

A DESCRIPTIVE SURVEY OF GRANT FUNDED PHYSICAL EDUCATION TEACHERS'  
KNOWLEDGE, SKILLS, AND DISPOSITIONS IN ADAPTED PHYSICAL EDUCATION

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY  
OF HAWAII AT MĀNOA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

THE DEGREE OF

DOCTORATE OF PHILOSOPHY

IN

EDUCATION

August 2017

By

James Patrick Barry Jr.

Dissertation Committee

Nathan Murata, Chairperson

George Harrison

Marie Iding

Charles Morgan

Yukiya Oba

Keywords: Physical Education, Adapted Physical Education, Survey, Disabilities

Dedicated to my family and my friends for all the support they gave me throughout my career if it weren't for you I would have never made.



## ABSTRACT

This study examined physical education teachers' perceptions of their knowledge, skills, and dispositions, who received federal funding and training from the Office of Special Education Programs (OSEP) in Adapted Physical Education (APE). The OSEP offers grant opportunities to institutions of higher education, non-profits, and other educational agencies grant opportunity to develop highly qualified adapted physical education teachers.

Survey research methods (Dillman, Smyth & Christian, 2014) were employed to collect information from participants. A 52-item questionnaire was developed along with established validity and reliability of the instrument. The survey was sent out to 272 former OSEP participants from seven institutes of higher education (IHE). A response rate of 55.76% was noted for this survey. Descriptive results from participant mean scores for perceived knowledge showed that participants felt they were well prepared to very well prepared to teach students with disabilities. Mean scores for perceived skills was found to be skillful to very skillful to work with students with disabilities. Mean scores for perceived dispositions score was shown that working with students with disabilities was important to very important. A general linear model ANOVA revealed interaction effects for gender identity and ethnic identity for knowledge and skills. Finally, OSEP personnel preparation grant participant's perception of their knowledge, skills, and dispositions in APE suggest that participation in an OSEP funded program helped improve physical education teachers for teaching students with disabilities.

## ACKNOWLEDGEMENTS

I would like to thank Dr. Nathan Murata for taking a chance on me and bringing me out to the University of Hawai`i at Mānoa and mentoring me into a professional. Thank you, for getting me through this challenging but enjoyable journey and helping me to grow academically, professionally, and personally. Without your constant encouragement and advice, this would not have been possible.

To my committee, Dr. Charles Morgan, Dr. George Harrison, Dr. Marie Iding, and Dr. Yukiya Oba, thank you for your support and guidance on this journey and for providing such valuable insight and expertise from each of your disciplines. Your leadership and knowledge has been invaluable inside and outside of class.

Also, deserving of special acknowledgement are my questionnaire reviewers, Dr. Monica Lepore, Dr. Manny Felix, and Dr. Julienne Maeda. Thank you for lending your adapted physical education expertise in the review of the questionnaire. To the OSEP APE Personnel Preparation Grant Directors, Dr. Hester Henderson, Dr. Francis Kozub, Dr. Robert Arnhold, Dr. Lisa Silliman-French, and Dr. Jiabei Zhang for helping me reach out to your alumni and administering the survey. A special acknowledgement to Dr. Garth Tymeson, for your support with your alumni and your help in the development of the survey.

To the faculty, staff, and students in the Kinesiology and Rehabilitation Science (KRS) department, your support along the way provided me with encouragement to pushed me to be the

best I can, thank you! To my fellow KRS graduate students your friendship has been invaluable. To my friend, Alli Tsuchida, it has been a privilege working with you the past few years. Your friendship and support helped me throughout the process. It has been a pleasure working with you, thank you for always being there to listen and help me when a problem arose. I'm glad to have gone through this process with you.

To my family, I cannot express your support throughout this process. Without your support and encouragement, I would have never been able to return to school and accomplish this.

To all my friends in Pennsylvania State Association for Health, Physical Education, Recreation, and Dance (PSAHPERD). You showed me what it truly means to be a professional and inspired me to become more.

Finally, to the Families, Staff, and Faculty of Hatfield Elementary School and North Penn School District. You allowed me the privilege of working with some of the best coworkers and students around. The experiences and connections you provided me are what made the teacher I am today. Without you I could never be the teacher I am today. Always remember to soar "Above and Beyond".

## CONTENTS

CHAPTER I.....	1
INTRODUCTION .....	1
Purpose of the Study .....	8
Research Questions .....	8
CHAPTER II.....	9
REVIEW OF LITERATURE .....	9
Teacher Perception of Content Knowledge Working with Students with Disabilities.....	9
Teacher Perception of Skills working with Students with Disabilities.....	13
Teacher Dispositions on Working with Students with Disabilities .....	30
Summary .....	39
CHAPTER III .....	43
METHODS .....	43
Research Design.....	43
Instrument Development.....	45
Development of the Knowledge Variables .....	47
Development of the Skills Variable .....	47
Development of the Dispositions Variable .....	49
Content Validity.....	50
Cognitive Interviews .....	51
Practice Survey .....	52
Reliability.....	52
Questionnaire .....	52
Data Analysis .....	53
Summary .....	55
CHAPTER IV RESULTS AND DISCUSSION.....	56
Introduction.....	56
Descriptive Statistics of Participants .....	56
Descriptive and Inferential Statistics as Related to the Specific Research Questions.....	60
Knowledge .....	60
Skills .....	62
Discussion.....	65
Knowledge .....	67

Skills .....	69
Disposition .....	70
CHAPTER V .....	73
SUMMARY AND RECOMMENDATIONS.....	73
Introduction.....	73
Summary .....	73
How do APE Teachers, who participated in the OSEP personnel preparation program, perceive their APE knowledge?.....	74
How do APE Teachers, who participated in the OSEP APE personnel preparation program, perceive their APE skills?.....	75
How do APE teachers, who participated in the OSEP APE personnel preparation program, perceive their disposition towards working with people with disabilities? .....	75
To what extent does the participants’ age, gender, and ethnic identification affect their perceived knowledge, skills, and participation? .....	76
Limitations .....	77
Future Research .....	78
Conclusion .....	80
References.....	83
Appendix A.....	93
Human Studies Program .....	93
The University of Hawai`i at Mānoa .....	93
Approval for Research .....	93
Appendix B .....	96
Physical Educator’s Knowledge, Skills, and Dispositions Questionnaire.....	96
Appendix C.....	121
OSEP Grant Program Director’s Procedure Email.....	121
Appendix D.....	124
Recruitment Emails to Participants.....	124



## TABLES

TABLE	PAGE
1. Likert Scale Coding for Each Construct.....	53
2. Summary of Participating Schools.....	56
3. Descriptive Characteristics of Participants.....	58
4. Descriptive Data for Knowledge Scale and Sub Scale Items.....	59
5. Interaction Effect Between Knowledge and the Independent Variables of Age, Gender, and Ethnic Identity.....	60
6. Descriptive Data for Skill Scale and Sub Scale Items.....	61
7. Interaction Effect Between Skills and the Independent Variables of Age, Gender, and Ethnic Identity.....	62
8. Descriptive Data for Disposition Scale and Sub Scale Items.....	63
9. Interaction Effect Between Skills and the Independent Variables of Age, Gender, and Ethnic Identity.....	64

# CHAPTER I

## INTRODUCTION

The Education for All Handicapped Children Act of 1975 was passed creating access to “free and appropriate public education for all children” regardless of their disability (Education for All Handicapped Children Act, 1975). This is an important landmark as physical education was the only content area that was specifically identified in the Education for All Handicapped Act (EHA). One significant section of the EHA of 1975 was the definition of special education. More specifically, special education means:

“Specifically, designed instruction, at no cost to the parents, to meet the unique needs of a child with a disability, including—(i) instruction conducted in the classroom, in the home, in hospitals and institutions, and in other settings; and (ii) instruction in physical education” (IDEIA, 2004, Sec. 300.39)

This established physical education as a direct service for all students (Education for All Handicapped Children Act, 1975). In addition to physical education which also includes Adapted Physical Education (APE), students would receive an individual education plan (IEP) and access to the least restricted learning environment (LRE). An IEP is an educational plan that is a contract between parents and the local educational agency (LEA). This educational plan states a student’s present level of performance (PLOP) and educational goals for the academic year. An IEP also lists placements, services, accommodations, and transition services for students (IDEIA, 2004, Sec. 300.302.). The LRE implies that children with special educational needs must be educated without special educational needs to the maximum extent appropriate (IDEIA, 2004, Sec. 300.114). It also had provisions for children with disabilities to receive a free and

appropriate public education in the LRE from 3 years old to 21 years old. In 1986, the Education for All Handicapped Children Act (PL 99-457) was amended to include early intervention preschool for children ages 0-5 who had a disability. This meant that infants and toddlers were also eligible for special education services.

In 1990, the Education for All Handicapped Children Act (PL 101-476) was reauthorized and was renamed to the Individuals with Disabilities Act (IDEA). The reauthorization of PL 101-476, required schools to develop a transition plan for student's starting at the age of 16 and the term handicap was also changed to disabilities (IDEA, 1990).

In 1991, the Rehab Act of 1973 (Public Law 101-336) was amended and renamed as the Americans with Disabilities Act (ADA). This law was a civil rights victory for all people with disabilities. Prior to the passing of this law, the private sector could discriminate against a person with a disability. The passing of the ADA prevented any agency private or public from discriminating against any qualified person with a disability (Americans with Disabilities Act, 1991). Section 504 of the ADA states, "no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under any program or activity (Americans with Disabilities Act, 1991, Sec. 504.794). Any violation of ADA is considered a civil rights violation. For example, if a student's disability does not impede his/her learning, the student would still be able to qualify for accommodations under Section 504 of the ADA.

Public Law 105-17 was reauthorized and updated in 1997 (IDEA '97), allowed the inclusion of students with disabilities into state and district testing and transition programming beginning at age 14. Moreover, inclusion of students with a disability into the general education

classroom increased was along with general education teachers' participation in the IEP development and implementation. Parents of a student with a disability had an increased decision making of their child's placements in a school.

