen in the classroom regarding concussion and concussion practices. The review of literature defines a concussion, explores teacher knowledge and perception of concussions, classroom management of concussions, the role of brain injuries in education, relationship of the support team through teacher relationships, and academic support for the concussed student.

Theoretical Framework

Having a theoretical framework is important while going through the research process. Yin (2018) described these theories as propositions that shape the data collection plan. The proposition will also organize the analysis and point to contextual conditions to be described

(Yin, 2018). Another way to utilize theories is to work the data from the ground up in which the data show the concept and use of inductive strategy to see the outcome (Yin, 2018). This literature review will examine the theories of planned behavior and self-perception that were used to understand perceptions of concussions in the classroom.

Theory of Planned Behavior

Developed by Martin Fishbein and Icek Ajzen, the theory of reasoned action looks at behaviors and antecedents that predict and explain a behavior of interest (Ajzen et al., 2007). An extension of the theory of reasoned action, the theory of planned behavior examines how the influences of attitude, intentions, perceived control behavior, and subjective norms influence a behavior (Ajzen, 1991). The two theories examine attitude and the intention an individual has in relation to the behavior that is performed (Ajzen et al., 2007). Ajzen et al. (2007) understood the purpose that attitudes have on behavior: "attitudes toward broad objects, groups, institutions, or policies to behavior-specific dispositions, such as intentions to perform the behavior, attitudes toward the behavior, subjective norms regarding the behavior and perceptions of control over performing the behavior" (p. 7). Seen in the theory of planned behavior, the behavior expression a person has can be influenced by volitional control. A person can decide to perform or not to perform a behavior at will (Ajzen, 1991). When an individual lacks complete control, intentions alone are not able to predict behavior (Kasamatsu et al., 2017). While an attitude refers to an individual's opinion, subjective norms include the individual's perception of what is understood by others, and perceived behavior control is the person's seeming ability to act on a behavior (Kasamatsu et al., 2017).

The theory of planned behavior is used mainly when trying to understand health behaviors (Register-Mihalik et al., 2013). Used in concussion research, the theory of planned

behavior was utilized to look at the intentions of concussion-reporting by student athletes and to understand beliefs and practices of teachers providing academic support for students who had sustained a concussion (Kasamatsu et al., 2017; Register-Mihalik et al., 2013). Encompassing both indirect and direct measures, the theory of planned behavior was used as the lens needed for investigation of concussion perceptions and knowledge held by educators.

Previous research formatted questions to elicit an experience in order to gain knowledge about the intended behavior (Kasamatsu et al., 2017; Register-Mihalik et al., 2013). When a person has a more favorable or positive attitude towards the behavior, there is a higher direct attitude score (Register-Mihalik et al., 2013). The environment surrounding student-athletes often dictates their intentions of reporting the concussion, whether it is positive or negative (Register-Mihalik et al., 2013). For teachers, it is presumed that if a teacher has a positive attitude towards concussions and implementing an academic adjustment for the concussed student, the intentions on providing support for the student will be enhanced; however, if the teacher has a negative attitude towards concussions or sees challenges, the implementation of academic adjustments for the concussed student will not be likely (Kasamatsu et al., 2017).

Self-Perception Theory

Bem's (1972) self-perception theory is a behaviorist theory that interprets the results by considering and looking at the viewpoint of an observer. The individual observed in the theory is not confined to inferences based upon overt actions; rather, their attributes are attained by observing their own behaviors (Bem, 1972; Goldstein & Cialdini, 2007). This viewpoint is external and was encouraged by Skinner's radical-behavioral analysis (Bem, 1972; Dico, 2018). The radical-behavioral analysis that Skinner formulated states that to label things within the environment, a distinguishable differentiation must be taught such as an adult teaching a child

about two different but similar objects (Dico, 2018). Several postulates help define the self-perception theory: individuals develop their attitude and emotions from the observations in which the behavior occurs, and the internal cues are weak for the individual; therefore, the individual is in the same position as an outside observer so that the observer has to rely on external cues to understand the inner self of an individual (Bem, 1972; Dico, 2018; Garnefeld et al., 2011). The first postulate is significant when trying to understand an individual's perception "to us as observers, the most important clues to an individual's inner states are found in his behavior" (Bem, 1972, p. 5).

Garnefeld et al. (2011) better explained that self-perception is like social perception as people make conclusions about others and their inner states based on behaviors observed. An individual with a positive perception of status is more likely to have higher self-esteem (Anderson et al., 2006). To know what an individual is willing to perform and the intention, it must be known what behavioral influences exist. When looking at the return-to-learn protocol and academic adjustments, the behavior that educators hold will show their willingness to seek the appropriate care for the student during his or her recovery.

Related Literature

A concussion, which has been dated back to observation in Ancient Greece, is a syndrome or illness that is caused by a biomechanical force which causes neurologic symptoms from which most individuals can recover (Kamins & Giza, 2016; Zirkel & Brown, 2015). As one of the most complex and intriguing organs in the human body, the brain is often overlooked when complexities arise (Guskiewicz, 2013). Injury risks in team sports and recreational sports have been widely accepted; however, there has been a rise in concern with the growing risk of concussion and continuing to play with one (Guskiewicz, 2013). Visits to an emergency room

have increased for concussions. In an 8-year time span, 2001–2009, the annual visits of concussion cases seen in the emergency department increased from 153,375 to 248,418 with the highest rates among young men ages 10 to 19 (Kamins & Giza, 2016). The sport-related concussion has been on the rise due to increased recognition and power and strength in athletes (Kamins & Giza, 2016). For a concussion to be diagnosed properly clinically, the signs and symptoms of a concussion must be understood. In addition to understanding the signs and symptoms, tools such as an evaluation test should be administered for diagnosis (Kamins & Giza, 2016). Interesting to note for a concussion, "there is no sign, symptom, or clinical tool that is 100% sensitive" (Kamins & Giza, 2016, p. 443), meaning a concussion is clinically diagnosed to protect the athlete from sustaining another concussion. A clinical diagnosis of a concussion comes from the initial assessment that looks at several domains: sleep, emotions, somatic and cognitive function (Browne & Dimou, 2016).

Because of a lack of understanding of concussions in the athletic community, concussions go unidentified and undiagnosed (Register-Mihalik et al., 2013). Register-Mihalik et al. (2013) found that student-athletes' attitude had the greatest influence on the intention to report a concussion. The strongest influence that a student-athlete faces when reporting a concussion comes from their coach and teammates (Register-Mihalik et al., 2013). If the beliefs and perceptions from the influences were positive, then the likelihood of reporting a concussion would be higher from the student-athlete (Register-Mihalik et al., 2013). Clacy et al. (2017) found that the majority of club coaches felt that it was their responsibility to remove the athlete from play if they were concussed.

There has been an increase in the identification of concussions seen in school due to media coverage and return-to-sport concussion laws (Zirkel & Brown, 2015). At the time of their

study, Zirkel and Brown (2015) identified that 49 states and the District of Columbia required a student-athlete to complete a return-to-play protocol, but only three of those states required classroom accommodations following a concussion. Schools should understand that it is important to integrate a student back into activity safely, whether it is athletic or academic. To benefit the student while they are recovering academically, school districts should provide staff with development and system-wide procedures and not overuse Section 504 (Zirkel & Brown, 2015). Depending on the severity of the concussion and the impact that it has on the function of a student's activities of daily living, a student may not qualify to be put on a 504 plan (Blankenship & Canto, 2016). Having the proper support team at the school will help facilitate the student's academic recovery. The school nurse should assist other school personnel with the identification of concussion symptoms and identify the appropriate accommodations needed in the classroom prior to taking legal action if appropriate (Zirkel & Brown, 2015).

Concussion Pathophysiology

To understand the importance of academic accommodations for concussions, what happens during a concussion needs to be understood. When the brain experiences trauma, neurometabolic changes occur that manifest into signs and symptoms (Hall et al., 2015). Signs and symptoms of a concussion include headache, dizziness, vertigo or imbalance, nausea, vomiting, lack of awareness, and confusion (Browne & Dimou, 2016). Mechanical damage that is caused by the trauma, a force applied to the head, causes hormonal, neurotransmitter, and energy storage to shift that sends the brain in to a crisis mode (Guskiewicz, 2013; Hall et al., 2015). The brain energy tries to regain homeostasis and can take 7 to 10 days to return to normal (Hall et al., 2015). For the brain to recover, physical and cognitive rest is prescribed to eliminate any increase in metabolic demands that may exacerbate or induce symptoms (Guskiewicz, 2013;

Hall et al., 2015). Cognitive impairments that can be experienced with a concussion include slowed reaction time and decreased processing speed; these impairments can prolong recovery and hinder school performance (Williamson et al., 2018).

Cognitive Rest

Cognitive rest is important in the recovery of a student who has sustained a concussion. Cognitive rest can be defined as limiting or refraining an individual from activities that stimulate the brain such as driving, watching television, working on a computer or cell phone, reading, texting, or studying (CDC, 2019). When a concussion patient has 1 week of cognitive and physical rest, post-injury neurocognitive assessments returned to or exceeded baseline neurocognitive assessment (Hall et al., 2015). These noted cognitive impairments support the need to provide a thorough academic accommodation for the student (Williamson et al., 2018). Cognitive rest decreases when cognitive exertion does not provoke symptoms and burdens the brain (Williamson et al., 2018). A primary outcome in managing a concussion through recovery is to prevent poor outcomes of depression and prolonged recovery (DeMatteo et al., 2015). There is not enough understanding of achieving the appropriate balance when returning to normal after suffering a concussion; therefore, it needs to be understood that a difference does exist when returning to school versus returning to learn (DeMatteo et al., 2015; Wing et al., 2016). Due to the delicacy of finding a balance between rest and returning to cognitive exertion, a student should be placed on an individualized return-to-learn plan following a concussion (Halstead et al., 2013; Wing et al., 2016).

Return-to-Learn

Return-to-learn is a protocol in which students are placed on academic accommodations or adjustments to ensure that they are reintegrating into school safely and that full mental state is

restored following a concussion (Baker et al., 2014; Master et al., 2012; McFarland Sports Medicine, 2019). A student may return to the classroom while symptomatic as they are healing from their concussion (Baker et al., 2014; Halstead et al., 2013). An indicator that a child is ready to tolerate a part-day school schedule is successful completion of homework in a controlled, self-paced environment (Master et al., 2012). While the academic adjustments are temporary, educators should understand what a student is feeling and going through as they are returning to normal (CDC, 2019). A student while on the return-to-learn protocol may experience frustration, sadness, embarrassment, or become angry because they are unable to keep up with the schoolwork; they also may feel isolated from their peers (CDC, 2019). The interventions or academic adjustments that are made can be done by the educator with check-ins done by the support team (Halstead et al., 2013; Master et al., 2012).

Teacher Professional Preparedness

Teachers have varying experience in the field from the time they enter the profession to what they engage in for professional enhancement. Just as concussion protocols are entering schools, the possibility that a teacher has had an encounter with a concussed student will greatly vary from years of experience in or out of the profession. What needs to be understood to explore the experiences teachers have with a concussed student is the educational experience they received as a student teacher or a professional seeking a teacher certificate.

The educational experience of a teacher prior to entering the profession vastly differs (Darling-Hammond, 2010). In comparison to other countries in the world in areas ranging from teachers' pay to the resources poured into educators, students may encounter a teacher who may have graduated from an accredited education program or encounter a teacher who has retired from another profession and would like to impart their wisdom on students seeking interest in

that profession (Darling-Hammond, 2010). Because of the vast difference in educational experience for teachers, teacher preparation may range in quality and the attrition rates are reflective of this (Darling-Hammond, 2010). The quality of an educational program is exacerbated by the fact that there is lack of quality control and consensus of how a program should be; therefore, educational teaching programs produce professionals with varying field experiences (Darling-Hammond, 2010).

While some institutions have undertaken the task of transforming and redesigning their programs, there is still the need for the teaching profession to settle on what a student teacher should learn and how they should learn (Darling-Hammond, 2010). Ten years ago, the focus on student teacher development had two components: foundational and method (Grossman et al., 2009). Foundational courses focus on the "the principles, frameworks, or guidelines that teachers use to guide their decisions about teaching and learning" (Grossman et al., 2009, p. 274). Methods courses focus on students learning how to develop strategies and tools for teaching (Grossman et al., 2009). Teaching and teaching practices have evolved over the past several decades; as new information emerges from teaching professionals and the content they teach, a shift in the learning experiences is suggested to meet the demands a teacher will face as he or she becomes a professional (Grossman et al., 2009). Redefining teacher education from the traditional development can tackle areas not normally taught as policies, but it can also introduce the student teacher to different encounters in and out of the classroom for additional experience (Grossman et al., 2009; Lacina & Griffith, 2019).

Once a teacher has become a professional, they will be introduced to the educational policies of their state and local district and this moment coupled with their school fulfillment is a complex stage in their career (Avalos, 2011). A beneficial guidance for teachers to get

clarification or advice on guidelines unfamiliar to them is the mentor relationship (Avalos, 2011). Not just relating to concussion protocols, mentoring contributes to the identity formation of both parties, but helps too with the retention of teachers (Avalos, 2011). As each school has its own culture, the development of educators whether through collective beliefs or relational beliefs contributes to the practice of a teacher (Avalos, 2011).

More recently, team teaching has become a norm for the student teacher (Simons et al., 2020). This approach during the field experience of a student teacher provides an opportunity for the team of teachers to collaborate in the planning, teaching, and evaluation of a course (Simons et al., 2020). With this collaboration, the mentor and mentee both gained valuable experiences that contributes to their practice as a teacher (Cajkler & Wood, 2016; Simons et al., 2020). Simons et al. (2020) found from interviewing student teachers in their study that the participants had positive feelings towards team teaching or teaching with a mentorship component. Having the support of the secondary teacher lowered stress, enhanced confidence. and the ability to work out plans for the benefit of the student (Simons et al., 2020). Cajkler and Wood (2016) found that there was a supportive process for the student teacher during the field experience where both the mentor and mentee focused on all aspects of education such as the improvement of pedagogy and not specifically the training of a teacher. As student teacher education evolves, the fundamental and methods model is no longer being used; instead, there is a shift towards the principles of collaborative planning and a pedagogic community to enhance the experiences of the student teacher and to build the mentor and team relationship utilized in the professional setting (Cajkler & Wood, 2016).