IDEA was reauthorized in 2004 and renamed Individuals with Disabilities Education Improvement Act (IDEIA) (Public Law 108-446). IDEIA contained many of the provisions that were provided in the original act with the increase in disability categories from 11 to 13 including traumatic brain injury and autism. It also reaffirmed the free and appropriate public education for all students with physical education still considered a direct service, and provisions for the LRE (Individuals with Disabilities Education Improvement Act, 2004).

President George H. Bush signed the No Child Left Behind (NCLB) Act (PL 107-110 ) into law in 2002 as an amendment to the Elementary and Secondary Education Act (ESEA) of 1965. The original ESEA established Title 1 to provide funding to support the education of disadvantaged children (Klein, 2015). Title 1 provides additional funding for multiple purposes with an emphasis on meeting the educational needs of low-achieving children in our Nation's highest-poverty schools, limited English proficient children, migratory children, children with disabilities, Indian children, neglected or delinquent children, and young children in need of reading assistance (Klein, 2015). NCLB also began to hold schools accountable to Annual Yearly Progress (AYP). AYP is "the amount of annual achievement growth to be expected by students in a particular school, district, or state in the U.S. federal accountability system" (No Child Left Behind, 2002). If a school does not reach AYP two consecutive years, the state must provide additional resources to help students improve.

No Child Left Behind also created highly qualified teachers in core academic subjects (No Child Left Behind, 2002). According to U.S. Department of Education, (2004) “to be deemed highly qualified, teachers must have: 1) a bachelor's degree, 2) full state certification or licensure, and 3) prove that they know each subject they teach” (U.S. Department of Education, 2004). Besides these three requirements highly qualified teachers are determined by individual states. Highly qualified teacher requirements only apply to those who teach in core subject areas. In NCLB, PE was not named a core subject. Special education teachers who do not teach direct instruction to students in core subject are also not required to demonstrate competency (U.S. Department of Education, 2004).

In 2015, the Every Student Succeeds Act (ESSA) was passed to continue the progress American schools started under NCLB. The focus of ESSA was to hold students to higher Academic Standards, provide more preschool access to students, and to prepare all students for success in college and in a career (Every Student Succeeds Act, 2015). The passing of the ESSA is important to PE teachers because it addresses the need for a well-rounded education. This means including highly qualified teachers in PE, something that was the original ESEA and past NCLB were missing (SHAPE, 2016).

This need for highly qualified teachers put a particular strain on special education where there is already a shortage (McLeskey & Billingsley, 2008). Special education teachers are required to have specialized knowledge, skills, and expertise that is not found in a general education curriculum. To be highly qualified a special education teacher needs to be qualified in a specific content area. This expertise is important in order to modify curriculum, have knowledge of special education law, administer special education assessments, and make any

necessary accommodations to students learning plan (McLeskey & Billingsley, 2008). Due to this the demand for personnel to provide services to students from infancy to 21 the shortage of available personnel continues and even became exacerbated (McLeskey & Billingsley, 2008; McLeskey, Tyler, & Flippin, 2004). These shortages negatively impact the quality of services to the students when educators are not fully credentialed (McLeskey et al., 2004). During the 2012-2013 school year, the Office of Special Education and Rehabilitative Services (OSERS) reported that 5,076 complaints, 16,980 due process complaints, and 9,680 mediation requests were received through the dispute resolution process for children and students served under IDEA (U.S. Department of Education, 2015). These numbers show there is a need for quality educators who understand how to work with students with special education needs. Notwithstanding is the need for qualified adapted physical education instructors. I will be using the definition of highly qualified teachers as teacher's who are certified teachers in a particular content area and have the pedagogical skills to implement a standards based curriculum in their content area (McLeskey & Billingsley, 2008).

The need for qualified APE teachers has grown at a rate of 48% since IDEA was enacted in 1975 (Zhang, 2010). Specifically, Zhang (2010) found that the supply of qualified APE candidates has been too small to meet the demand for the number of openings in APE. This is creating a dilution in the pool for APE instructors with APE being the secondary focus and other areas as the primary focus (Zhang, 2010). The OSEP Personnel Preparation grant allows IHE's to recruit, prepare, and fund physical education teachers in special education and related services to become highly qualified APE teachers.

The OSEP Personnel Preparation Grant Competition was designed to “improve the quality and increase the number of personnel who are fully credentialed to serve children, including infants and toddlers, with disabilities especially in the areas of chronic personnel shortages by supporting projects that prepare early intervention, special education, and related services personnel at the associate, baccalaureate, master’s and specialist levels” (U.S. Department of Education, 2017 p. A-2).

One function of the OSEP Personnel Preparation grant competition program has allowed IHEs and state agencies to offer training and education in APE for eligible individuals in order to address the shortage of qualified teachers teaching special education. In most training and education, content knowledge continues to be an important factor in any or most OSEP training programs including APE. Consequently, increased APE knowledge and training is an important curriculum for current and future PE teachers since many are unprepared to teach students in APE at the undergraduate level (Campos, Ferreira, & Block, 2015; Marin, 2014; Obrusnikova, 2008; Rizzo, 1985; Rizzo & Vispoel, 1991; Rizzo & Kirkendall, 1995). Moreover, teachers who do not have experience working with students with special needs have reported experiencing anxiety the first time they taught an APE class (Roper & Santiago, 2014). As more teachers, both preservice and in-service increased their knowledge base and teaching experience with student with disabilities, there appeared to be a positive correlation in knowledge and experienced gained and an increase in confidence level in teaching students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014). Ammah and Hodge (2005) argued that there is also a positive correlation between how prepared teachers are to teach APE and teacher confidence. Consequently, a teacher’s perception and perceived competence are also indicators of

successfully teaching students with disabilities in APE (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014; Tant & Watelain, 2016).

Teachers' perception of their knowledge is important to help improve teaching confidence (Rizzo, 1985). Teachers with more formal training and experience are more comfortable working with students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995). Similarly, a teacher's self-efficacy is an important factor that can affect how much or how little a teacher perceives his or her teaching skills (Hersman & Hodge, 2010). Consequently, a teacher's knowledge about disability types, application of teaching and behavior management strategies and finally perceived confidence and overall positive dispositions appeared to positively influence teaching students with disabilities in APE.

OSEP grant programs allow institutions of higher education (IHE) to educate students in special education, related services and adapted physical education by addressing the theoretical knowledge, course work and the practical experience to augment the skills needed to teach with students who have a disability in physical education. In this connection, the notion of highly qualified and ability to teach students with an array of disabilities in physical education has been an important part of federal funding (i.e., IDEA and NCLB). Despite federal support for educating highly qualified educators, there continues to be shortage of trained and qualified direct service providers including special education and adapted physical education teachers (McLeskey & Billingsley, 2008).

Since the inception of federal funding supporting training and education dating back to 1975 with the Bureau on the Handicap, funds have been available to support individuals in their pursuit of obtaining certification and credentialing in APE. A conservative estimate in



individuals educated and trained in APE over the years across multiple IHE is approximately 1000. In this connection, I am interested in documenting how previously funded individuals' knowledge, skills and dispositions about teaching APE in schools. As an APE profession, the amount of personnel preparation funding may not be considered significant given the amount provided to other training areas (e.g., teaching low-incidence disabilities); nonetheless, the efficacy and demonstrated competence in teaching an array of disability types calls to question whether the federal funding programs and grantee recipients have made a positive impact teaching students with disabilities.

### **Purpose of the Study**

The purpose of the study was to describe adapted physical education in-service teachers', who received funding from the Office of Special Education Programs Personnel Preparation grant program, perceptions of their knowledge, skills, and dispositions.

### **Research Questions**

The research questions in this study were

1. To what degree do APE in-service teachers, who participated in the OSEP Training program, perceive their APE knowledge?
2. To what degree do APE in-service teachers, who participated in the OSEP Training program, perceive their APE skills?
3. To what degree do APE in-service teachers, who participated in the OSEP Training program, perceive their disposition towards working with people with disabilities?
4. To what extent does the in-services' teachers age, gender, and ethnic identification affect their perceived knowledge, skills, and disposition?

## CHAPTER II

### REVIEW OF LITERATURE

This chapter provides a theoretical basis for researching the knowledge, skills and dispositions of physical education teachers who received OSEP funding to teach students with disabilities. In addition, this chapter will focus on factors that influence these perceptions. Knowledge, Skills, and Disposition will be discussed along with background knowledge of the program. The importance of training both preservice and in-service teachers in APE in coursework, practicum experiences, knowledge, teacher confidence, and attitudes is discussed as well. A highly qualified APE teacher should be able to address and demonstrate competencies in the Adapted Physical Education National Standards (APENS) that are published by the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID). These standards are addressed in the questionnaire through each of the scales used in the survey.