Teachers are able to enter the profession aside from the traditional teacher education preparation. Teachers who enter the profession through a certification route typically have a

stronger preservice skill academically than teachers who enter through the traditional route (Sass, 2015). Alternative teaching certification programs are diverse, and the programs that tend to have low entry requirements produce teachers that are more productive than traditionally prepared teachers (Sass, 2015).

For secondary schools, teachers require more specific content training, and the preparation program for a secondary school teacher should explore a deeper understanding of the subject matter (Shuls & Ritter, 2013). Whitford et al. (2018) conducted a meta-analysis and found that student achievement with a teacher who was not traditionally prepared was better, leading to the suggestion that teachers recruited for high schools should have knowledge of their specific content area.

While Sass (2015) found that the productivity of teachers who enter the profession by certification is higher than traditionally prepared teachers, Dee and Cohodes (2008) found depending on the subject content, subject-qualified teachers were not more effective in promoting student engagement than other teachers who were comfortable with that subject. Regardless of the teaching preparedness, this shows that teacher effectiveness cannot be blanketed into a one-size fits all (Dee & Cohodes, 2008).

Zientek (2007) found that traditionally prepared teachers felt better in communicating, using instructional strategies, and planning while the non-traditional certified teacher had a positive experience in mentoring. Teachers who enter the profession away from the traditional method are likely to be in the minority with real-world experience and are committed to teaching (Zientek, 2007). Regardless of their preparation, teachers within their first 3 years of teaching need to have positive support systems, classroom experiences prior to teaching, and instruction

on curriculum design, lesson planning, assessments, evaluation, multi-diversity, and content standards (Dee & Cohodes, 2008; Zientek, 2007).

Teacher Professional Development

Professional development is offered to teachers as a way to enhance their pedagogical skills to impact a student's learning (Matherson & Windle, 2017; Parsons et al., 2019), yet teachers are participating in a developmental activity that has no impact on their practice or a student's learning (Matherson & Windle, 2017). Understanding how teachers gain and enhance knowledge once they are professionals will clearly paint how they proceed and adapt to an individual student and their learning style.

Current professional development focuses on a model that is used to enhance the teacher's knowledge that can be applied to their professional practice (Bowe & Gore, 2016). However, most professional development is available to teachers by an outside source that may not focus on uses that teachers are dealing with locally and can be streamlined into a single topic (Bowe & Gore, 2016). When professional development is focused on active teaching assessment, observation, and reflection, teachers develop the necessary skills pedagogically to impact student learning (Darling-Hammond & McLaughlin, 1995; Evans, 2014; Matherson & Windle, 2017). Teacher learning does not necessarily need to come in the form of a lecture; learning in communities using a relationship-based approach such as mentoring or consultation has been successful in the increase of teacher knowledge and development (Cunningham et al., 2015; Matherson & Windle, 2017).

When professional development for teachers is created, the focus should be on the demonstrated effectiveness of the program and the effect it can have on student achievement (Wayne et al., 2008). Teacher collaboration in the development of these professional

development programs allows for teachers to focus on three premises that can contribute to their daily practice: teachers have the resources to identify and ability to solve their problem, discussion amongst teachers, and collaborative work (Bowe & Gore, 2016). Matherson and Windle (2017) found similar sentiments from their study that teachers want the learning opportunities from professional development to be relevant for their students, teacher-driven, sustained over time, offering additional and practical ways to deliver content to the student.

For the teacher-driven professional development to be successful, leadership needs to be flexible, resourceful, have a set vision, and possess an awareness of the audience to which the material is being delivered (Evans, 2014). Parsons et al. (2019) investigated the delivery of professional development online and found that 77% of the teacher participants participated in online professional development with 45% finding it to be extremely beneficial and 39% finding it to be moderately beneficial.

In relation to concussed students in the classroom, professional development for teachers is emerging but still limited to nonexistent. Hawkins (2019) found that teachers did not have as much professional development on concussion education as they had in other areas. From the findings, teachers noted that they benefitted from the professional development offered even though it was minimal; teachers indicated that there is a need for increased professional development to alleviate the inconsistent response teachers have to the concussed student (Hawkins, 2019). There are statewide initiatives in Pennsylvania and Colorado that teachers can utilize for online concussion education (Davies & Tedesco, 2018). In Pennsylvania, the BrainSTEPS program is managed at the state level and offers training for concussion management teams for school districts to help support the student during the academic recovery (Davies & Tedesco, 2018). The Department of Education in Colorado developed concussion

management guidelines similar to the program in Pennsylvania in that it educates and provides guidance for school districts as concussion management guidelines are implemented (Davies & Tedesco, 2018). While in-person trainings have benefits to improve concussion knowledge amongst educators, trainings are not always available and professional development for teachers should focus on utilizing online concussion training programs due to their ease of access, increase of knowledge and awareness of concussions, increase of concussion identification and response, and confidence of the school's concussion management team (Davies & Tedesco, 2018).

For teachers to gain knowledge on subjects and topics, the previous model of professional development that focused on a single topic is being redefined into a new model that is focused on topics that are teacher driven and applicable to what is happening for the teacher locally (Bowe & Gore, 2016). In-person trainings have a beneficial impact on the increase of teacher knowledge, but as technology is increasing, easy access to online programs give the teachers opportunities to focus on multiple subjects or topics at their convenience and tailored to their learning style (Parsons et al., 2019). Professional development on concussion education is emerging but not as impactful as other subject areas for teachers. From previous studies, the need for teacher concussion education and the need for professional development for the teachers is clear (Davies & Tedesco, 2018; Hawkins, 2019).

Teacher Knowledge and Perception of Concussions

Regardless of what subject an educator teaches, there is a chance that he or she may instruct a child who has a concussion and is returning to school. If a teacher understands what the child is facing during academic recovery, the proper accommodations can be placed to see to the success of the student. Teachers can accurately identify cases of concussions and accompanying

effects such as socioemotional ones or knowing that a person does not have to be knocked unconscious for brain damage to occur (Ernst et al., 2016).

With this general understanding, teachers are still uncertain about concussions, and misconceptions of concussions in the classroom still exist. At some point in the school year, a teacher is likely to interact with a student who has a concussion (Kasamatsu et al., 2017). Teachers understand that a concussion can affect school performance and may have encountered a student with a drop in performance after sustaining a concussion. There is a need for formal training and education for teachers to understand concussions and to give the appropriate academic accommodations for the student who has sustained a concussion (Dreer et al., 2017; Kasamatsu et al., 2017; Sarmiento, Donnell, Bell, & Hoffman, 2019).

When teacher are put through a didactic presentation, their concussion knowledge increases (Carzoo et al., 2015). Teachers' familiarity with concussions did not affect the overall knowledge gain after attending an educational module; but, what is unknown is what knowledge was retained after the didactic presentation and if the teachers were able to use that knowledge and apply appropriate academic adjustments for the student (Carzoo et al., 2015; Graff & Caperell, 2016). Outside of the handouts, forms, or brochures that a teacher may receive, there is acknowledgement by educators that there is a need for more concussion education (Dreer et al., 2017).

Teachers face the challenge of the unknown because a concussion is an injury that is not seen. Because they are unable to see the symptoms such as headache, vision issues, dizziness and nausea, teachers must take the word of the student and see how these symptoms influence school function (Arbogast et al., 2013). The teacher must first believe the student before the teacher can apply the proper concussion management in the classroom (Sarmiento, Donnell, Bell, Tennant,

& Hoffman, 2019). Having the care team at school with the school nurse helps with the management of the concussion in the classroom as the teacher can use that resource for effective management as needed (Bressan & Babl, 2016; Davies & Tedesco, 2018). A teacher may face several barriers when implementing applicable return-to-learn plans. Teachers must identify the appropriate academic accommodations, implement the accommodations, and communicate with the parents about the accommodations given to their student (Sarmiento, Donnell, Bell, Tennant, & Hoffman, 2019). School professionals receive accommodations from the student's physician with basic information. Teachers need guidance to set forth the accommodations by the physician for best practice and care to be given to the student who is academically recovering (Sarmiento, Donnell, Bell, & Hoffman, 2019).

For the academic recovery of a student to be successful, a concussion management team needs to be in place for the student (Dreer et al., 2017; Sarmiento, Donnell, Bell, & Hoffman, 2019). When a healthcare provider prescribes classroom accommodations for the student, it is possible that the success of the accommodations could be done through a tracking system for the student where the overseeing physician can communicate any additional changes through the school nurse (Dreer et al., 2017; Sarmiento, Donnell, Bell, & Hoffman, 2019). With this communication, the need is shown that a standard should be in place for teachers and school nurses to follow from the overseeing physician (Dreer et al., 2017; Sarmiento, Donnell, Bell, & Hoffman, 2019). Having the communication and standard form will set the standard for best practice and ensure that all entities are on the same page when managing a student's academic recovery.

Classroom Management of Concussions

A standard form for school concussion management or return-to-learn is needed for management of the concussion in the classroom. If educators suspect a concussion, they should ask probing questions to assess the status of the student and speak with parents about the findings (Stokes & Hampton, 2019). Educators transitioned into the "caregiver" role when classroom management recommendations for concussions were released by the American Academy of Pediatrics (Graff & Caperell, 2016). When looking at factors that can contribute to classroom management, the severity of the concussion and time needed to recover represent the most significant factor (Baker et al., 2015). When student recovery takes longer than 10 days postinjury, the reports of problems increase. Baker et al. (2015) found that students who missed more than 1 day of school had a significantly higher Sports Concussion Assessment Tool-2 (SCAT2) symptom severity than students who did not miss school ($F = 4.8$; $p < .032$), and that there was no significant difference in the age of the student when reporting new problems at school ($p < .08$). Having the proper management within the classroom with the appropriate form can contribute to the recovery of a student.

In primary and secondary schools, there may be a difference in the management of concussions in the classroom. Younger school children may recover from a concussion in fewer days, 6 to 10 days, compared with a high school student's 10–14 days (Blackwell et al., 2017). If there is legislation for return-to-learn protocols and academic accommodations, the aim of the protocols is towards middle and high school student-athletes, omitting elementary students and students who sustain a concussion outside of athletics (Blackwell et al., 2017).

A proposed return-to-school protocol looks at integrating the student into school in a five-stage recovery process; students advance in the stages as their symptoms decrease and a

balance is seen with brain recovery and returning to school safely (Sunsara & Williams, 2019). There is a lack of oversight on how to proceed with return-to-learn protocols, reintegrating the concussed student into school and if the student needs cognitive rest. Nurses varied on the contribution that cognitive rest gave to recovery: 53% of nurses in the study thought an extended cognitive rest benefits recovery, 44.3% thought 3 days of rest or less is needed, and 2.1% felt that there was no benefit to cognitive rest (Blackwell et al., 2017). However, as Thomas et al. (2015) found, if a child is placed on a strict rest protocol, symptoms are likely to take 3 days longer to resolve.

Consistency is important for the student who is returning to school and learning following a concussion. It is important to understand the effectiveness of returning-to-learn and to make it efficient for all parties involved. As states have a return-to-play protocol in place, there should be a priority to have an effective and efficient return-to-learn protocol as these athletes are students first (Blackwell et al., 2017; Sunsara & Williams, 2019).

Awareness and Understanding Brain Injuries in Education

The likelihood of an educator interacting with a student who has a concussion is relatively high in special education and physical education. Due to the nature of these departments, educators interact and teach a wide range of students. Physical education teachers may have to report a concussion that is sustained in activity during class time, or they may interact with an athlete that has a concussion during practice or competition. Physical education teachers receive training on concussions that may be due to secondary positions such as coaching (Hildenbrand et al., 2018). Even with this knowledge and the understanding of policies, physical education teachers may not put the policies into practice if the school has them (Hildenbrand et al., 2018).

The severity of the sustained concussion a student has will necessitate the assistance of special education teachers during school (Blankenship & Canto, 2016). Even in this department, there continues to be a gap in services provided for students with a concussion or a higher severity of a brain injury (Glang et al., 2015). Special education teachers need additional training when dealing with concussions. This is important because if a student is placed on an individual education plan or Section 504, if the teacher is not current with knowledge, the assistance for the student will be minimal and not favorable for the student's academic recovery. Special education teachers' knowledge and misconceptions of concussions are similar to the general public's (Hux et al., 2013). If education professionals are not receiving the proper training and preparation when dealing with a student who has a concussion, then the proper accommodations needed for that student are not being done (Blankenship & Canto, 2016; Hux et al., 2013).

When a teacher has to explore the Internet for training, the information that they receive and read may be inadequate and not reflected in working with a student who has a concussion in the classroom (Glang et al., 2015; Howe & Ball, 2017). Students who receive special education services for the concussion state that their education reintegration is inadequate (Hux et al., 2013). Special education teachers, like general education teachers, lack the support and training needed to assist a student who has a concussion in the classroom.

Relationship of Academic Support Care Team

Relationships are important for an initiative to be completed. In this case, the teacher is the main focal point of the academic support care team as they have communications with multiple stakeholders in the academic recovery of the concussed student (McGrath, 2010; Romm et al., 2018). Since there are multiple entities on the academic support care team for the

concussed student, the individual relationships that a teacher has with each member should be examined beginning with the teacher–student relationship.

Teacher–Student Relationship

Students in secondary schools will have multiple teachers throughout a school day with different relationships with each (Martin & Collie, 2019). The success of the student lies in the relationship with their teacher. From the teacher's perspective, when the teacher–student relationship is positive, the student has higher academic achievement (Martin & Collie, 2019; Oreshkina & Greenberg, 2010). However, Brinkworth et al. (2018) found that neither a positive nor negative relationship from the student's eyes show an association with grades. A positive relationship will lead students to internalize some of their teacher's beliefs and values (Martin & Collie, 2019). Support from the teacher gives strength to the student and allows the teacher to get to the level of the student to see what they can handle as a student progresses in coursework (Oreshkina & Greenberg, 2010).

Students who have emotionally supportive teachers experienced a higher level of autonomy in the classroom (Ruzek et al., 2016). When a teacher notices that a student is suffering in an academic area as they spend time with them to promote engagement within the struggling area, a relational support is formed and in turn academic support is accompanied (Martin & Collie, 2019). Looking at children with developmental language disorders, the quality of the teacher–child relationship in the early formative years had an associated learning behavior in subsequent years (Rhoad-Drogalis et al., 2018). Exploring the teacher–child relationship in early learning can contribute to the improvement of behaviors that may be associated with developmental learning disabilities (Rhoad-Drogalis et al., 2018).

Positive relationship with adults is an integral part in promoting positive youth development (Pianta & Allen, 2008). The behaviors and perceptions that are stored in a teacher's memory can change over time; with these revisions, future interactions can change as perceptions change (Brinkworth et al., 2018). When a student understands their self-perception in relation to the expectations and perceptions of their teacher's, the effort which is put forth towards work increases, leading to better performance (Meltzer et al., 2004; Swanson et al., 1999). As a student with a learning disability navigates their course work, the willingness they put forth to work hard and implement strategies from the teacher can bypass their difficulties, which will lead them to greater success in school (Meltzer et al., 2004).

Teacher–Teacher Relationship

A model that currently exists in the school system, similar to the support care team for a concussed student, is professional learning communities (PLCs; Hallam et al., 2015). Collaboration and trust within this team serve to effectively work towards a shared goal (Hallam et al., 2015; Leader-Janssen et al., 2012). Hallam et al. (2015) found when they explored trust-based collaboration that when the team's purpose was perceived as helping each member succeed, judgment was not feared within the team. When members of the PLC were patient and kind with each other, it led to fulfilling responsibilities, building trust, and increasing collaboration. If trust did not exist, any collaborative efforts that were to exist were ineffectual and superficial (Dallmer, 2004; Hallam et al., 2015). Dallmer (2004) and Leader-Janssen et al. (2012) found that by understanding the roles of the teachers within the team, collaborative practice provided a development that was personal and professional in which the teachers were able to develop new ways of knowing and learning.

Parent–Teacher Relationship

Parents and teachers want the best for their student. Herman and Yeh (1980) found that increased parent participation leads to increased parent satisfaction with the school, teacher, and student achievement. A teacher who has contacted the parents is more willing to continue a relationship, and a form of trust is created (Santiago et al., 2016; Witmer, 2005). When teachers help parents understand the expectations, parents are able to better communicate frustration the child may be having (German, 2018). Improving trust between parents and teachers begins with communication (Adams & Christenson, 2000). The definition of family–school trust is the confidence that another person will act in a manner that will benefit or sustain the relationship (Adams & Christenson, 2000).

Teacher–Guidance Counselor Relationship

When dealing with return-to-learn, the guidance counselor and teacher should be on the same page as a student is going through their academic recovery. Teachers see the value of having the support of the guidance counselor and having good communication is important to working as a team (M. Clark & Amatea, 2004). As teachers spend their time with students directly, they are able to notate their concerns affecting student performance and communicate that with the guidance counselors (M. Clark & Amatea, 2004). Teachers also experience a great deal of emotion throughout the day and school year. Having the relationship with the guidance counselor during the return-to-learn protocol will provide extra support needed to see the student through to recovery (Warren, 2013). Cholewa et al. (2016) found that teachers want to have the relationship with school counselors; then, if something were to happen, there is a resource available.

Teacher–School Nurse Relationship

Tending to the health needs of a student is a team effort (Biag et al., 2015). School nurses who have full information are able to maintain school records that are complete and accurate (Selekman & Calamaro, 2014). The effective care of the student regardless of the condition is dependent upon communication between school personnel, parents, and the child (Biag et al., 2015; Peery et al., 2012; Selekman & Calamaro, 2014). Hill and Hollis (2012) noted that teachers spent an average of 24.43 minutes a day on health issues. When teachers have a relationship with the school nurse, they help students avoid any miss instruction in class (Maughan, 2018). Teachers throughout the day tend to different tasks. Having the relationship and support of healthcare professionals on campus will alleviate any unwanted stress to which the inappropriate care of the student may contribute.

Teacher–Administrator Relationship

Administrative support is defined as the extent to which the principal and school leaders make work easier and help improve teaching (Boyd et al., 2011). Principals and administrators should understand the impact their support has on a teacher (Hughes et al., 2015). For a leader, having the traits of ability, benevolence, and integrity are predictors to being committed to the relationship (Colquitt et al., 2007). The career span of educators requires different support from the administrator (Richards, 2007). With the variance in experience, support given should be examined to meet the needs of the teacher and the situation at the time (Neill et al., 2011). Communication is imperative for the continued success of the teacher and team and for understanding any difficulties that may arise (Neill et al., 2011).

Extracurricular Activities for the High School Student

Participation in extracurricular activities provides numerous opportunities for the high school student such as belonging to a group, enhancing social skills, or taxing intellectual skills that may not be challenged while in school (Eccles et al., 2003). Darling et al. (2005) found that students who participate in extracurricular activities sponsored by the school reported to have higher grades, a positive attitude towards school, and higher academic aspirations. A teacher who has developed a teacher–student relationship will be able to see the effects extracurricular activities have on the success of the student.

Psychologically, extracurricular activities provide youth an opportunity to develop initiative, work ethic, social skills, social capital, and emotional competencies (Darling et al., 2005; Feldman & Matjasko, 2005; Kort-Butler & Hagewen, 2011). The self-esteem of students who participate in school-based extracurricular activities is higher initially than those who do not participate (Kort-Butler & Hagewen, 2011). The self-esteem of students who participate in sports-based extracurricular activities is higher than those who participate in school-based extracurricular activities (Kort-Butler & Hagewen, 2011). Finding the proper balance of participation in extracurricular activities limits the emotional strain that adolescents experience when participating in activities beyond their capacity (Fredericks et al., 2002). Matjasko et al. (2019) and Simoncini and Caltabiono (2012) found that students' behavioral problems increased if too much strain was applied from excessive participation in extracurricular activities. The delicate balance of participation and behavior should be observed by the influential adults in a student's life: teacher, coach, or parent (Fredericks et al., 2002).

School-based extracurricular activities such as sports or band expose the youth to experiences not typical to home life and leisure activities outside the rigors of school (Darling et

al., 2005). The academic performance of a student who participates in school-based extracurricular activities tends to be better than their counterpart who does not participate due to the added instillment of adult values (Darling et al., 2005; Eccles et al., 2003). The increased involvement in extracurricular activities by a student is linked to family connectedness (Feldman & Matjasko, 2005). Parental relationships increase when students become more involved in extracurricular activities and greater communication is observed in the parent–adolescent relationship but also the parent–teacher relationship (Feldman & Matjasko, 2005).

High School Student with Brain Injury

Dealing and working with a high school student can be complex. There are a lot of emotions that are coupled with the natural growing process. When dealing with a concussion, the student-athlete can go through the grief process in addition to external pressures, emotions, and the natural growing process alone and without support (R. Clark & Stanfill, 2019; Hughes & Leavey, 2012). As the student has to deliberate the positives and negatives of dealing with a concussion, stakeholders need to understand the reporting behaviors of a concussed student, the barriers that may exist to reporting a concussion, and how the individual with a concussion functions daily.

Reporting Behaviors

The cognitive skill of a student will vary within a classroom (Finn et al., 2014). Within a subject, it is important that the teacher is well versed with the subject matter (Sadler et al., 2013). A teacher will be more apt to know if students are experiencing a cognitive deficiency based on their not meeting the aptitude (Sadler et al., 2013). By the time a child reaches the 12th grade, one in 45 students may have had a brain injury (Cave, 2004). Each brain injury is different and depends on factors such as type and severity (Cave, 2004). Students who have a brain injury may

have other disorders coupled with the injury such as attention deficit and hyperactivity disorder (ADHD; Cook et al., 2016). Social stigmas such as the phrase “mental disorder” may impact the treatment and understanding of the injury (Cave, 2004).

Wallace, Covassin, and Beidler (2017) found that the concussion knowledge between male and female athletes was similar; however, females were more likely to report their symptoms to an authoritative figure. Stigmas that are associated with male-dominated sports contribute to the male high school athlete not reporting concussive symptoms along with the fear of upsetting coaches and parents (Wallace, Covassin, & Beidler, 2017). Even though high school athletes are knowledgeable regarding concussions, there is still underreporting going on as the athletes think that the injury is not serious enough for medical attention, and they do not want to be withheld from competition or upset the coach (Chrisman et al., 2012; McCrea et al., 2004; Wallace, Covassin, Nogle, et al., 2017).

Barriers to Reporting

There are many barriers that an athlete will face when it comes to reporting a concussion. The thought process of the athlete after experiencing a concussive blow could be likened to the athlete thinking that the symptoms they are feeling are caused by something else such as a head cold or dehydration and the rationalization of pain that is similarly seen in female and male athletes (Chrisman et al., 2012; Sanderson et al., 2017). The lack of having an identifiable medical professional such as an athletic trainer to whom to report symptoms is an external barrier to reporting a concussion (Sanderson et al., 2017). R. Clark and Stanfill (2019) found in their systematic review that the most common barrier to not reporting was a fear of losing playing time. They also found that external pressures such as parents, teammates, fans, and coaches contributed to the athlete not reporting concussive symptoms. While there is legislation

to protect the student-athlete along with educational information, increasing the educational efforts at an earlier age may eliminate the underreporting and hidden concussions that may occur in the classroom (R. Clark & Stanfill, 2019; Craig et al., 2020; Sanderson et al., 2017).

Coxe et al. (2020) found that the organizational method to delivering the educational material to the parents and students is a barrier for the reporting of concussions. The current state laws require that concussion information sheets be distributed to parents and students; however, this passive approach that is taken with the informational material may not effectively reach the audience for the teaching and educating of concussion safety (Coxe et al., 2020). Bagley et al. (2012) suggested that youth athletes learn about concussion and concussion safety early in their athletic careers. To improve the concussion knowledge of parents and students, interactive workshops hosted by the school should thoroughly explain concussions for the importance of the injury to be understood (Bagley et al., 2012; Coxe et al., 2020).

Team allegiance among both male and female athletes is another barrier to concussion reporting (Sanderson et al., 2017). There is a guilty feeling amongst both males and females to play with symptoms when the team is lacking bench or spare players (Sanderson et al., 2017). Playing through the pain for females and males contributes to the cultural sport norm. Athletes do not want to be removed from the game, and fear of upsetting the coach or losing their starting position is another barrier (Sanderson et al., 2017).

In Kita et al.'s (2020) study, overseeing physicians were identified as the key supports for the concussed student and academic accommodations. However, a barrier after the concussion has been diagnosed is the limited concussion knowledge held by teachers; teachers do not know what accommodations should be requested to help the student during his or her academic recovery (Kita et al., 2020).

Lived Experiences Following a Sports-Related Concussion

In their study Valovich McLeod et al. (2017) found five categories of the lived experiences that adolescent athletes went through following a sports-related concussion: (a) effect of symptoms, (b) impact on emotions, (c) effect on school role, (d) effect on societal/social role, and (e) minimizing/masking symptoms. Some participants of this study noted the inconsistencies of school personnel to assist them in academic adjustments while other participants noted that the educators were helpful (Valovich McLeod et al., 2017). The participants went through psychosocial and emotional experiences to the point where they minimized the symptoms experienced in fear of being made fun of or to not be treated differently (Valovich McLeod et al., 2017). Davies et al. (2020) found that anxiety and stress increased in their participants as they noted a decrease in their academic performance. Grubenhoff et al. (2016) found that postinjury anxiety was a contributor to symptom resolution being delayed.

Having the support of school personnel and the concussion care team with a coordinated academic adjustment helped to alleviate additional emotional symptoms that the concussed student experienced (Davies et al., 2020). Hodges and Ameringer (2019) found that the participants of their study were controlling their emotional experiences by using management strategies of rest and controlling the environment. In one of the first studies to identify strategies used to manage concussion symptoms, adolescents were able to recognize the challenges that they faced with a concussion and turn it into a positive coping method to heal properly (Hodges & Ameringer, 2019).

Kita et al.'s (2020) examination of the lived experiences of a concussed student identified the emotional and practical challenges of recovery, including feelings of social isolation and difficulties managing school. Having social support, such as a friend checking in to see how the

student was feeling or if he/she needed help with schoolwork to a teacher calling to see how the student was coming along in recovery, allowed the student to feel included (Kita et al., 2020). To better understand the experiences concussed students have, the social and cultural norm that has been established should be broken down (Cassilo & Sanderson, 2019). Trusted individuals that athletes interact with daily, such as peers, coaches, parents, teachers, and others, can be more proactive in offering support to the concussed student as they will understand more the internal struggles that a concussed student faces and not pressure these individuals to play while injured or maintain the same curriculum schedule as a peer who is not concussed (Cassilo & Sanderson, 2019).

Academic Support for the Concussed Student

Academic support for the concussed student is needed and has been identified in previous research (Glang et al., 2015; Howe & Ball, 2017; Hux et al., 2013). It also has been identified that if an activity requires students to push past their cognitive limits, concussion symptoms reappear or worsen (Bratsis, 2013). Developing and implementing return-to-learn policies will assist in the concussion management process academically (Kasamatsu et al., 2016). Regardless of what is defined in a school policy for concussion management, the recognition and timely facilitation of support for the concussed student are needed to see the success of academic recovery and to potentially reduce any residual effects such as anxiety or depression (Kasamatsu et al., 2016).

Communication is an important factor for lending academic support for the concussed student (Kasamatsu et al., 2016; Lyons et al., 2017). If a school has access to an athletic trainer, the athletic trainer serves as a mediator for athletics and academics and is the point person monitoring a student after a concussion. Kasamatsu et al. (2016) found 73.7% of the athletic

trainers in their study monitored the student-athlete's concussion recovery and 35.3% served as the primary person monitoring academic progression.

Strategies for implementing academic support should be utilized by school districts, and if not at the school district, individually. Having a systematic approach and policy for dealing with a concussion in the classroom will lead to the success of the student but will also eliminate any potential gaps and confusion that may arise. Having a checklist of phases and how to reintegrate a student into the classroom or weekly team meetings to understand the perceptions that teachers may have will alleviate any confusion and support the student academically (Glang et al., 2015; Kasamatsu et al., 2016; Lyons et al., 2017). Another academic support service that should be included for the students is the continuance of training for educators following an initial concussion training (Glang et al., 2015). There is a need to understand what perceptions and knowledge an educator has regardless of the time of service (McKinlay & Buck, 2019). There is also a need to know how to best educate the educators on understanding the importance of concussions in the classroom and how to successfully reintegrate the student academically and into school without any secondary problems (McKinlay & Buck, 2019).