#### **Teacher Perception of Content Knowledge Working with Students with Disabilities**

At the heart of teacher preparation program is knowledge. Knowledge provides the theoretical background for the physical education teacher to teach all students. The theoretical background provides the content knowledge that reflect the breadth and depth of knowledge as it pertains to the curriculum. It is also important for APE teachers to know the history of the field including special education laws and their classroom implications, this provides a historical background on why APE is needed and what their role is. This way they are better able to communicate to colleagues, service providers, parents, and students meeting the criteria for APENS standards. The ability to teach is a major focus of an APE teacher. APENS standard 10 refers being able to effectively teach students with consideration the areas of human

development, motor development, exercise science. These three areas are the criterion for the first three APENS standards. Human development aligns with APENS standard 1 and incorporates a basic understanding of the application of human development to the needs of students (NCPERID, 2006). Motor development aligns with APENS standard number 2, it means understanding the influence of developmental delays has on the physical and motor development on students (NCPERID, 2006). Exercise science is the focus and application of exercise principals to allow students with disabilities to enjoy the benefits of exercise (NCPERID, 2006). Finally, APENS Standards 4, 8, and 12 deals with measurement, assessment and student program and evaluation respectively. Measurement and assessment are part of an APE teacher's ability to comply with the legislation to help meet the needs of students APENS Standard 8 addresses and APE teacher's ability to make recommendations about special services for students with a disability (NCPERID, 2006). Finally, APENS standard 12 aligns with skills as student and program evaluation. APE teachers should be able to assist in the evaluation of the entire range of educational services for a student who has a disability (NCPERID, 2006). All these attributes and content knowledge are essential components needed to be a highly qualified and effective APE teacher.). In APE, a teacher's theoretical background is expanded than just a general PE teacher's ability to write unit and lesson plans. An APE teacher uses his/her theoretical background to include working with students who have a disability and making the modifications to instruction. This theory includes the selection of goals based on appropriate assessments to make necessary adjustments to the unit as needed. Understanding of curriculum theory meets APENS standard number 7 (NCPERID, 2006). This is the ability to understand

trends in APE, such as culturally responsive teaching, inclusive education, using approaches that are knowledge-based and outcome based in physical education

To help understand the theoretical background in APE, teacher education programs should be teaching “why” APE is necessary. IDEA requires that students with disabilities participate in the least restricted environment (LRE) (IDEIA, 2004). The LRE connotes a form of inclusion in that a student is in your class with support or aid; albeit typical general education classroom. Exclusion occurs when a student with a disability is separated from his or her class with (Tripp et al., 2007) services provided in a self-contained physical environment. Another type of exclusion is functional exclusion. This occurs when a student is included in a GPE class but does not receive any relevant instruction; instead, he or she is off to the side doing an alternate activity (Tripp et al., 2007). While the LRE is considered to be the ideal environment for students with disabilities, other considerations such as supplemental aids and services must be provided to ensure learning. In order to fully address the notion of individualized instruction, accommodations and modifications, and teacher accountability, educators have employed comprehensive universal designs as part of their program planning.

Ammah and Hodge (2005) completed a qualitative study looking at secondary teachers’ beliefs and practices in teaching students with severe disabilities. In their study, Ammah and Hodge used a combination of observation and interviewing two general physical education (GPE) teachers. The teachers taught in two different school districts within a 50-mile radius of the researcher. Both teachers were white males that taught at the high school level and had more than 5 years’ experience teaching in their school (Ammah & Hodge, 2005). The same authors used teacher questionnaires, video recordings with wireless microphones, observer field notes,

and interviews, to analyze and triangulate data. Using the Analysis of Inclusion Practices in Physical Education, Form T (AIPPE-T), they arrived at three themes: (1) teachers have wavering beliefs about inclusion, (2) there are many complexities to inclusion of students with disabilities and (3) the lack of teachers' preparedness levels lead to a lack of confidence in teaching students with disabilities. The findings of the study showed that the attempts to engage students with disabilities varied between the two teachers. One teacher used a modified game that had rules and equipment modifications while the other had very few changes. Both teachers used direct instruction but the amount of time instruction was given varied. Both felt the inclusion was a good thing but the implementation of inclusion was difficult to do in an oversized class. They both lacked confidence in teaching students with disabilities but had positive beliefs towards inclusion (Ammah & Hodge, 2005).

Campos, Ferreira, and Block (2015) conducted a qualitative study examining elementary and middle school physical education teachers' views on inclusion. Resultant themes emerged indicated teachers were favorable toward inclusion, but had concerns over disability type and lack of specific APE training. The participants felt that more pedagogical and educational practice was needed to foster the development of skills needed to work with students with disabilities (Campos, Ferreira, & Block, 2015).

Mangope, Mannathoko, and Kuyunu (2013) studied PE teachers' knowledge and skills. Using the Attitudes Towards the Inclusion of Individuals with Disabilities Scale (ATIES) (Wilczenski, 1992, 1995), Mangope et al. (2013) surveyed 86 PE student teachers (51 female and 35 male). Using open ended research questions participants were asked about their concerns about "including learners with disabilities in your regular PE classroom" (Mangope,

Mannathoko, & Kuyini, 2013). The participant's response in this area was that although they felt that participation of students in their class is a good thing, teachers had concerns. One participant was quoted as saying "...the problem is that (PE) teachers are not taught or provided with enough information in order for them to operate well in this style of inclusion" (Mangope et al., 2013). Another participant said "right now I do not know any adapted equipment used by a child of any disability" (Mangope et al., 2013).

Hodge and Elliot (2013) reported that participant's gender can affect the participant's perception of their knowledge. Using survey methodology, Hodge and Elliot (2013), surveyed 182 participants (63% male and 37% female) from IHE's in North Carolina. Participants that were included were Caucasian, African American, Asian, Native American, and Hispanic. The response from the Asian, Native American, and Hispanic were less than 3 so they were excluded from the data set leaving 177 usable data sets (Black n=98, Caucasian n=79). Both male and females were accepting of persons with disabilities however females felt that they were not prepared enough and would require more training (Hodge & Elliot, 2013). Hodge and Elliot (2013) also reported that Caucasian teachers tended to be more accepting of students with disabilities; however, they also felt that they needed more training working with them.

### **Teacher Perception of Skills working with Students with Disabilities**

The application of content knowledge and applying it help promote student learning is the skill. Aligning with APENS Standard 9, Instructional Design and Planning, development of a lesson is an important skill for an APE teacher. There are many different aspects to consider that go into lesson planning. When planning lessons there are important variables that a teacher needs to consider. The first one is that all children are different and that each child has hers/his own

unique attributes (Lieberman, Lytle, & Clarcq, 2008). The unique attributes of a student align with APENS Standard 6, in that all children should be treated as individuals first (NCPERID, 2006). Second variable to consider is if the objectives align with state and national standards? Do you have IEP or 504 modifications you need to consider? What are the needs of the class? These are all important factors a teacher should consider when preparing his/her lesson plan (Lieberman et al., 2008). Third, the teacher must look at the ways to modify a lesson (Lieberman et al., 2008). By looking at the task, the teacher can make appropriate modifications to meet the needs of all students. Standard 11 implies that APE teachers are able to consult and utilize interdisciplinary skills to interact and provide administrative support to about individuals to parents, colleagues, service providers, and students. It also is directed to help an APE teacher make consultation recommendations in physical education and physical activity (NCPERID, 2006). Similarly, Standard 15 is communications, this is being able to discuss and communicate the role of an APE teacher, to colleagues, administration, and other persons who work with people with disabilities (NCPERID, 2006)

Making modifications for all students is an important skill for PE teachers who are in APE (Lieberman et al., 2008). To create an effective learning environment what incorporates all instructional strategies, teachers need to individualize the learning experience to meet the needs of each student (Ellis, Lieberman, & LeRoux, 2009). Verbal directions, video directions, demonstrations, pictures, peer instruction or written instructions are all ways a teacher can modify a lesson. Teachers can use a combination of these modifications to allow a variety of students to learn in a way that is most beneficial for them. By modifying, equipment students have the ability to learn how to perform a skill at their own pace. Tennis, for example, can be a

difficult sport to learn for someone who is new to the sport, however with the use of an oversized tennis racquet and a slow bounce ball a student is able to become proficient using these items and building up to using regulation sized equipment. Modification of the rules is another variable a teacher can use for creating a lesson that includes all students. By using a rule modification is anything that deviates from the original or culturally accepted rules of a game” (Lieberman et al., 2008). Finally, a teacher has to make modifications to the way they present their instruction. This is everything from a classroom environment. To the instruction of the lesson, how you interact with your class, finally to how you provide feedback (Lieberman et al., 2008).

An example of using modifications while teaching in a PE classroom is the study done by Ko and Boswell (2013) employing qualitative techniques reported on the teaching and understanding views of general physical education (GPE) teachers’ as it relates to practices, student learning, teacher views, and needs relative to inclusion. The participants were from the same school district located in a rural area in the southeastern United States. The criteria for these teachers were that the teachers must teach GPE at the elementary level and have two or more years teaching adapted physical education (APE) and currently teach students with disabilities. Seven GPE teachers met the criteria and participated in the study. Out of the seven participants three were female; ethnically the participants were Caucasian and one was African American (Ko & Boswell, 2013).

Data were analyzed using content analysis and constant comparative analysis, looking at chunks of data for common themes to commonalities and differences. Investigators met and went over the data to find recurring themes and patterns that emerged. All data were examined, coded and merged into content areas where four themes emerged (Ko & Boswell, 2013). The first



theme to emerge was the dedication to inclusion. The perceptions of the teachers were that they were all dedicated to supporting inclusion in their PE classes. Teachers reported that they were able to modify their teaching to accommodate students into their classes. Along those lines was the second theme of “necessity for adaptation” was often referenced with the teachers. Teachers reported that they used different types of equipment such as sizes, weights, and textures or balls for activities. This was backed up in the journals and lesson plans that were reviewed. One participant explained when how they develop a lesson with modifications “when I’m putting a lesson together, I try to consider everybody I am teaching...I first develop the activity, and I include modifications so that when I have students with disabilities, I can modify the activity in a way that they are not getting special attention” (Ko & Boswell, 2013). Differentiation was also considered successful in the instructions of students. The third theme developed because of adapting equipment and that was the need for “experimental practices.” Teachers would use trial and error when reporting the success or lack of success towards an adaptation. Researching ideas on the internet and discussion with other PE teachers were also a way that adaptations would occur. The final theme to occur was challenged, a majority of teachers reported that during the preservice teaching there was limited learning about inclusion in GPE. Content specific areas was also an important factor, one participant asked for training how to make jump rope and bowling easier for students with disabilities. Teacher feel that more professional development was reported by participants due to the fact it did not include hands-on experiences (Ko & Boswell, 2013).