Summary

The findings of concussion perceptions and knowledge in the classroom held by teachers identify that teachers understand that concussions are serious and have implications on a student and his or her academic success. The previous studies suggest that educators, general or special, are knowledgeable of the basics of concussions but still hold misconceptions that are similar to those of the general public (McKinlay & Buck, 2019).

Current research studies indicate that teachers are willing to participate in educational modules to enhance concussion knowledge and see what current concussion management

practices consist of (Carzoo et al., 2015; Graff & Caperell, 2016). Using the theoretical framework of theory of planned behavior and self-perception theory, research can explore gaps that are seen in current literature. While teachers are going through educational modules to enhance concussion knowledge, it is unknown which knowledge is retained and which accommodations are given to the students. While there is no current standardized protocol for a return-to-learn plan for a concussed student, the prescriptions that teachers receive from physicians lack the information needed to fulfill the academic adjustment and what barriers may exist when doing so. It would be beneficial to explore the usefulness and perceptions of a support team within the school when implementing or assisting students as they return to school following a concussion. The goal of this study was to fill a current gap and provide educators with a method of understanding concussions in the classroom and the effectiveness of utilizing proper academic accommodations to lead to the academic recovery of the student.

CHAPTER THREE: METHODS

Overview

This chapter will describe why an instrumental case study was appropriate for this study and procedures that were specific to the study. This instrumental case study was used to understand the phenomenon of experiences 10 teachers had when implementing academic accommodations for a student who is concussed. The purpose of this study was to describe teachers' experiences and knowledge when implementing academic accommodations with concussive students from a high school in Florida. This chapter will describe the research design, research questions, participants, setting, procedures, role of the researcher, data collection, data analysis, trustworthiness, and ethical considerations.

Design

This study was conducted as a qualitative instrumental case study. Time and place bounded the case study. For this, the data collected was in depth and recent. A case study is a design that is used for qualitative research to describe and analyze an identified case (Creswell & Poth, 2018). The case or what is to be studied should be defined and can be defined by the initial research questions allowing for the definition to be refined as the researcher moves along in the research process (Yin, 2018). Educational research in the 1970s utilized case studies to evaluate the curriculum design and innovation in which methods explored the participants' perspectives and the influence of contexts such on the success and failures of the curriculum (Harrison et al., 2017). The design of qualitative case study research is important as this research method is versatile and suitable for comprehensive, holistic, and in-depth investigation of an issue that is complex (Harrison et al., 2017).

For this current study, an instrumental case study was used to answer the research questions as it sought to understand the experiences teachers have when implementing concussion academic accommodations. Creswell and Poth (2018) stated that an instrumental case study allows the researcher to focus on an issue then can select a bounded case to illustrate the issue. There have been several published studies that have looked at teacher concussion knowledge quantitatively. Quantitative research on teacher knowledge has revealed that teachers' knowledge did increase following an educational session; what is unknown, however, is the retention of knowledge and application to an academic accommodation following the education session (Carzoo et al., 2015; Graff & Caperell, 2016). Qualitative studies on teacher concussion knowledge have not emerged as much as quantitative studies have. There have been some mixed-methods studies that include a qualitative research component of understanding the phenomenon, in cases, concussion knowledge, followed by implementing a program and testing the knowledge quantitatively (Case et al., 2017). For this focus, an instrumental case study research design for this topic allows for the study to use a theory and be holistic to account for a potential shift that may occur (Yin, 2018).

The primary focus of this case study was the experiences of teachers when implementing academic accommodations. The secondary issue was describing teachers' knowledge of concussions. Concussion awareness in the media has increased in recent years. The literature review identified that teachers are knowledgeable on the basics of concussions but still hold misconceptions. For this case study to be complete and exemplary, Yin (2018) characterizes that there are three ways in which completeness can be achieved: the identification of boundaries, the collection of relevant evidence, and the absence of artificial conditions. Artificial conditions such as time constraints or running out of time do not end the study; the study is complete when all

available resources have been exhausted (Yin, 2018). An in-depth exploration of teacher experiences when implementing a concussion academic accommodation is possible when following the design of a case study. The design accounted for any potential shift that could occur that would reveal a problem in the existing program as well as any solutions on how to fix the problem (Yin, 2018).

For this study, a high school in Florida was sought out in a single school district. The case was teachers implementing the concussion academic accommodations. Understanding from the teacher knowledge and experiences dealing with a concussion in the classroom is important, especially from their view and words. Having a research design that captured their perspective and is replicable may be beneficial to other school districts as return-to-learn protocols are seen in the classroom.

Research Questions

There were four research questions that guided this study. The research questions were formulated from gaps in the literature regarding teacher understanding of the usefulness and perceptions of a support team when assisting a student as they return to school following a concussion (Glang et al., 2015; Kasamatsu et al., 2016; Lyons et al., 2017). McKinlay and Buck (2019) identified that there needs to be an understanding of the perceptions and knowledge an educator has of concussion regardless of the time they have been a teacher.

For this study, the investigated experiences and concussion knowledge of secondary school teachers includes the support they receive when implementing an academic accommodation, training they have received, understanding the role in the process and how they manage a concussed student in the classroom.

1. How do educators describe the training they receive for handling a concussion in the classroom?
2. How do educators describe their role in implementing concussion academic accommodations?
3. How do educators describe how they handle a concussed student in the classroom?
4. How do educators describe the assistance they receive from administration for handling a concussed student in the classroom?

Setting

A high school in Florida was selected for the setting as it is a public institution and the school district within the county recently adopted a return-to-learn protocol to be utilized in schools. The district demographics for 2019 were 54.1% White, 18.9% Black, 17.7% Hispanic, 4.6% Asian, 4.5% Multiracial, and 0.2% Native American. At the time of the study, there were 101,000 students enrolled in the district with high schools having a total enrollment of 28,637 students. The high schools in the district have access to a school nurse, athletic trainer, and school psychologist in addition to the guidance counselors, teachers, and administrators who are on campus. The high school was assigned the pseudonym Beach High School to protect the confidentiality and interests of the school district. As the school operates under the school district, approval was needed prior to any research conducted. For the instrumental case design, participation from a group of teachers at Beach High was needed to understand their experience when implementing concussion academic accommodations to gather rich, in-depth data.

Participants

Ten teachers volunteered to participate in the study. Purposeful sampling was utilized as the researcher intentionally sampled a group of teachers who work for the school district with the

return-to-learn protocol to further understand the phenomenon that was under examination (Creswell & Poth, 2018). A convenience sample was used as it saved time, money, and effort (Creswell & Poth, 2018).

For this study, teachers who had more than 3 years of teaching experience were included in the study. The care that a student receives from teachers may vary due to their understanding and years within the profession (Dreer et al., 2017; Kasamatsu et al., 2016). Utilizing teachers with teaching experience of at least 3 years lent to the opportunity of a teacher interacting with a concussed student. Teachers who had coaching experience within the state's athletic association were excluded from the study because these coaches have mandatory yearly concussion training and have been identified from the literature to have concussion knowledge (Clacy et al., 2017).

The list of potential candidates was populated by speaking with the principal of the school, who was able to identify teachers who met the inclusion criteria for the study. Once the participants were identified, pseudonyms were assigned to protect their identities.

Procedures

The Institutional Review Board (IRB) process was streamlined as it pertains to the study. An initial application was completed and submitted prior to data collection. After the approval of the IRB at Liberty University, IRB approval was obtained by from the school district in Florida. When approval was obtained from both IRB entities and the principal of the school, research began. Information regarding the recruitment process was emailed to the potential participants. In addition to the recruitment process, an explanation of the study, time commitment, and process were explained. The participants took part in a face-to-face interview, focus group interview, and written communications regarding academic accommodations for concussed students.

The interviews were conducted in respect to the schedule of the participants. Open-ended questions were asked from a question list; follow-up questions were asked when necessary. Answers were transcribed for data analysis. Once the interviews were transcribed, the participants reviewed their answers to ensure that is how they wanted to answer the question.

The focus group was conducted like the interviews. The focus group had open-ended questions asked from a list, but additional questions were asked if prompted by the answers of the participants. The recording of the answers was transcribed. The final data collection method was presented in a journaling format where teachers answered written questions following their individual interviews.

COVID-19 is a novel respiratory illness that has caused safety measures to be taken by various institutions. As in-person interviews could not be conducted due to the health and safety precautions in place by the school district, interviews were conducted by a video conferencing platform (Zoom) and journal responses were conducted through the survey platform Survey Monkey. This alternative option allowed for the interviews to be conducted in a manner that was reasonable and safe for the researcher and participants of the study. For the school year in which the study took place, students could opt to attend school in person or virtually due to risks from COVID-19; therefore, teachers had an additional strain as they had to navigate teaching both in-person and virtually. There were difficulties gathering participants for the study, and the study participant number was finalized once all avenues of reaching out were exhausted.

The Researcher's Role

The primary role of the researcher was to design and implement a study that contributes to the growing body of knowledge that has been published in literature. The researcher was also responsible for maintaining and protecting the rights of the participants, employing ethical

practices and standards through all phases of the study. The protection of the participants included informed consent as well as maintaining the confidentiality and privacy of the participants. I collected the data from the participants of the study. To minimize any bias from the researcher, I used memo and journaling techniques to guard against imposing my thoughts upon the participants.

I have personal connections to the school district as I serve as the athletic trainer for one of the high schools. However, as my job is mainly after school, there are minimal interactions with the teaching staff of my school and the school for the study. The interactions that I have are with teachers who are also coaches and the administration. The teaching staff may know that there is an athletic trainer on campus; however, they may not know who the athletic trainer is. Because of my relationship with the coaches, they were excluded from the study. Coaches understand the state statute and the process for a student to return to activity. Because of my working relationship with the administration, I had their full support when looking to understand the experiences teachers have when implementing return-to-learn protocols and academic accommodations.

Data Collection

Data that is collected should highlight the phenomenon within real world context (Yin, 2018). For this design, group and individual interviews, documentation, and direct observation can be applicable for data collection (Yin, 2018). Interviews can provide explanation through the voice of the participant. Direct observation allows the researcher to see the context of the case, in real time. Documentation, including participant journaling, can cover questions unrelated to the interview. This can allow the participant to be specific and answer more freely in a private

setting. The researcher can review the writing and responses repeatedly. For this study, focus group interviews, individual interviews, and journal documentation were used for data collection.

Interviews

Interviews are done to see the perspective or world from the view of the subject (Creswell & Poth, 2018). Teachers were interviewed individually in a semi-structured, open-ended question format. The questions were posed in a manner to allow for themes to emerge describing the experiences encountered when implementing academic accommodations. The questions were presented in a manner to get to know the participants first before asking them about their experiences. The standardized questions were as follows:

1. Please tell me about yourself.
2. Please tell me about your educational background.
3. Please tell me about your professional background.
4. Please tell me why you became a teacher.
5. What is your knowledge about concussions?
6. What are your thoughts about a concussed student in class?
7. What aspects of your professional background equipped you to handle a concussed student in the classroom?
8. How would you describe the training you have received dealing with concussions and academic accommodations?
9. How would you describe the support you receive from administration when dealing with a concussed student in the classroom?
10. How would you describe the effectiveness of the school concussion policy?
11. How would you describe your role as an implementer of academic accommodations?

12. What do you believe your strengths are as an implementer for academic accommodation?
13. What do you believe your weaknesses are as an implementer for academic accommodation?

Questions 1–4 were introductory questions used for the participants to explain their background and to develop rapport between the participants and myself (Creswell & Poth, 2018). Carzoo et al. (2015) found that an educator who has managed a concussion was more confident than those who only had knowledge of a concussion, and that whether the educator was getting education (formal or informal), it was not enough to dispel myths and contributed to misconceptions about the illness. Ernst et al. (2016) stated that misconceptions about the illness were found in undergraduate studies for teachers; having accurate knowledge of a traumatic brain injury will assist in the developing of the appropriate interventions and educational programs for the concussed student. Dreer et al. (2017) concluded that there needs to be education support to enhance the concussion knowledge of educators who will be managing concussions in the classroom. Questions 5–6 were designed to understand the concussion knowledge of educators and the concussed student in the classroom.

Questions 7–10 asked the participants to detail the training they received regarding concussions and the support they receive from administration. Glang et al. (2015) found that limited training for educators and school personnel affected the education of children who had a traumatic brain injury or concussion. Hildenbrand et al. (2018) found that educational professionals receive inadequate training to deal with a concussion in the classroom and may contribute to students not receiving the necessary services needed. Romm et al. (2018) found that teachers and school administrators' personal experience contributed to what knowledge and perceptions they had of concussions. Romm et al. (2018) suggested that ongoing communication

with the support team of the concussed student will enhance the student's recovery. Gioia (2016) and Sunsara and Williams (2019) both agreed that having a policy (whether state, district, or school) is needed to promote the implementation of a consistent return-to-learn process. Having the consistency of the return-to-learn process clarifies for the student that a full academic recovery is needed before they return to athletics (Sunsara & Williams, 2019).

Questions 11–13 discussed the role of the implementers and the perceptions they have implementing academic accommodations for concussions. McGrath (2010) stated that the goal for the recovering student is to be able to keep up with academic demands that do not stress the cognitive function and worsen symptoms. The educator should know and understand that the recovering student will not be able to meet the expectations of class and adjustments needed should match what the student is capable of handling (Graff & Caperell, 2016; McGrath, 2010; Romm et al., 2018; Sarmiento, Donnell, Bell, & Hoffman, 2019).

Participant Journaling

Personal documents were examined during the data collection period. These personal documents were journal responses in which the participants received a link via email to complete the journal document using Survey Monkey following the individual interview. There were no identifiers attached to the survey link, and the participants were instructed not to include personal identifiers in their responses. The questions were unrelated to the interview questions and used to probe deeper regarding the participants' self-perception in implementing academic accommodations.

1. Describe what attitude is needed to implement concussion academic accommodations as an educator.
2. Describe a positive experience you had implementing academic accommodations.

3. Describe a negative experience you had implementing academic accommodations.
4. Describe how your attitude towards implementing academic accommodations has changed over time.
5. Describe your attitude towards implementing academic accommodations with a support team.

Questions 1 through 5 sought to understand the attitudes that the participants had when implementing academic accommodations and if previous experience contributes to the current style of the educators' implementation. Kasamatsu et al. (2017) found that intentions by themselves do not predict behavior when an individual lacks complete control, and that attitude refers to the opinion of the individuals, subjective to what is understood by others. As they looked at beliefs, Kasamatsu et al. (2017) found that there needs to be additional research on the role of the teachers implementing academic accommodations and their perceived ability to implement an academic accommodation in order to develop necessary training for educators. Romm et al. (2018) found that administrators did not know that teachers faced challenges when implementing academic accommodations and that teachers and principals did not have the same understanding of implementing academic accommodations; they continued to hold onto their personal experience with concussions and allowed their experience to contribute to their perception of concussions and implementation of the return-to-learn plan.

Focus Groups

Once the interviews and document analysis were completed, a focus group interview consisting of seven teachers was conducted. The focus group allowed the participants time to clarify a point and discussed any question or concerns. The questions for the focus group were open-ended using the videoconferencing platform, Zoom, and continued to elaborate on

concussions in the classroom and the experiences teachers have implementing an academic accommodation. The participants were in a relaxed environment where they could openly discuss how they implemented accommodations and think critically of the answers they provided. The questions for the focus group were as follows:

1. How often do you all interact as staff?
2. How do you handle group communication when supporting each other?
3. How do you handle group communication when supporting a student?
4. How would you describe your understanding of concussions in the classroom?
5. Describe the way guidance is sought for a concussed student needing adjustments to their protocol.
6. How do you describe the academic support team for a concussed student?
7. Describe the training that is utilized for the academic support team.
8. How often is the academic support team utilized for the concussed student?
9. Describe the strengths and weakness of the academic support team.
10. Describe your capability of adjusting academic accommodations without guidance or support from staff.

Questions 1–3 were formatted to get to know the group and the interactions they have together to build rapport with myself (Creswell & Poth, 2018). Questions 4–9 were designed to understand the communication within the academic support team, training for the support team, and assistance from the support team. Sarmiento, Donnell, Bell, and Hoffman (2019) conducted a qualitative study in which the focus group participants were able to express their concussion knowledge and speak about the communication and guidance of the return-to-learn academic accommodations of the student. Heyer et al. (2015) conducted a study examining what practice

and management high school principals used for school-aged students with concussions and found that the principals who had training were likely to promote training for other school faculty. It was also found in that study that schools differ in the resources and management of the students as they returned from the concussion and are in academic recovery (Heyer et al., 2015). Question 10 was designed to discover if the teacher could utilize the overseeing physician of the student for assistance in the implementation of the return-to-learn protocol. Santiago (2016) found that there is not open communication between the school and physician and that there needs to be a release form for the school personnel to openly discuss any changes that need to happen to a student's academic accommodation plan.

Data Analysis

Data collected from the interviews, participant journals, and focus groups were analyzed by the researcher of this study. The focus group and individual interviews were audio and video recorded with permission. The video and audio files were transcribed and coded using the pseudonyms of the participants. The transcribed data were coded using the computer-assisted qualitative data analysis software NVivo. The computer-assisted qualitative data analysis was a tool for the researcher to use for coding, categorization, and memoing of the data, but the final analysis came from the researcher. The data went through final analysis that was analyzed for emerging themes to support what was discovered in the individual and group interviews and participant journaling. The participant journals were analyzed and coded using the computer-assisted data analysis. Documentation used for this study was kept in a secure, password-protected file if electronic, and hard copies were kept in a keyed file box in a secure location.

The data were analyzed for common themes and concepts using the analytic strategy of working the data inductively (Yin, 2018). Using common themes assisted in pattern matching with the potential of creating new ideas for future studies (Yin, 2018).

Trustworthiness

Trustworthiness for this study was determined through credibility, dependability and confirmability, and transferability. Addressing the concepts of each ensured that trustworthiness was reached. To achieve and increase trustworthiness, bracketing, triangulation, member checks, external audits, and direct participant quotations were used.

Credibility

To establish credibility, triangulation of the data sources, methods, and investigators was used (Creswell & Poth, 2018). The triangulation of data sources included interviews, focus group interviews, and a participant journal. The process of member checking or seeking the feedback of the participant increased the reliability of the study as it allowed for the participant to clarify any misspoken words and clarify the accuracy of the account (Creswell & Poth, 2018).

Dependability and Confirmability

Through the constant examination of the procedures and investigation questions, dependability and confirmability were achieved. In addition, a running journal was objectively utilized to capture observations that were not able to be noted through audio transcription. Reliability was needed for the study to have dependability, which allows for replication of the study. Having external auditors that have no relation to the study but are familiar with the topic kept the researcher honest about the meanings and interpretations (Creswell & Poth, 2018).

Transferability

The sampling process that was utilized for this study allowed for the transferability of the research. The sample of participants can be used if another researcher wants to replicate the study as external validity (Creswell & Poth, 2018). To increase the chances of replicable results, the study provided thick descriptions accounting for the views of the participants and other variables, quotations, action verbs, or details, that may affect the replication of the study by future researchers (Creswell & Poth, 2018).

Ethical Considerations

Prior to conducting the study, the ethical framework that was established included submitting an IRB application to Liberty University and the school district for approval to conduct the study. Informed consent forms were used for the participants explaining the study and the IRB guidelines for both institutions followed.

To protect the confidentiality of participants, the following ethical considerations were set in place: I allowed each participant to select his or her own pseudonym. The name of the school was replaced with a pseudonym and only identified by its region. All data were coded to the pseudonyms assigned. All collected data are kept private in a safe environment, either electronically in a password-protected file or as hard copies kept in a box that is secured by lock and key and kept by the researcher. Communication that occurred with the dissertation committee members did not include any names of the participants to maintain confidentiality.

The participants were treated with respect and dignity as it aligns with my Christian worldview. The study that was conducted honored God and aligned with what He has established for us through His word to follow the guidelines of IRB according to the law or rules. The

findings of this study were reported as they were revealed and any bias that may have occurred was minimalized through memoing and journaling.

Summary

This chapter detailed and discussed the methods and procedures that took place in understanding and describing the experiences teachers have when implementing concussion academic accommodations. A qualitative instrumental case study approach was used to seek the answers to the research questions. Ten teacher-participants from a school in Florida were interviewed individually and responded to journal prompts, and seven of those participants participated in a focus group interview. Through data analysis and pattern matching, themes emerged. The information gathered from this study contributes to the literature existing to guide teachers in being efficient facilitators of academic accommodations for concussed students.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this qualitative case study was to understand the concussion knowledge and experiences of local secondary school educators as they implement return-to-learn academic accommodations for students recovering from a concussion. The focus of the study was to gain insight into the teachers' experiences defined as role, training, implementation, and interaction when implementing academic accommodations for concussed students. The participants were asked questions in interviews, focus groups, and journaling that supports the research questions of this study.

This chapter offers in-depth detailed experiences of the participants derived from the data collected. Themes developed though coding are discussed, including personal self-perceptions when implementing academic accommodations. The research questions are answered with the data collected. The data collected provide a better understanding of the experiences local secondary school teachers had when implementing concussion return-to-learn academic accommodations.

Participants

There were 10 participants in this case study (see Table 1). The participants were identified through an initial screening by the school's principal. Table 1 identifies each participant and his or her position at the school. Pseudonyms were assigned to each participant, the local school, and school district to protect the identities and interest of the participants involved in the research. A detailed description of each participant is provided in the following table.

Table 1

Participant Background and Position at School

Pseudonym	Position	Subject Taught	Years Teaching
Jazz	Teacher	Science	30+
Leslie	Teacher	College Prep	30
James	Teacher	Social Studies	10
Lincoln	Teacher	Special Education	28
Thor	Teacher	Physical Education	30+
Abby	Teacher	Business	15
Alpha	Teacher	Reading	20
JVM	Teacher	Science	18
June	Teacher	Math	20
John	Teacher	Social Studies	10

Jazz

Jazz is in her second-year teaching at Beach High School. She has taught everything from music to science. She holds a bachelor's and master's degree and became a teacher because she found that she was good at instructing and did not want to be in a position of disliking her job. Jazz has taught for over 30 years and is 54 years of age.

Leslie

Leslie has been in education for 30 years. She has taught from elementary to high school level and was an area superintendent prior to working at Beach High. Leslie completed her first full year at Beach High and has a doctoral degree in educational leadership. Leslie became a teacher as she felt drawn to work with kids. Leslie has had first-hand knowledge and personal experience with concussions as her eldest child suffered one and was placed on academic accommodations. Leslie witnessed firsthand the academic struggles her child went through and had to advocate on her child's behalf throughout the academic recovery.

James

James has been teaching for 10 years and is 33 years old. He has completed his fourth year teaching at Beach High. James is a gifted consultant and enjoys real-world experiences which was what drew him to teaching social studies. James recognizes that he can have impact on his students and the world through his career journey. Outside of implementing academic accommodations for concussed students, James does not have knowledge on concussions and only hears about them from his friends who are coaches.

Lincoln

Lincoln knew he was destined to be a teacher and he knew he wanted to be a gym teacher. Lincoln is 51 years old and has been teaching for 28 years. Starting off as a gym teacher, Lincoln wanted more of a challenge and transitioned to the special education department at Beach High. Lincoln knows about concussions as he follows professional sports and has had firsthand experience working with students who have had concussions or traumatic brain injuries.

Thor

Thor, 62, is a former collegiate athlete who played in the late 1970s. Football is a passion for Thor as he played and wanted to coach after completing college. Thor experienced concussions himself while he was playing. He has been teaching at Beach High for 38 years and works in the physical education department. he has witnessed the evolution of concussions during his time and now errs on the side of caution when he hears of one in his class.

Abby

Abby's pathway to education is unique. She knew she always wanted to be a teacher and has 15 years of teaching experience after working in a medical practice as a purchasing agent.

She finished her degree 20 years after graduating high school and raising her family. She is 53 years old and is fortunate to not have been personally affected by her children or herself having a concussion.

Alpha

Alpha is in her 50s and holds a doctoral degree in educational leadership. She became a teacher after realizing her nieces and nephews needed an advocate in the classroom. She recognized there was a need for diversity in the school system and has been teaching for 20 years from the elementary school level to high school.

JVM

JVM has been teaching for almost 20 years and worked for a vending company prior to becoming a teacher. During his college education, he bounced around different medical pathways before realizing teaching was his calling. While he was exploring the different options, he was completing the courses needed for a teaching certificate in the State of New York. JVM has taught at Beach High for 16 years; he is 53 years old and suffered a concussion while he was a college wrestler.

June

June is 54 years old, has taught in public and private schools, and holds a doctoral degree in curriculum development. She has been in the education profession for 20 years after working in government for 10–11 years. June has a passion for teaching and thoroughly enjoys teaching people, especially children. Personally, June has had a child that was affected by a concussion but classroom modifications were not put in place for her child.

John

John is 34 years old and is a 10-year veteran in the classroom and school system. He has various experience coaching and has witnessed the medical treatment of a concussion when working in collegiate football. John has also sustained a concussion himself and is apt to stay on top of protocols and safety procedures for the interest of his students.

Results

This study was centered on 10 participants at a local high school in Florida. The data were collected over 3 months through individual interviews, journaling, and focus group interviews. The interviews were video recorded and transcribed by the researcher, upholding the safety measures put in place by the school district. Data were collected during a period of time in which COVID-19 was actively ongoing. Initially, scheduling interviews was the biggest challenge as the teachers were already facing a lot of strain with the daily tasks they had to complete with COVID-19. Once the participants understood the purpose of the study, the interviews were scheduled first, followed by the journal prompts and focus group interview.

The individual interview granted an opportunity for the researcher and participant to be in an intimate setting in which the participant was able to provide thought-provoking responses. The participants were able to clearly articulate and clarify their responses as well as elaborate upon a response, contributing enough data to be analyzed. The focus group interview was video recorded and transcribed by the researcher. in the journal entries, participants responded to five questions following the individual interview. Reponses were brief but provided additional details on the perception educators have when implementing academic accommodations. During the focus group interview, as the questions were asked, the participants were able to elaborate from other participants' responses or speak on their own experience when implementing academic

accommodations. The focus group interview was collaborative in nature as the participants were comfortable in driving the discussion when questions were posed. The manner in which the data were collected from the focus group provided great insight into what the participants were saying as there was great enthusiasm and inflection through purposeful conversation. The participants were able to clarify any misspoken words from the individual interview and discuss further their perceptions on the implementation of the academic accommodations. As the responses were brief from the journal entries, the participants had the opportunity to speak more on their perceptions in a collaborative manner, thus allowing for a group insight of how the participants felt when implementing the academic accommodations. The data gathered from the focus group interview were representative of the participants in a group setting. The data collected from each method of collection provided insight on what experiences educators have when implementing academic accommodations for concussed students.

Theme Development

From the collected data that were reviewed and analyzed, six themes emerged (see Table 2). During the data analysis, codes of similar meaning were grouped from the data of the focus group interview, individual interview, and participant journal into an overall theme that shapes and defines the study. Table 2 identifies the codes and themes that were developed from the data analysis. The themes that appeared throughout the methods of data collection are as follows: (a) deficient implementation protocols; (b) best practices for return-to-learn (RTL) academic accommodations; (c) teacher–student relationship; (d) teacher–teacher relationship; (e) barriers; and (f) administration support. The themes and codes will be discussed in relation to the findings.

Table 2

Codes to Inform Themes

Codes Developed	Informed Themes
No clearance note for student	Deficient implementation protocol
Minimal to no training	
Unaware of school concussion policy	
One way communication	
Ownership of student	Best practices of RTL accommodations
Informed guidance of RTL	
Knowing what to do with RTL	
Advancing RTL with education tools	
Medical professional guidance	
Supporter	Teacher–student relationship
Utilizing resources for success	
Getting to know student	
Open-minded	
Awareness	
Empathy and understanding	
Meeting student's needs	
Collaboration	Teacher–teacher relationship
Internal communication	
External communication	
Positive attitude	
Negative attitude	
Daily Functions	Barriers
Parent-student reluctance	
Strain of course material	
Student giving up	
Time/overwhelmed	
Lack of attention to concussed student	
Support is minimal	Administration support
Support is limited	
Support is adequate	
One way communication	
Teacher individualizes RTL plan	

Deficient Implementation Protocols

Currently, the teacher receives the RTL academic accommodations through the student's guidance counselor or the principal's secretary. There is no formal discussion for the RTL plan from the sender to the teacher, nor is there a follow-up given stating that the student is cleared and has healed from the concussion and is no longer on academic accommodations.