How a teacher views their skills and how effective they are in a particular situation is known as perceived competence (Block & Rizzo, 1995; Obrusnikova, 2008). Perceived

competence was shown by Obrusnikova (2008) to be a top predictor in PE teachers ability to teach children with disabilities. This perceived competence is linked to teaching experience with students with disabilities, adapted coursework and preparedness (Obrusnikova, 2008). Perceived competence can be effected by the quality of the professional preparation for inclusion in PE through training and experience. The more years' experience a teacher has working with a student with a disability significantly correlated with the quality of experience in PE (Obrusnikova, 2008). Many PE teachers felt that initial training did not prepare them to teach in a truly inclusive environment (Vickerman & Coates, 2009) and that their training should have focused more on practical experiences over theoretical aspects (Lieberman et al., 2002).

Beamer and Yun (2014) examined PE teachers beliefs about the inclusion of students with autism spectrum disorder. In this study, Beamer and Yun (2014) took a stratified national random sample of 3000 public schools that resulted in 233 GPE teachers. Out of the 233 GPE teachers, 142 GPE teachers were used (n=142), the other teachers either quit or did not complete enough of the survey to be included. The mean age of the sample was 46 years old (SD =9.2 and ranged from 25-63). Females made up 63% of the participants and 99% of the participants were certified physical education teachers. The mean years of teaching experience were 18 years with a range of 1-37 and a SD =9.3. Elementary school PE teachers made up 69% of the participants with 29% representing middle school and 18% high school. Due to overlap at teaching levels, the percentages do not add up to 100% (Beamer & Yun, 2014).

Beamer and Yun (2014) using methodology outlined by Dillman, Smyth, & Christian, (2014) sent four rounds of e-mails to complete the survey. The first email provided initial contact with participants with a short introduction and information about the research. Along with the

email, a coupon code from a physical education retailer was provided for participation in the survey. A week after the survey went out a follow-up email thanking those who participated and reminding those who had not participated was sent. Two weeks after that there was a final email.

Using descriptive statistics and general linear model as regression the researchers reported and found potential factors of physical educators' behaviors towards inclusion. Specifically, teacher's behavior was the dependent variable and the independent variables were years of experience, self-efficacy, the number of undergraduate APE courses, the number of graduate APE courses, the perception of undergraduate training in inclusion, the perception of graduate training in inclusion, and the number of inclusion in-services (Beamer & Yun, 2014). The results indicated a mean score for attitudes or 6.65 out of a scale of 1 to 7. Participants self-efficacy scores towards their beliefs to perform tasks associated with the inclusion of students with autism spectrum disorder showed a  $M=7.8$  out of 10 (95% CI of 7.6, 8.1). When asked about support staff, 65% reported they did not have an APE specialist. Out of those who did have an APE specialist, 76% felt they were supported. The authors reported a majority of the professionals felt they are supported by other staff at schools such as teaching assistants (72%), special education teachers (80%), and physical therapists (49%) (Beamer & Yun, 2014). Working with these staff members is important for an APE teacher because they are all professionals who work with the special education student (Columna, Lieberman, Lytle, & Arndt, 2014).

On education, participants reported that the 46% had at least one undergraduate APE class; 36% reported two or more undergraduate classes and 18% reported no APE classes. However, 58% of participants felt that they were prepared fairly or very well in their

undergraduate education. At the graduate level, 90% of the participants reported that they did not have graduate level APE classes but 53% reported that their coursework prepared them fairly well or very well (Beamer & Yun, 2014).

The Carol M. White Physical Education Program (PEP) grant provides local education agencies with the funding designed to “initiate, expand, or enhance physical education programs” (U.S. Department of Education, 2016). The PEP grant is a grant offered by the U.S. Department of Education and is available to local educational agencies. Elliott, McCollum, Colquitt, and Pritchard (2013) did a study about the perceptions of how the PEP grant changed PE teacher perceived competence in an Elementary Physical Education Programs in one school district. In this study, qualitative methods were used to determine the impact of the PEP grant. The school district that received this grant is based in rural southeast Georgia. For the study, Elliott et al. (2013) interviewed eight participants (four principals and four PE teachers) that were selected using a purposeful sampling technique. Each interview lasted 60 minutes. The principals consisted of 3 female participants and one male, whose age ranged from 39-54 years and administrative experience ranged from 3 years to 18 years. The PE teachers consisted of two male and two female teachers ranging in age from 27 to 58 years and had 4 to 34 years of teaching experience. After each interview was transcribed participants could read their transcripts to clarify, elaborate, or suggest a change to their response. The researchers used multiple analysts to help reduce potential bias and to assess the reliability and validity of the data obtained (Elliott, McCollum, Colquitt, & Pritchard, 2013). Analysis of the transcripts showed that there was a development and implementation of an expanded innovative physical education curriculum. This allowed teachers to shift from a traditional sports program to a new program

that focused on cooperative and fitness activities that incorporate a wider variety of activities into their PE curriculums. This new approach was confirmed by the principals that were interviewed (Elliott et al., 2013). This new approach allowed the grant recipients to use new adapted physical equipment to allow successful inclusion of all students into PE classes. Based on the interviews all schools were not previously practicing full inclusion for all students. The money from the PEP grant changed that, one teacher said “the whole approach changed to helping individuals rather than team games, so it was only natural for us to extend this to our students with physical and mental disabilities” (Elliott et al., 2013). The money from the PEP grant allowed the PE teachers’ perceived competence in teaching disabilities to increase.

*Needs of Students with and without Disabilities.* When talking about teacher skills it is important to remember that teachers should look at what is best for the students. Coates and Vickerman (2010) surveyed 65 children with disabilities, ages 7 to 14 years old. These surveys were followed up by a focus group by participants. The survey consisted of 69% males and achieved a response rate for the survey of 29.95% (Coates & Vickerman, 2010). The results of the survey showed that 86.2% of the special educational needs students enjoyed PE. The majority of students surveyed (55.4%) felt that they were good a particular sport but were unsure whether their teachers and classmates perceived them as being good (Coates & Vickerman, 2010).

The focus group showed that the participants enjoyed PE, as it was a friendly and social atmosphere where students could express their feelings with their peers. However, their feelings were less positive when they felt that they were at an unfair disadvantage (Coates & Vickerman, 2010). One participant “C” said “There’s a lot of running about but I keep getting caught most of

the time...sometimes I do get angry” (Coates & Vickerman, 2010). PE teachers and classmates can have an effect on the disposition of special educational needs students in inclusive classrooms. Teachers need to recognize when a student is struggling in class modifications and adaptations should be created to allow for student learning and success.

Coates and Vickerman (2010) showed that the students are enjoying PE and some inclusive practices are being followed. However, a final issue that is brought up is sometimes the student with special educational needs being bullied. This is especially true with students who have physical disabilities. One participant in the focus group “R” said “... I used to love PE, now I am getting on the other side of PE because people are picking on me, saying that ‘you can’t run’ and sometimes in PE they are talking behind my back about me and saying, ‘R can’t run, R can’t play football’” (Coates & Vickerman, 2010). Teachers in inclusive classes should use management skills to teacher tolerance and cooperation among all students. Many times, teachers feel that they need more training and management skills working with students in an inclusive environment. Teacher perceived competence would increase with more management skills to counter bullying in lessons these negative experiences can be reduced (Coates & Vickerman, 2010).

A similar study done by Fitzgerald and Stride (2012) interviewed three students with disabilities about their experience in PE. The results of their interviews were written in a narrative and analyzed. To ensure reliability, the students were interviewed three times, focusing on their views and experiences in PE. One participant “David,” aged 13, talked about how he dreaded PE. In an excerpt from his narrative, David talks about how he feels in class “...I’m like a clown, a spectacle to be watched and laughed at and the center of attention for all the wrong

reasons...” (Fitzgerald & Stride, 2012). Another student “Mary,” age 13, experienced being cast aside and did not get the social experiences many other students get. In an excerpt from her narrative “Mary” said “The big netball posts, nets swaying in the breeze, too high for me. Can’t get the ball to go anywhere near them? Not that I get a chance...” (Fitzgerald & Stride, 2012). Anecdotal reports of students missing out on PE is related to teacher skills since teachers’ perception about “doing the right thing” is not congruent with how students may feel during PE class.

It is important that teachers take students’ needs into consideration and make sure that they are applying the laws by doing what is best for the students. Highly qualified teachers in APE would be able to use the skills that they were taught to modify and adapt lessons. The notion of individualized instruction is apparent as highly qualified APE teachers know and understand how to address the unique needs of students particularly in meeting IEP goals. To this, physical education curricula such as Sport Education, Tactical Games, Fitness for Life models can be effectively implemented to meet the individual needs of students with and without disabilities. Sports education (SE) model allows students to become more competent, literate, and enthusiastic sportspersons (Siedentop, 1998, 2002; Siedentop, Hastie, & Van der Mars, 2011). By teaching students using the sports education model, PE teachers allow the inclusion of all students to learn different roles and to work cooperatively (Pressé, Block, Horton, & Harvey, 2011). The SE model has six features that allow students to work cooperatively in an active learning environment. The six tenants that Siedentop (2011) describe are: 1. Seasons – students learn by participating in full seasons of a sport. 2. Affiliations – students remain on the same team for the duration of the season. 3. Formal Competition – Students develop in game like

situations throughout the season. 4. Culminating Event – each season ends with a final culminating event. 5. Record Keeping – extensive records are kept throughout the season. 6. Festivity – throughout the entire season the sport is celebrated and the atmosphere is kept in the spirit of the sport particularly are culminating event (Siedentop, 1998). Each student is given a role on the teams that he/she is responsible for. This creates a team atmosphere where everyone is included. By having every team member contribute to the team even students who have a disability can be given a role on the team that allows them to interact with their peers and participate in a GPE class.

The SE model allows students to experience success as a team focusing more on team performance and less on individual performance (MacPhail, Gorely, Kirk, & Kinchin, 2008). At the conclusion of a SE unit, students reported a feeling of self-skill improvement and more student autonomy. Winning was more of a cooperative celebration of the sport and less of a feeling of defeating others (MacPhail et al., 2008). This inclusive atmosphere allows students to succeed at their own level allowing students of all abilities to experience personal success.

Another method of PE instruction is the Tactical Approach (TA). The TA approach has been incorporated into PE curriculums such as Teaching Games for Understanding, (Griffin & Butler, 2005) or Teaching Sports Concepts and Skills (Mitchell, Oslin, & Griffin, 2013). In 1982, PE began to make a shift from the traditional skills and drills that has been done previously to helping students understand the “why of a game before the how” (Hopper, 2002; Mitchell et al., 2013). In a TA, students are placed in mini games (i.e., 2 v 2; 3 v 3) like situations. These mini games have modified rules that allow for simplification of the game or sport. During game play students are presented with challenges that allow the students to make choices in a game. These



decisions are then discussed as to why they were made and compared to the result. Finally, the results are discussed allowing students to make decisions about what did and did not work and how they would do it differently (Hopper, 2002). This is in contrast to the technique approach traditionally taught students how to do a skill and allowed them to do the skills in drills with partners (Gubacs-Collins, 2015; Hopper, 2002). Both the TA and the technique approach allow modifications to equipment and can be modified to allow diversified instruction for students. The difference between the two is the TA focuses on the learning from the perspective of the game like situation with decision making and skills and the technique method makes learning the skills the primary role (Gubacs-Collins, 2015).

Research on the effectiveness of this teaching method is mixed. Some studies report that there is no significant difference when it comes to skill acquisition and techniques. Using a three week 15 lesson badminton unit, on 9th grade high school students, researchers found that there was very little difference in skill development between the two groups (French, Werner, Rink, Taylor, & Hussey, 1996). However, in the observation of the game the group that received tactical instruction demonstrated the use of more advanced knowledge than the students who used the technical skills (French et al., 1996). A separate study from Turner and Martinek (1999) looked at the effect the TA had on sixth and seventh grade students. In this study students were divided into seven groups one control group, three tactical groups, and three technique groups. Students were then taught a field hockey unit. The results for this showed that the students who received the TA made better decisions when passing the ball and controlling the ball. The students who received the technique approach were faster on the skills test (Turner & Martinek, 1999).

A group scores were higher thanks in tactical knowledge, although there was no statistical difference for procedural knowledge (Turner & Martinek, 1999). Students with disabilities may have fewer opportunities to engage in social interactions if they are not viewed as a contributor in a PE classroom (Obrusnikova, Dillon, & Block, 2011). Newer PE models such as the SE and TA allows for students to have value in class and to participate in physical education while working at their own level.

While there are multiple PE teaching curricula, both the SE and TA are student centered instructional models designed to put student learning as the focus. These models incorporate learning in the affective, cognitive, and psychomotor domains. In 2014, the Society of Health and Physical Educators (SHAPE) America adopted new National Standards and with them Grade Level Outcomes (SHAPE America, 2014) designed to make students more physically literate. Both models above allow students to become more literate with the hopes of adopting a physically active lifestyle. The SHAPE America national standards provide broad strokes of what should be included in the PE program. The grade level outcomes are more refined in the fact they are specific to grade levels and narrows the focus of content in each grade. Use of the SE and TA allow students to grow in the elementary by building the skills; the middle school to apply the skills; and high school students to master the skills (Gubacs-Collins & Olsen, 2010). Both models also call for frequent formative assessment in each domain, this is important for teachers to look at feedback to address areas where student need is required. By using the formats and strategies, provided by the SE and TA models, in their GPE classes, teachers can make modification and adaptations to create an inclusive atmosphere for all students including students with disabilities.

Newer curriculum models tend to embrace individual learning as a more inclusive style of learning using methods as Universal Design for Learning (UDL) and differentiated instruction. Universal Design for Learning (UDL) is a teaching strategy that begins at the planning stage and creates lessons that have less needs for the teacher to modify and adapt a lesson for a SEN student (Spooner, Baker, Harris, Ahlgrim-Delzell, & Browder, 2007). UDL aligns with NCLB and IDEAIA because it provides all students with the “potential to access, participate, and progress in the general curriculum. (Spooner et al., 2007). When planning for UDL lessons there are three variables that a teacher needs to consider. The first one is that all children are different and that each child has hers/his own unique attributes (Lieberman, Lytle, & Clarcq, 2008). Teachers need to take into consideration many different needs of students. Teachers need to know how to plan lessons that help students succeed in PE while making sure the lesson aligns to standards, adheres to IEP and 504 modifications, the individual student needs, and the needs of the class (Lieberman, et al. 2008). By doing this the teacher can make appropriate modifications to meet the needs of all students.

Making modifications for all students is an important factor in UDL. It can be the delivery style by using verbal directions, video directions, demonstrations, pictures, peer instruction or written instructions. The use of more than one way allows teachers to reach out to a diverse group of learners. By modifying equipment students have the ability to learn how to perform a skill at their own pace. Tennis for example can be a difficult sport to learn for someone who is new to the sport, however with the use of an oversized tennis racquet and a slow bounce ball a student is able to become proficient using these items and building up to using regulation sized equipment. Modification of the rules is another variable a teacher can use for

creating a UDL lesson. “A rule modification is anything that deviates from the original or culturally accepted rules of a game.” (Lieberman et al., 2008 p. 36). Finally, a teacher should make modifications to the way they present their instruction. This is everything from a classroom environment, the instruction of the lesson, how you interact with your class, finally to how you provide feedback (Lieberman et al., 2008). These are all important premises for teachers who are using UDL.

The concept of UDL can exist outside of a PE classroom, including youth sports. Youth sports make up a large part of a child’s development and as physical activity promoters, we should make learning about sports enjoyable to all students. When I was a teacher I know people, who were turned off to PE and sports at very young age citing that they had a bad coach or teacher. Making an experience enjoyable to all is an important factor for children. One thing to consider however is the coaches are typically someone on the team’s father or mother. A very few of these coaches have the “foundational knowledge of coaching practices that promote competence and success with diverse athlete performance” (Sherlock-Shangraw, 2013 p.42). Youth sports can incorporate UDL into their coaching lessons to help increase player success. To accomplish this Sherlock-Shangraw (2013) recommends the following: (1) Get to know your players, by adding the player interest you are able to relate to your students; (2) Frequently assess students by asking questions; and (3) Use peer demonstrations (Sherlock-Shangraw, 2013).

Learning programs like Response to Intervention (RtI), when implemented dynamically, can allow for more personalized instruction to students, and can be more effective than some other models currently being used in schools (Connor & Morrison, 2016). According to the

National Association of State Directors of Special Education (NASDSE), Response to Intervention (RtI) is “the (general education) practice of providing high quality instruction and intervention matched to the student need, monitoring progress frequently to make decisions about changes in instruction or goals, and applying child response data to important educational decisions.” (NASDE, 2006 p. 3) For practical purposes, RtI is an inclusion based model that allows students to participate in a heterogeneous classroom while receiving the instructional needs that they require.

Using both summative data and formative data, teachers are able to keep track of student performance and provide instruction to students to meet their educational needs (Stephens, Silliman-French, Kinnison, & French, 2010). The use of formative data allows to teacher instant feedback on which students understand and which students are struggling to get the content. The use of summative data allows the teacher to see which students should go up or down a tier.

Students in the first tier typically make up about 80% of the students and helps educations find out who is in the lower 25<sup>th</sup> percentile (Stephens, et al., 2010). It is this tier that students are first identified for needing some help. In a physical education setting, these students receive instruction and monitoring as a proactive and preventative treatment (Stephens, et al., 2010). In a physical education setting students physical education teachers should act as physical activity specialists (Heron, Villareal, Yao, Christianson, & Heron, 2006) working to help students make a connection between physical education, health, and physical activities performed outside the classroom (Dauenhauer, 2012; Erwin, Castelli, & Ernst, 2009).

Dauenhauer (2012) suggests using a few different strategies that can help teachers attain this in both general physical education and adapted physical education classes would include: fitness

nights, extracurricular sports, and before and after school activity programs. This would be the area that would best meet criteria for a fully inclusive classroom setting. Students who are considered the bottom 25<sup>th</sup> percentile would move forward and be involved in tier two (Stephens, et al., 2010).

In tier two, students are identified as borderline and need to receive some intervention. These students are identified as not responding to instructional treatments that were performed in tier one often these students are documented as falling below appropriate skill level. (Marston, 2005) In tier two, students are often in a small group setting and receive instruction based. These students may work with the general physical education (GPE) teacher or the adapted physical education (APE) teacher. Through instruction students learn to refine the skills that are being worked on in class. Dauenhauer (2012) reported that students in his class received training on how to set and work towards goals and usually lasted anywhere between 8-15 weeks. Students with disabilities, who are in this, tier can benefit from use of peer buddies in the GPE class (Stephens, et al., 2010). The use of peer tutoring has proven to be effective when teaching students within a specialized content area such as physical education (Heron et al., 2006; Stephens et al., 2010).

In tier three, the students who did not respond to the intervention are given more intensive attention and more individualized instruction. If a student is not making progress in Tier three they are often referred to special education for evaluation (Stephens, 2010). According to Dauenhauer (2012), the role of the interventionist at this tier is to “identify those barriers and work with the student to overcome them.” Some suggestions that Dauenhauer (2012) makes is to

have sessions with parent and child to help reinforce habits outside of school in the home and provide the parents with enough background knowledge to be able to assist.

By using UDL and RtI, teachers can have an impact on student learning. Both are inclusive models that allow for student learning at different levels while giving attention to those who need it. These models both match the plan for NCLB and the IDEAIA because it is helping improve the education of all students. It allows for students to make choices and gives them options to control their own learning pathways. The use scaffolding and tier teaching, such as RtI, students have the ability to have small successes on their own level and building upon those successes. It is the duty of the teacher and teacher educators to implement that in the class and help increase student success.