Many of the participants were unaware of the school concussion policy and referred to the athletic concussion policy that is in place. The participants were able to identify the form used for academic accommodations from the district, but noted that if a teacher has not encountered this, then they would not know of the policy. Participants mentioned that there could be students who may be walking the campus with a concussion, and training should be held for the teachers during the pre-school workdays from a medical professional with concussion knowledge; teachers should also hear about classroom experiences from students who have suffered a concussion. Utilizing these methods, the participants said, would give them a relatable knowledge set in that they can better understand what happens during an invisible injury. One participant had not had a concussion or experienced one on a personal level, and when it came to concussion protocol training for educators, the participant stated,

> I've never had a concussion. I have no idea what a concussion is like. It would be great to have a group of students talking about their experience. Different levels of students, especially straight A students who were like I am really a great student but after that concussion couldn't operate. It would be good to hear from students explaining to teachers this is what it felt like. Like the student explaining how long it [took] them to recover, just hearing from real experience.

Best Practices for RTL Academic Accommodations

A theme that emerged that was not discussed in previous literature is best practices for implementing RTL academic accommodations. The participants recognized that their role in implementing RTL academic accommodations for the concussed student is ownership, to do right by the student and fulfill what is written on the form that is submitted by the physician. However, they sought clarification on which educational tools they could use to implement the academic accommodations for the concussed student and guidance on what to do when they received the RTL from the physician.

Abby stated,

> Well, really, I mean granted I am not the one who creates them but I have to implement them. If I don't do it in the classroom, then it is not going to happen. Really, whether we like it or not, the onus falls on the teacher like everything else to make sure that it happens.

Regardless of the knowledge about concussions held by the educator, when the teacher participants received written guidance from the overseeing physician, they were comfortable abiding by what was written; however, even though the student's limitations were written, there were several participants who were unsure of what the limitations relating to the healing process meant and how best to use educational tools in the academic recovery. JVM mentioned,

> Knowing exactly what to do as far as [implementing academic accommodation]. I am not really sure what the best way to handle that. Is it [to] put their head down but that's not always the best thing for the concussion. Knowing the medical professional [thoughts] what is the best [to use educational tools]. Because in some cases it may be better that

they do their work that day or maybe it is better that they try to concentrate or maybe it is not and maybe that is the wrong thing to do.

When it came to the support for the student through a support team, the participants agreed it would be best to have knowledge and academic adjustments be sent directly from the physician to the school nurse rather than the guidance counselor for the sense of urgency that this matter carries. The participants also recognized that the school nurse should be part of the support team and the main communicator from the teachers to the parents or physician as the nurses are the ones with the knowledge set to communicate properly on behalf of the student. Even though there is recognition that the communication should be coming from the school nurse as the school representative for the student, the school nurse may not be on campus daily. June best described this issue as "I would say that we are lacking in the nurse support but that is a budgetary item. Not that the nurse is communicating with us it is just that we have the lack of hours with a nurse."

In terms of current training, there is none that is offered. The participants described relying upon their own experiences to guide them through implementing RTL and other disabilities academic accommodations, relying upon their years and experience of being a teacher, or relying solely on the form as their guide. Participants emphasized that they can limit time in class, allow for students to have breaks, or change the delivery method of class content, but there is no true way to understand and see if the student is recovering nor to know what the best practice is for RTL implementation.

Teacher–Student Relationship

The participants indicated that they are passionate about their position and their students' success. Regardless of what the student is going through, the participants support their students

and have an open mind when contributing to the student's success during his or her academic recovery. One way that the teacher supports the student as indicated by the participants is by utilizing resources that the teachers have developed throughout their teaching careers to care for the student in academic recovery. John stated, "I have 10 years of teaching under my belt, I feel like I gave a pretty good amount of tools in my tool belt to use in terms of differentiating sources that I use . . . in accommodating those students." In addition to resources gathered from their experience, awareness of the student's needs is another way in which the participants indicated support of the student through his or her academic recovery. Thor and Lincoln both agreed that it is imperative for the teacher to have "awareness of the student's [current] needs" to safely guide them through the RTL academic accommodations. Having this awareness, one participant stated, allows for the teacher to know "the struggles and risks of a student with a concussion." This awareness contributes to the teacher's "willingness to learn and accommodate" on behalf of the student.

Aside from awareness, communication with the student is imperative. Knowing the student and his/her current needs contributes to the appropriate implementation of the academic accommodations. James stated, "I really get to know the students at the individual level. I always make sure the first week of school, I really get to know them." From the participants' perspective, having this relationship establishes a baseline of the student's cognitive and social abilities. Alpha explained, "I am working with the student on a daily basis and I can see if the accommodations are working." The participants also stated that having this understanding and knowing the student's baseline when interacting with a concussed student, they can have "flexibility and adaptation in [their] approach" as it is "necessary for a teacher to effectively handle a student suffering from concussion-based symptoms."

The participants also stated in the focus group that having empathy, understanding of the student's situation, and meeting the concussed student's needs contribute to successful implementation of the academic accommodations. A positive relationship outcome is knowing that the students are comfortable enough to speak with teachers regarding extra assistance during their recovery.

JVM stated,

> I have good communication with the student. I would be aware of that. If there are few teachers where the student might not feel comfortable bringing that up or letting them know they need an accommodation so for example, if you get an email that says student may have a concussion that says have a headache, not able to pay attention. If a student feels like that is what is happening in that class, they might not feel comfortable going to the teacher . . . a lot of students feel comfortable with me about 99% of the time [and] would have no problem letting me know that I need an extra day or today is not working for me. If I know that is happening, then I can be accommodating to that.

With this communication, the participants from experience were able to meet the needs of students. In their journal entry, one participant described their experience with a student who was struggling:

> A struggling student had asked for help and time to complete overdue assignments. We agreed on a time for one-on-one instruction, after only a few meetings and some extra work put in by the student, the overall grade and long term interest in the course improved.

Teacher–Teacher Relationship

During the focus group discussion, the participants indicated that in a typical year, there is more communication between teachers. However, due to COVID, teachers were limited in the communications they had with each other and communication was conducted primarily through electronic mail as opposed to face-to-face; normal monthly staff meetings were held virtually. In the collected data, the participants voiced that attitudes including collaboration and communication, internal and external, were needed when implementing academic accommodations for the concussed student.

The participants discussed collectively several attitudes in the teacher–teacher relationship and dealing with a concussed student. The type of attitude that is present with the support team for a concussed student made a difference in the outcome that was achieved. The participants stated that if there was effective communication amongst the teachers, they would be able to proficiently collaborate, bounce ideas off of each other, and seek different approaches to ensure that the concussed student was getting the same or similar treatment in each respective classroom. However, some participants were also leery of the support team due to previous collaborative teamwork. One participant said, “If it is a ‘do as I say’ team, then no, I do not want anything to do with it.” An authoritative personality was a deterrence to working with colleagues even though participants knew that it could affect the student’s recovery. Further clarification was needed, and the participants had the opportunity for clarification during the focus group. Those participants who were neutral towards a support team clarified that they would prefer the team approach, indicating they would welcome any additional help. When the participants were able to discuss the support team during the focus group, those who were opposed to the idea understood and saw the perspective of those who were for it; they acknowledge that if the

support team is collaborative rather than authoritative, the success of the concussed student is more likely.

During the focus group, the participants explained that they felt that internal communication between teachers would contribute to the success of the concussed student. As the collaborative efforts between teachers increase, communication between teachers and the medical professional at the school, who would be the liaison to the family or physician, would increase, leading to an "individualized approach" for each concussed student. However, the participants anticipated that they would face barriers from external communications. During the focus group discussion, the participants named individuals outside of the school support team who could act as barriers to successful implementation: the front office secretary, attendance clerk, and parent. The participants felt that parents were difficult to contact, which would prevent the teachers from getting appropriate information on the student. They also felt that they were dependent on whether the front office was notified of the student's medical situation and whether the office, in turn, notified the teacher that a student had a concussion.

Barriers during the School Day. There are many tasks that teacher needs to accomplish in a school day. The participants identified several barriers during the focus group that may inhibit them from fulfilling the academic accommodations to the benefit of the student. During the time of the study, teachers had to instruct students in person and virtually due to the COVID-19 learning modifications. The participants summarized that this was a year for accommodations regardless of the situation, but several weaknesses for implementing academic accommodations for concussed students were as follows: time/overwhelmed, class constraints, parent and student reluctance, and lack of attention to detail.

Teachers are limited in instructional time. The teacher has 50 minutes to deliver class content, meet the needs of students, and adjust the class period as appropriately fit. In the eyes of some participants, there is not enough time or personnel to combat the tasks that need to be accomplished in a day. Alpha stated, “The fact that we have so many students that we have to accommodate, it’s a lot of students for teachers to have to be able to keep up and that would be the weakness.” Abby noted,

> Time. Definitely time. I will get so back logged with everything else that I have going on that I might forget to do the hard notes and if the kid does not constantly remind me. . . . I keep telling my kids that was more than five minutes ago and if you don’t remind me then I am not going to remember.

Several participants taught courses that were rigorous and felt that because of the demands of the course, they were not able to accommodate the concussed student. In a unit, they may have room to adjust the content, but if a student is unable to keep up, the student ends up losing that unit. One participant noted from the journal response,

> There was a year that I had all AP classes that include a large amount of outside-of-class reading. When a student had approached me that they had been diagnosed with a concussion, I set up an alternative schedule for him to complete his assignments . . . outside of that adjustment, there was not much wiggle room in the AP curriculum. His symptoms worsened and he ended up missing a number of days and was never really able to catch up.

The participants were further asked during their individual interviews the following: If the students were given the opportunity to complete their assignments in an alternative class space, would it be beneficial for them and the student to do so? The participants were split on

this decision as they did not see the need but understood how it could benefit the student if there was accessibility for it to occur. June stated,

> Ok, if we were to think about all things at the time and we are to think about supporting that student with resources and budgets, maybe to hire someone to place in a room like that, that would be ideal. . . . We have teachers who have quit left and right and we have substitutes who don't show up and we have classes moved into cafeterias or in the media center in mass groups. We don't have the luxury of doing that maybe so yeah, if we have the accessibility maybe in the guidance counselor's office where they have their meetings that would be a good place to have it.

As this was the situation for one concussed student, the participants agreed during the focus group "that if the student is not given the opportunity to catch up then they give up and that is what we do not want to happen."

Parent reluctance and the student giving up were other barriers to the implementation of the academic accommodations. During the focus group, participants noted that students use the accommodations as an excuse to not get better or perform well in class. The participants agreed that probing questions are needed to assess the student and his or her needs so that the student does not take advantage of the accommodations provided.

Teachers have high expectations for the students in their class and want them to succeed. Participants mentioned that due to these high expectations, they get caught up in the flow of the class and pushing the student to do and be more. At times, they forget that the concussed student may not be able to reach those standards short-term due to a brain injury. James explained,

> I really need to make sure that since my bar is high, the harder the topic, the more combinations there are and I need to vary my accommodation sometimes and really make sure that my students understand what their accommodation is specifically.

As the teacher holds the students to high expectations in their course, there are times that attention to detail may be missed. Depending on the course, teachers may not have the ability to adjust the content and they may fail to listen to what the concussed student is saying of the course difficulty during the time of academic recovery. Jazz summarized,

> Sometimes I go too fast. I don't listen as well as I should. Although I do have to push them [students] sometimes. Probably, I do not listen as well as I should. The old cliché get the bit in your teeth and you just go. That's kind of the expert blind spot. I expect that I am here and they are here and I just push on when I should not have.

Administration Support

Administration support of the participants was mixed. A third of the participants felt that they had no support, a third that felt that they had limited support, and a third felt that they had adequate support. For the participant group that felt they had no or partial support, the administration left the academic accommodations up to the teacher and the implementation plan was individualized to the teacher. Leslie felt that the administration should step in as a "secondary role" if something needed to be addressed or the appropriate modifications were not being met. For John, the administration support depended on the overseeing assistant principal (AP) he had for the year.

> In the past, it's been hit or miss, depending on which AP is overseeing me, but most of the time it tends to be pretty supportive as long as the teacher has a plan in place, as long as it's not adding extra work to their plate.

One participant did not have the same experience, explaining that the administration support was "minimal" and other than the initial email letting the teacher know of the student's accommodations, "I don't remember them asking me how the student was or is everything better now."

The participants with adequate support were the ones who had direct access to the administration by means of walkie-talkies. Lincoln described the administration support as "very supportive of being flexible, allowing accommodations and modifications for any kid that may need it" and allowing the student to be tested in different ways other than traditional testing. Thor was able to directly talk to his administrator daily and in each period due to the nature of his class, physical education.

Research Question Responses

Analysis of the responses gathered through the participant interviews, journaling, and collective focus group interview provided enough detail to answer the research questions of this study.

Research Question One

How do educators describe the training they receive for handling a concussion in the classroom? Yearly, prior to schools starting, secondary school educators participate in pre-school workshops, meetings, and trainings to prepare for the upcoming school year. During this time, the district and school discuss policies, especially those in relation to academic accommodations such as 504 plans or individual education plans. While this is ongoing, simpler policies or accommodations that are not seen as often are not discussed such as the concussion RTL academic accommodations.

Even though the participants were confident enough to implement academic accommodations for the concussed student, they were lacking a clear directive and protocol. Many times, the participant as a teacher is individualizing the accommodations for the concussed student with “no clear protocol” and no follow up.

Having a medical professional guiding and leading the trainings was a vocal consensus amongst the participants. During the individual interviews, the participants vocalized that training would be optimal if it were offered by a medical professional trained in concussion management giving instruction on the academic accommodation protocol followed by a student or several students who had suffered a concussion sharing their lived experiences.

Research Question Two

How do educators describe their role in implementing concussion academic accommodations? The participants had no problem owning the academic accommodation for the concussed students and guiding them through their academic recovery. While the concussion knowledge of the participants varied, the participants were able to follow the script of the RTL academic accommodation and adjust the protocol in the favor and benefit of the student.