### **Teacher Dispositions on Working with Students with Disabilities**

Teaching dispositions are often predicted by academic preparation and perceived competence towards working with students who have a disability (Rizzo & Kirkendall, 1995). Dispositions can be classified into internal dispositions that a person places their values towards working with a person who has a disability intrinsically (Krull, 2001). It is what they perceive as right or wrong. External disposition is when a person is placed in situations and behaves that way due to outside factors, such as social desirability (Krull, 2001). Perceived competence can influence a person's disposition. A teacher who displays a positive disposition wants to experience student success. The APENS standards that most closely match up to teacher dispositions are standards 13 and 14. Standard 13 is continuing education. Teacher who are striving to live up to standard 13, are professionally active, remain current in the field, and know of the resources in their area (APENS, 2006). Standard 14 is ethics. This standard is an intrinsic

value of what a professional deems right or wrong. APE teachers are expected to keep high ethical standards while providing services for their students (APENS, 2006). Both internal and external dispositions are important for all teachers but for APE teachers who deal with confidential documents such as IEP's and 504's ethics is extremely important (APENS, 2006). The important thing to remember is they are here for their students and should always strive to adhere to the highest professional dispositions.

Dispositions combine the knowledge and skills of teaching with the inclination to achieve the lesson's objective (Schussler & Knarr, 2013). Dispositions can be affected by a teacher's perceived competence to know when and how to design instruction to meet the needs of all students and the willingness to act on it (Johnson, Evers, Vare, & Murrell, 2010; Obrusnikova, 2008). Adapted PE teachers need the knowledge and skills to operate a classroom effectively but also need the flexibility to change when the circumstances outside a teacher's control demands it; hence this is considered external disposition (Schussler & Knarr, 2013). Internal disposition is a teacher being self-aware in order to view and interpret a particular situation through his/her own eyes (Schussler, 2006). These perceptions are unique to each teacher and are shaped by prior experiences, beliefs, culture, values, and cognitive ability (Schussler & Knarr, 2013). These dispositions are guided by a teacher's attitude towards working with students who have a disability.

Rizzo and Kirkendall (1995) looked at what affects the attitudes of future physical education (PE) teachers when teaching students with mild disabilities. Using the Physical Educators' Attitudes Toward Teaching the Handicapped-II (PEATH-II), Rizzo and Kirkendall, surveyed undergraduates from a northeastern state university who were either enrolled in a



physical education (PE) or adapted physical education (APE) teacher program. The sample included 37% female (n=65) and 63% male (n=109). The median age of all participants was 20.8 years with a range of 18 to 29 years. Participants experience working with students with disabilities ranged from 33% (57) who had no experience, 10% (17) who had experience but rated it as not good, 19% (34) who had experience that was good, and 38% (66) who said their experience was good (Rizzo & Kirkendall, 1995; Rizzo & Wright, 1998; Rizzo & Vispoel, 1991). The PEATH-II was designed for undergraduate students who participated in the study. I did not feel that this document would be appropriate for teachers who have a master's degree in APE.

The PEATH-II contains 12 statements with embedded blanks, for each disability, and has a 5-point Likert scale under each statement. The PEATH-II also has 9 selection type open-ended items including demographic attributes and was validated for content relevance. Cronbach's alpha was used for construct reliability based on Educable Mental Retardation (EMR), Behaviorally Disordered (BD), Learning Disordered (LD), and all PEATH-II items were .82, .85, .88, and .90 respectively. Data was collected on the first day of class and students were told that participation would not influence the grade (Rizzo & Kirkendall, 1995). Correlations were made between the subject demographic attributes and attitudes. Multiple regressions were used to predict attitudes towards teaching individuals with disabilities. Age had a significant negative correlation with behavioral disorders  $r = -.18, p < .01$ . Two variables that had a significant correlation; students who have experience working with disabilities: the year in school  $r = .19, p < .01$ , and perceived competence,  $r = .36, p < .001$ . Academic preparation regarding individuals with disabilities had a significant negative correlation with perceived competence. The results

suggest that advanced students had more favorable experiences with people with disabilities. These favorable experiences along with academic preparation increased teacher's perceived competence in teaching students with disabilities. Academic preparation and perceived competence were best predictors of favorable attitudes towards working with students who have a disability (Rizzo & Kirkendall, 1995). Rizzo and Kirkendall reported in their study some limitations about low sample size due to intact groups and not a random sample. The intact group had favorable attitudes about the program and possibly could have skewed the results. They also suggested that further study be given to experiences, teaching competence, and academic preparation. With the impetus for positive attitudinal change with varied experiences, teaching competence and academic preparation may in fact correlate with an APE teacher's disposition toward teaching students with disabilities.

Likewise, Casebolt and Hodge (2010) did a qualitative study looking at how the high school physical education (PE) teachers felt about working with students who had mild and severe disabilities. Their study used five high school PE teachers (3 male and 2 female), with a mean age of 37, at four suburban high schools. To do this, Casebolt and Hodge used a demographic questionnaire and focused interviews which were audiotaped. The questionnaire included demographics such as age, race, and gender, but it also included information about the teaching environment, such as class size, disability types, access to support, and services. The interview was a two-phased interview. The participants received the list of questions a week prior to the interview to reflect on their response. Interviews were recorded and transcribed by the lead author, participants were then contacted to clarify and confirm their responses for member checking or reliability confirmation. Transcripts were sent to a research team and they

were independently categorized and looked for reoccurring patterns. The results of the interview yielded four themes. The first theme was teaching practice; teachers felt that teaching students with disabilities, especially severe disabilities, were more difficult than students with mild or no disability in non-inclusive settings. Planning, adapting and modifying lessons for students who have a disability was a challenge that the teachers were struggling with. Class size was also an issue the larger the class the less time they had to give feedback and work with students individually. The safety of the students was another concern teaching large groups. Often students teachers found it difficult to plan new and different activities that could be taught safely in their teaching area (Casebolt & Hodge, 2010).

The second theme to emerge was teacher self-efficacy. This is largely based on teaching experience, knowledge, formal thinking, disability type, resource availability, and space. The teachers with more experience teaching voiced higher levels of efficacy due to formal training and informal learning from colleagues, the internet, and disability related pedagogy. However, the participants voiced a need for more professional development on strategies working with and teaching students with disabilities in physical education (Casebolt & Hodge, 2010). The third theme to surface from the study is contradictions of inclusion in PE classes. Teachers had mixed feelings on inclusion with one position on the value of social interactions between students with and without a disability; however, PE teachers commented on separating students with disabilities from their classmates, having lower expectations of students with disabilities, and identify students with disabilities as often disruptive to their classes (Casebolt & Hodge, 2010).

The final theme to emerge from the study was intrinsic motives. Teachers want to see their students succeed regardless of ability level. All participants agreed that what motivates

them the most is to provide the best education for all students. Extrinsically, the participants seemed to be discouraged by district policies that deter students to have little or no motivation to include students. They were hopeful that they could gain support from administrators, colleagues, and parents by demonstrating the amount of success that they had in their classes (Casebolt & Hodge, 2010). The study is important because it captures the opinions of these physical educators regarding working with students who have a disability. Further research could look at increasing the participants from different areas or population centers such as cities or suburbs that may have PE teachers with that have more experiences working with people with disabilities.

Similarly, Roper and Santiago (2014) examined preservice teacher attitudes towards persons with disabilities. The authors held three focus groups with 14 (9 female and 5 male) preservice teachers enrolled in a pre-service teaching program. Participants age averaged 24 years old and ranged from 20 to 42 years with a standard deviation of 5.3. Participants were asked to identify their race, 13 identified as Caucasian and the other participant identified as Hispanic (non-Caucasian). Subjects participated in a focus group service learning (SL) project working that required 6 hours working with adapted physical education students in a school setting (Roper & Santiago, 2014). At the beginning of the SL experience, students reported nervousness, scared, and anxiety. Many of the participants reported that this was the first time they worked with a person with a disability. Another preconceived notion was that the students in APE were frail and could easily get hurt. Participants reported that as they worked with students they became more comfortable and more relaxed. All participants reported that the experience was an “enlightening and rewarding experience.” Roper and Santiago (2014) reported

that none the participants had an interest in APE but after the experience, 4 participants have given it consideration.

Campos, Ferreira, and Block (2015) examined elementary and middle school teachers' views on inclusion. Using semi-structured interviews with five physical education teachers (four male and one female, age range 25 to 32,  $X=27.6$ ). An analysis of the data fostered three themes. The first theme to emerge showed that teachers have a favorable attitude toward inclusionary practices. Participant responses indicated that inclusion was beneficial to all, improving social acceptance and social competence. The second theme to emerge was the challenges and concerns of the teachers. The most common concern discussed was the type and level of the disability and the lack of specific training in APE. The participants ranked their preference of students with disabilities as hearing impairments were the most favorable followed by intellectual disabilities, physical disabilities, and visual impairments. Stating that "visual impairments were the most difficult disability to accommodate" (Campos et al., 2015). A second concern was the severity of some student's disability. Teacher's beliefs are more favorable toward teaching a student with a mild disability compared to a student with severe to profound disabilities. One reason cited this belief was teachers cannot address the class as well since they are paying more attention to the students with disabilities. (Ms. A.) stated "If I pay attention to him, the class will lose concentration and the outcome will be poorer. If we pay attention to the class, students with disabilities will be isolated from the class" (Campos et al., 2015). The third theme to emerge was related to teacher attitude was that there is a lack of specific training in APE. Teachers felt that they need more training working with students with disabilities. The participants felt that more

pedagogical and educational practice was needed to foster the development of skills needed to work with students with disabilities (Campos et al., 2015).

A qualitative study by Combs, Elliott, and Whipple (2010) used the Physical Educators Attitude Toward Teaching Individuals with Disabilities – III (PEATID-III) (Rizzo, 1986; 1993). The questionnaire was sent to 150 elementary PE teachers in the school districts the primary investigator was given permission to use, out of the 150 questionnaires sent 26 were returned for a response rate of 17% (Combs et al., 2010). The participants for the interviews were selected by their responses to the questionnaire, two from opposite ends of the continuum. After the interview, transcripts were written up and given to the participants to clarify, elaborate, and comment on their responses (Combs et al., 2010).