While participants were able to follow the form, they were still unsure what each part of the protocol meant and how they could incorporate “educational tools” into the plan for the student. The participants agreed that a support team is sufficient to help the concussed student as it “always helps to collaborate and work as a team to support students” and “communication is key” in seeing that all of the student’s teachers are on the same page when implementing the accommodations.

Research Question Three

How do educators describe how they handle a concussed student in the classroom? To be successful in handling a concussion in the classroom, relationships are important in seeing that the accommodations are implemented properly. Teachers thrive on the established relationship that they have with their students and with their colleagues. The participants had no issues with implementing the protocol from the physician; however, to know how to adjust for the student, the participants relied upon the established relationship with the student that had been formed at the beginning of the school year. The time it took to get to know their students was enough for the participant teachers to recognize if their concussed student was having issues or for the student to "feel comfortable enough in approaching" the teacher participant to request a break.

The relationship that the participants had with their colleagues was equally important in handling a concussed student in the classroom. Being in a conducive environment that would allow for communication and eliminate a "my way or the highway" mindset was vocalized by the participants. For the support team and teacher relationships to work, the team had to form a communicative and collaborative environment. If negative attitudes were shown within the team approach, then the participants felt they were able to better handle the accommodations individually.

While the relationships were positive and successful in handling the concussions in the classroom, the participants faced barriers that impeded their progress and handling of the concussion in the classroom. The barriers that the participants faced are some that challenge teachers regardless of whether or not they are assisting a student with academic accommodations. Time, attention to detail, course constraints, and parent reluctance were some impediments that impose on the handling of a concussion in the classroom. As the participants

had to adjust for these barriers, some were able to “accommodate all students regardless of an issue or not” to adjust for the barrier. While these were negative impacts to the handling of concussed students, the participants were able to find a way to see that the concussed student did not feel impacted by their illness.

Research Question Four

How do educators describe the assistance they receive from administration for handling a concussion? The participants were vocal in that they felt a type of assistance from administration when they had to implement the academic accommodations for the concussed student. From their interviews, the participants described ways in which the assistance came from administration whether they were “super supportive” or “minimally” supportive. The assistance from the administrative staff varied depending on which administrator the participant had or whether the administrator possessed “experience and knowledge” dealing with concussions from previous years. The inequality of assistance was described equally amongst the participants which contributed to some participants developing individualized plans so that they would not add more to the workload of the administrator, leading to the participants doing more and adding more to their own workloads.

Summary

Several themes emerged from the data that were collected to support the research questions of this study investigating the participants’ experiences implementing academic accommodations for a concussed student. The data indicated that the participants implemented academic accommodations even though they did not have a clear protocol from the school to do so or assistance from administration, nor the proper training on what the protocol meant. The relationships that the participants formed with their students were supportive enough for the

participants to know how to adjust the protocol for the student. Utilizing their experiences, the participants figured out ways for the best practice in implementing the academic accommodations for the concussed student. However, they agreed that a medical professional trained in concussions should be advising their student management and providing trainings for educators. This study produced applicable themes provided valuable information on the experiences of secondary school teachers when implementing concussion RTL academic accommodations.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this qualitative study was to describe secondary school teachers' experiences and knowledge when implementing academic accommodations for concussed students. This chapter will acknowledge the findings as well as discuss the significance of this study in relation to the empirical and theoretical research conducted on educator knowledge implementing academic accommodations for the concussed student. Implications, methodological and practical, will follow, delimitations and limitations will be discussed, and recommendations for future research on educator experiences implementing academic accommodations will conclude the chapter.

Summary of Findings

The findings presented in this summary resulted from individual interviews, journaling, and a focus group interview with the educator participants. The collected data answered the four research questions driving this study.

The data analysis for the question "*How do educators describe the training they receive for handling a concussion in the classroom?"* showed that educators receive minimal to no training on the implementation of academic accommodations for concussed students. It was clear that the educators had to rely on previous experiences implementing academic accommodations and resources gathered throughout their professional career to ensure that the student was recovering well academically. The educators revealed that training would be beneficial even if they did not have to implement a return-to-learn (RTL) academic accommodation for that school year. Having that knowledge would be sufficient to use as a resource and tool. The training should be led by a medical professional along with students who have experienced a concussion

in the classroom. This form of training would provide knowledge and understanding to better implement the RTL academic accommodations for the concussed student.

The data analysis for the second question "*How do educators describe their role in implementing concussion academic accommodations?"* indicated that regardless of their respective concussion knowledge, educators would embrace the accommodation and implement it. The educator participants had confidence in themselves to fulfill the written guidance from the physician; however, they were unsure of what each adjustment meant, how it could apply to their class, and what educational tools they could use to support the concussed student.

The data analysis for the third question "*How do educators describe how they handle a concussed student in the classroom?"* indicated that there are two relationships for the success of the student's academic recovery. The educator's knowledge of the student's cognitive and social baseline from the beginning of the school year provides enough information for educators to evaluate whether the academic accommodations are working or if the educator should simplify them. The communicative relationship between teacher and student is vital; if students believes that the teacher cares, they are willing to express how they are feeling and if they need extra time or help.

The teacher's relationship with their colleagues is successful if the communication is supportive, collaborative, and positive. If educators feel they are in a position in which colleagues are not supportive, collaborative, or positive, this study found that they would implement the academic accommodations individually regardless if they needed help.

Barriers in the implementation of the academic accommodations for the concussed student come from day-to-day tasks, attention to detail, or time. The barriers mentioned proved to be a block in the implementation. At times, teachers may be so overwhelmed with

assignments they need to fulfill or are set in motion that they forget about what the concussed student is going through. After a reminder, even with the barriers, the educators found a way to ensure that the academic accommodation was implemented in the best interest of the concussed student.

The data addressing the fourth question "*How do educators describe the assistance they receive from administration for handling a concussion?"* revealed that the educators were split in the assistance they received. Some educators felt that there was amazing support in which the administration would do what it took for the success of the student, while others felt that the administration left the accommodations to the educator and would only help if the academic accommodations were not being followed. It appears that as there are inconsistencies with the administration assistance; the communication for the concussed student between teacher and administration seems to be nonexistent after the initial information email.

The research questions did not address specifically the concussion knowledge of educators or the teacher–parent relationship. However, these are important to discuss. The data revealed that the concussion knowledge of educators was minimal unless they had a personal experience with an academic accommodation. The educators indicated that their concussion knowledge was gained from media and current events in professional sports. At minimum, the educators were able to state one to two concussion symptoms but were not able to elaborate how a concussion occurs unless they had a personal experience with their child sustaining one or taught a class that explored the human body. The parent–teacher relationship was discussed briefly amongst the participants during the focus group interview. When it came to adjusting the protocols themselves, the participants felt that it would be beneficial for them to call the parents or guardian of the student to understand and see how they were adjusting at home and "what

they're doing at home." They felt that the communication with home does need to improve "so that they can then on our end come up with a more efficient plan as to realistic expectations going forward with respect to the student."

Discussion

The educators' experiences can be connected back to the literature review and studies of educators implementing accommodations and their knowledge of concussions. This discussion will relate the data to prior studies, agree with prior research, extend on preceding research, and add new contributions to the research that is conducted on secondary school educators implementing academic accommodations for the concussed student.

Empirical Literature Discussion

RTL protocol for a concussed student is an academic accommodation protocol used by the treating physician to integrate the symptomatic or asymptomatic student back into the classroom following a concussive injury (Baker et al., 2014; Halstead et al., 2013). The educators throughout their interviews acknowledge receiving this academic accommodation when having a concussed student in the classroom and implementing the protocol in the classroom.

The education and professional experience of the participants varied, and the instruction and implementation of the academic accommodation varied, depending on the preservice route participants took in their educational training. The participant educators who did not have a position outside of education were apt to use resources that were learned from their field experiences and knowledge gained from working with a mentor (Cajkler & Wood, 2016; Simons et al., 2020). Educators who held a position outside of the education field prior to becoming a

teacher used mentoring and relationships to implement the academic accommodations (Zientek, 2007).

At the time of the study, professional development and training for educators regarding concussion education was not available for the participants. The educators in this study agreed that there is a need for professional development in the form of training that would enhance the RTL management and increase the knowledge of the educator. JVM stated, “It seems like it would be helpful. The training shouldn’t be too demanding, straightforward information, what to watch out [for], and maybe how to accommodate the student.” The educators’ sentiments on professional development and training are reflective of current studies that highlight the need for teacher concussion education and professional development (Davies & Tedesco, 2018; Hawkins, 2019).

James was accurate in saying that the educators are dealing with a brain injury and that a sense of urgency should be emphasized for the student. The educators understand that a concussion influences school performance. One participant had a concussed student’s symptoms worsen, which caused that student to miss several days of school and prevented the student from catching up in class. Even with this lived experience, the educators still held misconceptions on concussions and concussions in the classroom. Due to this evolving issue, the educators want formal training in how these issues can be addressed in the classroom and the appropriate academic accommodations that should be given to the student (Dreer et al., 2017; Kasamatsu et al., 2017; Sarmiento, Donnell, Bell, & Hoffman, 2019).

The educator participants have expressed the need for a support team with the school nurse being the head and communications coming from that person. The participants also expressed that they would need more information of the RTL by the physician to use the best

educational tools in implementing the accommodations for the student. These findings support Bressan and Babl's (2016) and Davies and Tedesco's (2018) findings of having a support care team led by the school nurse for the classroom management. Utilizing the physician for training and guidance of the accommodation supports what Sarmiento, Donnell, Bell, and Hoffman (2019) found for the best practice in care for the student who is recovering academically from a concussion.

Oreshkina and Greenberg (2010) found that teacher support gives the student strength but also allows for the teacher to make a connection with the student to see what workload the student can handle as they progress through coursework. This finding is supported by the participants who noted that the beginning of the school year is the time for the teachers to get to know their students' cognitive and social baselines. They also noted that when the teacher creates a communicative relationship with the student, the concussed student feels relaxed enough to express how they are feeling during the process. The student is also comfortable enough to say the instruction may have been too much for them that day, which is support by Ruzek et al.'s (2016) finding.

Communication between teachers is extremely important for the success of the team but is also in the best interest of the student. As Hallam et al. (2015) found, the participants stated that effective communication needs to be positive, collaborative, and supportive. Knowing what roles the teacher has when communicating about the concussed student leads to the collaborative team work as Bowe and Gore (2016), Dallmer (2004) and Leader-Janssen et al. (2012) found. Understanding roles deterred any authoritative and negative behaviors that may exist.

The participants identified several potential barriers to successful implementation of the academic accommodations. Parent reluctance was noted by the participants. The participants

suggested that communication regarding the student should be open for any modifications to occur. Adams and Christenson (2000) found that the trust between parent and teacher comes from communication. Santiago et al. (2016) and Witmer (2005) found that if teachers contact parents, trust is created which is corroborated by what the participants noticed when seeking to modify accommodations based on parents' feedback and insight.

The support that the participants received from administration varied. There were some participants who had adequate support and communication from the administration similar to Neill et al.'s (2011) findings: the needs of the teacher were met with the support from administration for the specific situation. Neill et al. (2011) also found that communication is needed for the success of the team. This finding is supported in the study by the participants who stated that even though assistance was minimal and the teacher was left to implement the protocol, if they needed help from administration, they could ask.

Time, class constraints, and attention to detail were the other barriers identified from the data. The participants mentioned that due to the structure of their courses, they may not have the flexibility to fulfill the academic accommodations or they may be caught up in day-to-day tasks so that the concussed student is overlooked. There are no reports that look at the time length of class and class structure when implementing the academic accommodations for students. This is an area in which further research and development can occur.

Theoretical Literature Discussion

Two theories were used as the guide for this study: Ajzen's theory of planned behavior and Bem's theory of self-perception. These theories were chosen as they relate to intended behaviors and perceptions when implementing academic accommodations for the concussed student and they were used previously when looking at health behaviors.

The collected data from this study indicated that the participants felt comfortable implementing the concussion academic accommodations and other academic accommodations for students based on their experience gained over time. The participants reported that the implementation of the concussion academic accommodations was done individually as opposed to using a support team approach.

The theory of planned behavior defines that the behavior an individual has formulates a perception. Ajzen et al. (2007) understood that the attitudes towards a behavior can influence the control that the person or individual has when performing the behavior at will. In the case of this study, the participants formed a stronger intention to perform the behavior of implementing academic accommodations from positive perceptions and attitudes they gained through experience over time (Dunn et al., 2018; Yan & Cheng, 2015).

With years of professional experience, the educators were self-enhancers which led to a positive self-perception in the implementation of the academic accommodation (Bollich et al., 2015). According to Ajzen (1991), a person can decide to perform or not perform a behavior at will. There was strong evidence from this study that indicated that the participants intended to perform the behavior individually. When they spoke of collaborating as a group, the likelihood of implementation decreased due to previous negative experiences with collaborative groups.

In agreement with the theory of planned behavior, Bem's (1972) theory of self-perception considers the actions that are performed based on the viewpoint of the observer. The theory of self-perception implies that individuals develop their attitude and emotions from the observations in which the behavior occurs (Bem, 1972; Dico, 2018; Garnefeld et al., 2011). Results from this study indicated participants were negatively motivated to work with a support team for the implementation of academic accommodations if their previous experiences of working as a unit

within a department or as a group were negative. The data analysis of the journal responses revealed the perceived attitudes of the participants working with a support team impacted their self-perception and mental process of working as a team to support the student (Bollich et al., 2015; Nisbett & Wilson, 1977). However, the focus group interview revealed that when the participants were able to collaboratively speak of working as a team to support the concussed student, the perceived attitude changed. In self-perception theory, self-perception is described as a social perception in which people are able to make conclusions about themselves and others from observed behaviors (Garnefeld et al., 2011) as indicated above.

Analyzing the purpose of the theory of planned behavior and theory of self-perception in relation to the behavior of implementing academic accommodation, it is evident that there is a strong positive behavior in the willingness of educators seeking the appropriate care of students in academic recovery. There is a need to further explore educators' interactions with concussed students and the implementation of academic accommodations utilizing theoretical application from an educational perspective.

Implications

Empirical Implication

The empirical implication for this study is apparent: there is a need for further investigation and research to be conducted with secondary school educators and the experiences they have implementing academic accommodations from an educational aspect. For this case study, the research questions were asked in relation to the defined study term experience determined from medical literature. The analyzed data were able to answer the defined terms, but to have a thorough understanding of the experiences teachers have when implementing academic

accommodations, all experiences of the implementation would need to be examined comprehensively from an educational perspective.

There are two topics that emerged and need more attention in empirical research: (a) barriers to implementation that exist, and (b) the trainings conducted by medical professionals. Depending on the course taught, teachers may face external and internal barriers when implementing academic accommodations for the concussed student. Would it be best for departments to identify what barriers could exist when teaching students and have a plan in place if a student were to miss class or have an adjustment to learning regardless of condition? This should be researched further with educational understanding and having a plan in place should the situation arise along with the training for the implementation of concussion academic accommodations by medical professionals. If the teacher received appropriate training for handling a concussion in the classroom and fully understood what each accommodation meant, would the controllable barriers in implementing the academic accommodations exist? As more RTLs are prescribed, this is an area that should be researched further with medical and educational personnel. The information gathered can be shared within school districts with medical partnerships for the academic treatment of a concussed student.

Theoretical Implication

There needs to be an emphasis on and development of behavioral and perception theories inclusive of teachers implementing academic accommodations for the concussed student. While there are theories that examine perception behaviors in health, there needs to be a stronger focus on perception behaviors in education and educators as they implement accommodations outside of the normal accommodations, such as a 504 plan or individualized education plan. The participants in this study were able to implement the academic accommodations without

adequate training due to their previous experiences with academic accommodations or experiences in general from their time in the profession. However, there were a few participants who felt that they did not receive enough information and thus implemented additional accommodations on their own, without communication to administration, to ensure that the concussed student was healing properly academically. If the educators had more concussion knowledge and implementation training for concussion academic accommodations, would they be able to confidently adjust academic accommodations and utilize a support team? While communication between the student, teacher, and parent would ensure that the student was healing appropriately, if the school personnel had the appropriate training, there potentially could be an established concussion policy that would be better understood by all within the school.

Practical Implications

Based on the findings from this study, it is evident that there needs to be improvement in the implementation of the academic accommodations for a concussed student. In this specific case study, there was a lack of training for the educators in implementing academic accommodations for a concussed student in the classroom. The educators agreed that more training is needed so that they can better understand concussions and what a concussed student might need in the classroom.

This study found that there is no established concussion policy for teachers to follow. Currently, the teacher participants are receiving RTL protocols from either the student's guidance counselor or principal's secretary. Aside from the initial email, there is no continuance communication about the student's recovery and how they are adjusting to the prescribed accommodations. Given the opportunity, the teachers would like to discuss how to adjust or even know if the student has recovered by the school nurse. However, the school nurse is not a part of

the initial conversation and may not know if the student is on temporary academic accommodations for a concussion. At the district level, there should be a policy in place for when a concussed student returns to the classroom. This policy would be reflected but not limited to the concussion return-to-play form and law at the state level. As there is a generic RTL form for the district, further exploration at the district level could create a uniform policy for best practices and assistance when the concussed student returns to the classroom. A policy committee should be established that would include stakeholders who have had experience working with a concussed student, including but not limited to parents, teachers, county supervising nurse, athletic directors, athletic trainers, guidance counselors, administrators, and physicians specializing in concussions.

Delimitations and Limitations

Delimitations for this study included limiting the study to the years in the profession, the location site for the study, and if the participant has or is a current coach of a Florida High School Athletic Association (FHSAA) sport. This decision was made based off empirical studies based on concussion knowledge of educators and the lack of empirical studies related to the experiences educators have when implementing RTL academic accommodations.

Coaches who have coached or currently coach an FHSAA sport must participate in yearly concussion training and were identified in literature to have concussion knowledge (Clacy et al., 2017); thus, coaches were excluded from the study. Teachers with less than 3 years of professional teaching experience may not have had the opportunity of interacting with a concussed student (Dreer et al., 2017; Kasamatsu et al., 2016) and were also excluded. By focusing in on non-coaching teachers with 3 or more years of experience, this study sought to

identify the issues and experiences of educators when implementing academic accommodations for concussed students.

Limitations with this study included the small sample size for participants. Initially, the study sought 12–15 participants. However, the study was conducted during the height of the COVID-19 pandemic when safety protocols limited access to and availability of participants; thus, the potential sample to draw from at the location of the study was lower in comparison to other schools in the area. Permission from the school district to obtain data presented time issues as the researcher could not begin collecting data until the last quarter testing period. With the pressures of testing and COVID-19 protocols, potential participants were willing to participate closer to the end of the school year but not after the final day of school. Potential participants also felt the strain of the school year and opted not to participate in the study. The most considerable limiting factor for collecting data for this study was the limited participants and availability.

Recommendations for Future Research

Based on the findings from this study, there are many directions for future research. Future research could be conducted at a larger school in the district, which would allow for a larger educator sample pool. It would be valuable to of more to explore the concussion protocols of a school that has a larger population and is in a higher sport classification.

This study excluded teachers who had less than 3 years of teaching experience. The study participants had 10–34 years of teaching experience. However, because of the size of the school used for this study, student population, and educational programs, there is the possibility that teachers with less than 3 years of teaching experience may have interacted with a student with a concussion or implemented an academic accommodation. With the same study focus, future

research could focus on teachers who have had 0–9 years of classroom teaching experience and their experiences implementing RTL academic accommodations. Teachers who are within this range of teaching experience may have learned teaching techniques for handling a concussion in the classroom from their educational teaching programs.

Another direction for future research could be to examine two schools and compare the experiences of the teachers at each school implementing academic accommodations for concussed students. This would allow for a multiple case study examining the efficiency of the district's RTL protocol.

Lastly, future research could replicate the current study utilizing a school concussion protocol, pre-school concussion training for teachers by a medical professional, and use of a support team for the concussed student. Using these inclusion factors would allow the researcher to investigate the experiences of educators when implementing concussion academic accommodations with a fully supported district protocol (Dreer et al., 2017; Kasamatsu et al., 2017; Sarmiento, Donnell, Bell, & Hoffman, 2019).

Summary

This case study was designed to describe the experiences of secondary school educators when implementing academic accommodations for the concussed student. Based on the participants' experiences, a clearly established protocol for the concussed student needs to be effectively and efficiently communicated for the student to safely return to school and be in an academic environment.

As there is an established athletic return-to-play policy, there should be a reassessment of the school's RTL policy for the concussed student as these usually complement each other even though a concussed student does not have to be limited to athletics.

No matter what the student may be going through academically, teachers lead with a servant heart and want to see the best for their students. As this topic continues to evolve, current trends will change to provide teachers with the best resources to instruct their students. While teachers may be comfortable in implementing RTL academic accommodations, providing them with the best knowledge set and best practices to serve their concussed students will be beneficial to all.

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APPENDICES

Appendix A: IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 24, 2021

Julie Burton
Jerry Pickard

Re: IRB Exemption - IRB-FY20-21-312 CONCUSSION KNOWLEDGE AND EXPERIENCES OF LOCAL SECONDARY SCHOOL TEACHERS IMPLEMENTING ACADEMIC ACCOMMODATIONS

Dear Julie Burton, Jerry Pickard:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix B: IRB Modification Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

March 3, 2021

Julie Burton
Jerry Pickard

Re: Modification - IRB-FY20-21-312 CONCUSSION KNOWLEDGE AND EXPERIENCES OF LOCAL SECONDARY SCHOOL TEACHERS IMPLEMENTING ACADEMIC ACCOMMODATIONS

Dear Julie Burton, Jerry Pickard:

The Liberty University Institutional Review Board (IRB) has rendered the decision below for IRB-FY20-21-312 CONCUSSION KNOWLEDGE AND EXPERIENCES OF LOCAL SECONDARY SCHOOL TEACHERS IMPLEMENTING ACADEMIC ACCOMMODATIONS.

Decision: Exempt - Limited IRB

Your request to remove the name of the school district from your consent form at the district's request and reduce the time estimates for your interviews and focus group has been approved. Thank you for submitting your revised consent form for our review and documentation. Your revised, stamped consent form can be found under the Attachments tab within the Submission Details section of your study in Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Thank you for complying with the IRB's requirements for making changes to your approved study. Please do not hesitate to contact us with any questions.

We wish you well as you continue with your research.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix C: Sample Recruitment Letter

[Date]

[Recipient]

[Title]

[School]

[Address 1]

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to understand the concussion knowledge and experiences secondary teachers have when implementing academic accommodations, and I am writing to invite eligible participants to join my study.

Participants must have at least three years of teaching experience and are not currently coaching a Florida High School Athletic Association sport. Participants, if willing, will be asked to; complete five journal entries, be interviewed individually, and possibly participate in a group interview. It should take approximately 15 minutes per week to complete one journal entry, approximately 60 minutes for the individual interview, and approximately 90 minutes for the group interview. Participation is completely voluntary and will be done virtually utilizing videoconferencing platform, Zoom, and electronic mail. Names will be collected as part of your participation, but your identity will be kept confidential as a pseudonym will be assigned to you and your identity.

In order to participate, please complete the attached availability survey for the individual and focus group interviews and return it to jburton21@liberty.edu.

A consent document will be emailed to you prior to the interview. The consent document contains additional information about my research. If you choose to participate, please sign the consent document, and return it to me via electronic mail, jburton21@liberty.edu, prior to or at the time of the interview.

Sincerely,

Julie-Ann Burton

Doctoral Candidate

jburton21@liberty.edu

The purpose of this case study is to describe teachers' experiences and knowledge when implementing academic accommodations with concussive students from a high school in Florida.

Please provide availability for individual interview. Interviews are not to conflict with work priorities.

Day of the week	**Preferred Time**	**Alternate Time**

An email will be sent approximately one month after individual interviews have begun to schedule the group interview. If you would like to participate in the group interview, please provide availability below. Participating in the focus group is voluntary.

Day of the week	**Preferred Time**	**Alternate Time**

Please return availability form to jburton21@liberty.edu

Appendix D: Principal Study Request Letter

[Date]

[Principal Name]

Principal

Beach High School

123 Main St.

Florida

Dear Principal,

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is Concussion Knowledge and Experiences of Local Secondary School Teachers Implementing Academic Accommodations, and the purpose of my research is to describe teachers' experiences and knowledge when implementing academic accommodations with concussive students from a high school in Florida.

I am writing to request your permission to conduct my research at Beach High School.

Participants will be asked to participate in an individual interview that will last approximately 60 minutes, complete a weekly journal entry that will take approximately fifteen minutes to complete for five weeks, and participate in a focus group (6-8 individuals) that will take approximately 90 minutes. Contact made with the participants will be done via videoconferencing platform, Zoom; or, through electronic communication such as electronic mail. There will be no in-person contact for this study. Participants will be presented with informed consent information prior to participating and will contact the researcher to schedule the requested interviews. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please respond by email to jburton21@liberty.edu.

Appendix E: Informed Consent Form

Consent

Title of the Project: Concussion Knowledge and Experiences of Local Secondary School Teachers Implementing Academic Accommodations
Principal Investigator: Julie-Ann Burton, Doctoral Candidate

Invitation to be Part of a Research Study

You are invited to participate in a research study. In order to participate, you must have three years of teaching experience, and not currently coach for a Florida High School Athletic Association sport. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

What is the study about and why is it being done?

The purpose of the study is to understand the concussion knowledge and experiences of local secondary school educators as they implement return-to-learn academic accommodations for students recovering from a concussion.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Participate in an individual interview that will last for approximately 60 minutes and is audio and video recorded.
2. Potentially participate (6-8 participants) in a group interview that will last for approximately 90 minutes and be audio and video recorded.
3. Complete five journal entries over the course of five weeks that will take approximately fifteen minutes each to complete.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential through the uses of pseudonyms. Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

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IRB-FY20-21-312
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- Interviews and focus groups will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher will have access to these recordings.
- Journaling link will be sent through electronic mail with responses that will be kept secured in a protected word file after filling out survey link.
- Confidentiality cannot be guaranteed in focus group settings. While discouraged, other members of the focus group may share what was discussed with persons outside of the group.

How will you be compensated for being part of the study?

Participants will be compensated for participating in this study. There is the potential for a meal or refreshments to be served during the focus group interview.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Julie-Ann Burton. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [redacted] or jburton21@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Pickard at vpickard@liberty.edu

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Liberty University
IRB-FY20-21-312
Approved on 3-3-2021

☐ The researcher has my permission to audio-record/video-record/photograph me as part of my participation in this study.

_____
Printed Subject Name

_____
Signature & Date

Liberty University
IRB-FY20-21-312
Approved on 3-3-2021

Appendix F: Open-Ended Individual Interview Questions

1. Please tell me about yourself.
2. Please tell me about your educational background.
3. Please tell me about your professional background.
4. Please tell me why you became a teacher.
5. What is your knowledge about concussions?
6. What are your thoughts about a concussed student in class?
7. What aspects of your professional background equipped you to handle a concussed student in the classroom?
8. How would you describe the training you have received dealing with concussions and academic accommodations?
9. How would you describe the support you receive from administration when dealing with a concussed student in the classroom?
10. How would you describe the effectiveness of the school concussion policy?
11. How would you describe your role as an implementer of academic accommodations?
12. What do you believe your strengths are as an implementer for academic accommodation?
13. What do you believe your weaknesses are as an implementer for academic accommodation?

Supplemental/ Follow-Up Questions

6a. Should the concussed student be placed in a classroom or space to reintegrate into school but not directly in a full classroom environment?

8a. What do you envision training to be like for you as the educator?

9a. What is the support team like for the concussed student?

Appendix G: Open-Ended Focus Group Questions

1. How often do you all interact as staff?
2. How do you handle group communication when supporting each other?
3. How do you handle group communication when supporting a student?
4. How would you describe your understanding of concussions in the classroom?
5. Describe the way guidance is sought for a concussed student needing adjustments to their protocol.
6. How do you describe the academic support team for a concussed student?
7. Describe the training that is utilized for the academic support team.
8. How often is the academic support team utilized for the concussed student?
9. Describe the strengths and weakness of the academic support team.
10. Describe your capability of adjusting academic accommodations without guidance or support from staff.

Appendix H: Journaling Prompt Questions

1. Describe what attitude is needed to implement concussion academic accommodations as an educator.
2. Describe a positive experience you had implementing academic accommodations.
3. Describe a negative experience you had implementing academic accommodations.
4. Describe how your attitude towards implementing academic accommodations has changed over time.
5. Describe your attitude towards implementing academic accommodations with a support team.