The teachers who had positive attitudes were named “Jan” and “Jennifer.” Jan was a suburban teacher with 12 years of experience; she talked about how she welcomed her students with special needs into her classroom. Jan is quoted as saying “Many of my students that are labeled with special needs are very skillful movers, energetic, and enjoy physical education...”(Combs et al., 2010). Jan went on to talk about how she was in favor of including students in her classroom. Her lesson plans were written years ago but she updates them a few days before she teaches them putting thought into how she can incorporate her students with disabilities into her classroom. The other teacher Jennifer talked about how she wanted her students to learn motor skills and learn how to improve their personal fitness levels. Jennifer spoke in her interview about an experience in her teacher education program that she has working with a student with special needs at her university. Jennifer talked about how important it was to write inclusive lesson plans so students shouldn’t feel left out. She also talked about the

importance of collaborating with others to develop an IEP for her students. By using specific teaching strategies such as proximity, she felt that students with special needs had a greater chance of being on task. Jennifer said, “When I ask the class to get into general space I try to make sure that I am very close to children who may have problems paying attention. I especially try to do this with the children who have ADHD who sometimes need me near them to help them concentrate and stay focused” (Combs et al., 2010, p. 188).

The two teachers with negative attitudes were identified as “Sean” and Tammy.” Sean is a teacher with six years of experience and is currently at a large suburban school where he has been for two years. Sean’s teaching philosophy is that he wants his students to learn the basic sports skills so they can go out and participate in sports outside of school. He says that when he sees them play sports and perform the skills he knows he has done a good job. Sean was given minimal training in APE from the college courses he has taken. When asked about inclusion, Sean responded “...I guess I believe that it looks great on paper but when it means that it disrupts my class then I begin to question the whole practice” (Combs et al., 2010 p. 119). The other teacher with negative views was Tammy. Tammy is an elementary teacher with 18 years of teaching experience, approximately nine years at each level (i.e., secondary and elementary). Tammy received very little training in APE and had asked for more in-service training. After 18 years of teaching she has seen a lot of changes in teaching. She does not write lesson plans anymore, only submits nine week outlines to her principal. Tammy spoke about her lessons and she was more concerned with the safety of her classes than the student with special needs. In her interview Tammy said “I don’t feel that I should turn my lesson upside down for just one child” (Combs et al., 2010). Tammy has acknowledged her lack of skill in this area and would like to

become a better teacher; she has spoken to special education teachers and even asked the district PE coordinator to provide in-service for her and her colleagues (Combs, et al., 2010).

Combs et al., (2010) found through these interviews that the attitude of the teacher influences the objectives of a lesson. Teachers who have a positive attitude have more than one learning objective. Teachers with a positive attitude prepare lesson plans that are inclusive to all the students. Teachers all wanted to be successful but there is a difference on how success is measured. Finally, teachers with positive attitudes have coursework and experience working with students with special educational needs (Combs et al., 2010).

### **Summary**

When the Education for All Handicapped Children Act was enacted, it required that physical education services be made available to students with disabilities as part of their free and appropriate public education and is part of the definition of special education (Education for All Handicapped Children Act, 1975). This created a need for more teachers in APE as more and more children and students were receiving special education services. In this regard, there was also a collateral concern to increase teacher training programs across the country to meet the increased demands.

Many physical educators felt unprepared to teach students with disabilities citing lack knowledge of special education services, specific modifications and accommodations for specific disability types, and legal applications (Block, 1994; Hardin, 2005; Lieberman, Houston-Wilson, & Kozub, 2002; Tant & Watelain, 2016). Consequently, there are many factors that influence a teacher's perception of teaching students with disabilities, applying specific modifications, attending to federal laws such as IDEA, and being accountable for student learning. In this



connection, Teacher Knowledge, Teaching Skill, and Dispositions were found to those salient factors that form the foundation of becoming a successful APE teacher.

The role of a professional in APE has evolved over time. It is important for APE teachers to know the history of the field including special education laws and their classroom implications. APE teachers must be able to communicate with colleagues, other service providers, students, and the student's family in order to provide the direct service to the student. Knowing what assessment is appropriate to use with a student is important to an APE teacher as they need to set goals and objectives for their students. Finally, APE teachers need to understand the pedagogical theories that are behind the curriculum and how to develop lessons that are culturally and developmentally appropriate to the success of the student. Specifically, an APE teacher needs to know when and how to help a student succeed by making proper accommodations and modifications to the curriculum when needed. It is these aspects that helped construct the questions for the knowledge.

Teacher skills are the application of their APE knowledge into their teaching. Teachers reported that training, hands-on experience, and support can positively influence their ability and skill levels in teaching students with disabilities. The perceived competence of applying these skills will help with the management and adaptations of a lesson (Coates & Vickerman, 2010). Another skill that is important to an APE teacher is being collaborative with other related service providers to attain the objectives set forth in the student's IEP plan (Beamer & Yun, 2014; Columna et al., 2014). Education has changed to include a variety of diverse learners with many different, social, cognitive, and physical needs (Duchardt, Marlow, Inman, Christensen, and Reeves, 2011). Often PE teachers are left out of student IEP meetings and experience a

disconnect in the IEP process despite general education required participation (Kowalski, Lieberman, & Dagget, 2006). Collaboration between the physical education teacher, special education students and paraprofessionals puts the needs of the student in the forefront of instruction allowing students to participate in a safe and supportive environment (Klein & Hollingshead, 2015). Collaboration can take on many forms; however, within the context of APE services, collaboration is the shared information and interaction between APE and related services providers. The two-way interaction of information sharing and exchange is perhaps the mainstay of collaboration between professionals.

Teacher disposition is the view a teacher has towards working with a student who has special needs. The way an APE teacher views his/her skills correlates with positive disposition towards working with students with disabilities. Teachers who feel competent working with students who have disabilities prepare accommodating lessons and have a more positive attitude working with students who have a disability (Obrusnikova, 2008). Many physical education teachers feel that they could use more training on instructional strategies focusing on how to teach students who have a disability (Campos et al., 2015; Casebolt & Hodge, 2010). By giving teachers the opportunity to receive hands-on experience working with students with special needs, studies have shown to improve the disposition of teachers (Combs et al., 2010; Meegan & MacPhail, 2006; Obrusnikova, 2008; Roper & Santiago, 2014). Another factor is the student's age level, with teacher's who have younger students with disabilities often showing more favorable dispositions (Rizzo, 1984). Finally, the type and severity of a student's disability can affect a teacher's disposition towards teaching physical education (Meegan & MacPhail, 2006; Obrusnikova, 2008; Rizzo & Vispoel, 1991; Rizzo & Wright, 1987).



## **CHAPTER III**

### **METHOD**

The purpose of this chapter is to describe the methods used to describe the grantee's knowledge, skill, and disposition in APE upon receiving support from their IHE from the Office of Special Education Programs Personnel Preparation Program. As previously stated the purpose of the study was to describe adapted physical education in-service teachers' perception of their knowledge, skills, and disposition who received funding from the Office of Special Education Programs Personnel Preparation grant program. This chapter consists of the following sections: research design, participant recruitment, instrument development, data collection, data analysis procedures, and summary

#### **Research Design**

I used survey research methodology to collect information from participants using guidelines espoused by Dillman, Smyth, and Christian (2014). This study was approved by the University of Hawai'i at Mānoa's Institutional Review Board (IRB) (See Appendix A). Upon IRB approval, I contacted seven institutes of higher education (IHE) who received OSEP Personnel Preparation Funding over the past 10 years requesting their participation in the study. The IHEs included the following sites: Slippery Rock University of Pennsylvania, State University of New York (SUNY) Brockport, Texas Woman's College, University of Hawai'i at Mānoa, the University of Wisconsin – La Crosse, Western Michigan University, and the University of Utah. These schools were contacted and asked if they would be willing to participate in the study. All seven of the schools responded that they would be willing to participate in the study. Requirements for participation included that participants must have

completed their institution's OSEP master's program in APE between May 2005 and August 2016. These instructional variations, in person, hybrid, and online, among the different IHE were taken into consideration when developing the questionnaire and planning the survey

Each of the participating IHE follow the Adapted Physical Education National Standards (APENS) outlined by the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID) (Kelly, 2006). Variations to the program may include a more specialized focus on certain aspects of APE but programs are regionally accredited IHE. Each IHE offers a master's degree tract in Adapted Physical Education with each institution requiring between 30-36 semester hours or training with emphasis in APE and research. APE related training specifically addresses physical education teacher preparation to prepare them in special (adapted) physical education teaching, modifications and individualized programming. Four of these IHE have traditional programs where participants attend classes in person. Three of these programs are considered hybrid classes where participants take classes online and classroom courses.

The decision to use an online survey was based on the assumption that all potential participants have completed a master's level program in APE and are expected to have computer skills. Participating IHEs coincidentally represented SHAPE America's regional districts. Each participant from the school was given the opportunity to respond to the survey. One anticipated issue was that not all students will have a current email on file. If primary email is returned the use of secondary email was used.

Dillman, Smyth and Christian (2014) suggest using the social exchange theory of human behavior to appeal to their desire to help give back to the grant program will increase responses.

Since I am researching alumni from different universities, social desirability is a factor that needs to be addressed when contacting the participants. To help reduce response error, I let participants know that I am a doctoral candidate with no affiliation to their school. This is to allow participants to know that I am an independent researcher and that their individual responses would not be shared with anyone else. I also let participants know that in each contact email that the survey is confidential so participants could feel that their risk was reduced. The questions are written to be more personalized and ask the participant more about themselves. This is to help increase the response rate as people are more motivated when they have questions that they want to answer. To establish trust, I worked with the grant program directors at each university. By working with the program directors, I was able to establish myself as a credible researcher and let the participants know and this was a legitimate study. This was important to establish trust between the participants and myself; “as participants are more likely to participate when there is trust” (Dillman, et al. 2014, p. 42). I also provided participants with my University of Hawai`i at Mānoa email for any questions. In addition to my email I provided the University of Hawai`i at Mānoa’s Institutional Review Board (IRB) contact information to emphasize that this is a research project that is university approved. More importantly, project directors will be assured that this was not a reflection of their respective programs; instead to capture the variables of interest in preparing APE teachers in schools. Project directors from the seven IHEs assisted with email distribution and making initial contact with their graduates.

### **Instrument Development**

The questionnaire has three sections to measure each construct totaling 52 items. The questionnaire also has a section for demographic information from participants, age, gender,

ethnic identification, experience, and university attended. Three main variables were used in the development of the questions used to measure physical educators' knowledge, skills, and disposition towards working with students with disabilities. After an extensive review of literature on both preservice and in service teachers three variables were developed and questions were designed around these variables.

Using the guidelines from Dillman, Smyth, and Christian (2014) I broke the questionnaire into five sections one for knowledge, one for skills, two for dispositions, and one for demographics. Each section has an introduction that was designed to inform the respondent as to what the participant can expect in that particular part of the survey. To do this the survey has been formatted properly so that it appears in the middle of the screen and the text can wrap around to allow flexibility to different screen sizes. The font should be clear and the responses should be easy to understand. I used Arial at a 12-point font for the online survey. This way the respondent can glance over the survey and see what is expected of him or her. Next, each section of the survey can have a part where it explains what the section is looking for (i.e., consent form, the perception of attitudes, skills, and disposition; demographic information). This was intended to help the respondents comprehend what the question is asking and to help them to mentally prepare for taking the survey.

After the questionnaire was developed, I collected evidence from content experts and from cognitive interviews. The review of the content experts and the cognitive interviews helped to support the validity of the survey. The content experts reviewed the questions to help me verify that the instrument's intended content measures the constructs adequately. The cognitive

interviews were conducted to identify any revisions that needed to be made and that respondents understood the questions after revisions were made.

### **Development of the Knowledge Variables**

After reviewing the literature about teacher perceived knowledge in working with students with disabilities, I created a knowledge construct designed to measure this variable. The reasoning for this is that many teachers reported that coming out of an undergraduate program in physical education they did not feel prepared enough to work with students with disabilities (Rizzo & Vispoel, 1991; Rizzo & Kirkendall, 1995). Teachers who do not have experience working with students with disabilities experience anxiety when asked to work with them for the first time. There is a correlation between the amount of training that teachers have and their confidence level. Teachers who receive more training to work with students in with disabilities and have hands on working experience show an increased confidence level when teaching students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014). Therefore, eight questions were based on their perceived knowledge of preparation. It is important to understand how to work with and manage students with a disability in a classroom setting, five questions were designed to measure that understanding. Because of IDEA and ESSA, there are important legal aspects to working with students with disabilities, including questions related to Special Education law, interpretation of the students' IEP, participation in the LRE, assessments and accountability. Five questions under the knowledge section were specific to special education law.

### **Development of the Skills Variable**



I developed a variable to measure the skills construct. This construct was based on how APE teachers view their skills and how effective they are in a situation. This perception is known as perceived competence (Block & Rizzo, 1995; Obrusnikova, 2008). Perceived competence was shown by Obrusnikova (2008) to be a top predictor in PE teachers ability to teach children with disabilities. Working with students who have a disability, teachers often need to be able to plan, instruct and assess all students with and without disabilities. When a teacher's perceived competence towards working with a student with disability increases, his/her ability to provide quality PE using more instructional teaching strategies to reduce negative experiences also increases (Coates & Vickerman, 2010). For these reasons I drafted a set of questions to measure each of these components. Four questions in the skills section were based skills for lesson planning and five questions dealing with instruction and teaching strategies. Because new teachers tend to find it difficult to plan new and different activities for students with more severe disabilities that could be taught safely in their teaching area (Casebolt & Hodge, 2010), I included questions to measure their perceived competence in their skills of planning and instruction. Finally, it is important for teachers to show student improvement. Assessment in physical education is important for all students. Assessment is a practical way to enhance teaching and learning for diverse learners is by providing multiple means to assess them (Butler & Hodge, 2001). Adapted physical education (APE) specialists frequently rely on standardized tests to determine whether a child with a disability qualifies for APE services (Block, Lieberman, & Connor-Kuntz (1998). Because students with different abilities have different needs and educational goals outlined in their IEP's, traditional physical education assessments do not normally apply to APE students. Adapted physical education teachers must meet the demands to

accommodate for these assessments by making modifications and providing more authentic assessments are needed for APE for their students. For this reason, I drafted three questions that addressed assessment (Block, Lieberman, & Connor-Kuntz (1998).

### **Development of the Dispositions Variable**

Disposition is an attribute that can be viewed as either internal or external. Internal disposition is related to characteristics that are inside the individual (Krull, 2001). These dispositions are formed from prior experiences, cultural beliefs, values, and cognitive ability (Schussler & Knarr, 2013). External dispositions are dispositions that are related to the environment where the individual is found (Krull, 2001). With regard to teaching, dispositions can be affected by individual teaching experiences. Teachers with positive attitudes were influenced by interesting and informative coursework and positive hands-on practical experience working with students with disabilities (Combs et al., 2010). Moreover, dispositions may also be related to perceived competence. Although different in connotation, both deal specifically with an abstract construct that offers positive outcomes when an appropriate learning experience is provided. Specifically, to APE, academic preparation and perceived competence were best predictors of favorable attitudes in for working with students who have a disability (Rizzo & Kirkendall, 1995). Teachers who have a positive disposition tend have multiple learning outcomes for students that cover the cognitive, motor, and psychosocial domains. Teachers with a positive attitude prepare lesson plans that are inclusive to all the students. Teachers want to experience success both for them and their students, but there is a difference on how that success is measured (Combs et al., 2010). Many PE teachers value inclusion and can see benefits of inclusion but often they have lower expectation of students with disabilities and sometimes

separate students with disabilities from the other students in the classroom citing that they are disruptive to their classes (Casebolt & Hodge, 2010). Teachers prefer to work with students who have a mild disability are more favorable to work with than those with a more severe disability (Campos et al., 2015).

### **Content Validity**

A total of 50 questions were sent to three reviewers to look at content validity. Reviewers are scholars in the field of APE and are familiar with the OSEP grant but do not have a direct tie with it. They consisted of two females and one male. Each reviewer was from a different ethnic background and geographical location. This was done to help reduce any cultural imbalances that might be in the survey. The reviewers were asked to look at the questions and report if they matched up with the constructs. The reviewers independently reviewed the questionnaire and returned them with their feedback. They each agreed that some of the questions were too general and suggested that they be more specific. For example, there was a question about reporting at an Individualized Education Plan (IEP) meeting. The reviewers each suggested that the question be broken into more specific items, such as, reporting data and writing goals. Their comments were reviewed and suggestions were made to add more specific questions. After the changes were made one final reviewer went through a cognitive interview and content validity. This reviewer is a scholar in the field of APE. I went through the online questionnaire with this reviewer to experience the feel of the online survey. When we reviewed the survey, there was an adjustment for two grammatical errors also the online survey had an issue with some of the font color being a red color. Adjustments to the font color were made so all questions would be an Arial font set

at 12-point in black. He also suggested that the additions of autism, deafness, and blindness be added to the knowledge section.

### **Cognitive Interviews**

After the expert panel went through the survey and provided feedback, the survey went to 5 graduate students for cognitive interviews. The purpose of the cognitive interview was to determine if participants can understand what is being asked in each question (Dillman et al., 2014). Cognitive interviews were used to probe respondent to clarify any of the closed ended questions and to reduce reader confusion (García, 2011). Many times researchers overestimate the user's ability to understand a question which can lead to the user's confusion (Willis, 1994). Some common sources of confusion include double barrel questions, professional jargon, uncommon words, and vague words (Choi & Pak, 2005). Participants in the cognitive interviews read each question out loud and as they talked through their response, they also provided feedback that was noted on the questionnaire. The speak-aloud tactic allowed participants to opportunity verbalize their interpretation of what was being asked. This provided additional evidence about the response process by providing me with insight into potentially what the subject's thought process will be during the survey process (AREA, APA, NCME, 2014, Ch.1). Items such as taking out abbreviations such as IEP and APE were cited with each participant. For the section that is covering skills the participants noted that the choices were not fully clear as the selections were asking participants about how skillful they felt their skills are in particular areas of APE. These selections were, "Not at all Skillful", "Sometimes Skillful", "Often Skillful", and "Very Often Skillful". For this section, they were asked if they would prefer an alternative of choices that included; "Not at All", "Rarely Skillful", "Sometimes Skillful", and

“Often Skillful”. Participants preferred the alternative choices better than the original. These changes were made on the questionnaire.

### **Practice Survey**

The survey was uploaded to Qualtrics Survey Solutions (Qualtrics, 2017) and was distributed to 10 undergraduate students to test the survey and to identify any problems that might occur with the survey using the online platform. A few issues came up in the format of the survey that I corrected and then retested with undergraduate students.

### **Reliability**

To estimate the reliability of the instrument, I used internal-consistency reliability for each construct and sub-construct. Cronbach’s alpha was used to measure the internal consistency of a construct by measuring the homogeneity of the construct. McMillan and Schumacher (2014) suggest that groups of items with an alpha below .70 should be used with caution.

### **Questionnaire**

The questionnaire was uploaded into a new file on Qualtrics and set the link was prepared to go to potential participants. Program directors at participating schools were sent an email that informed their graduates about the study asking them for their participation. The survey was sent out to 278 graduates of the OSEP Personnel Preparation Grant program. Three follow-up emails were sent out at one-week intervals for the duration of the study. The questionnaire was scheduled to be sent out on Tuesday mornings or the recipient's local time. Sauermann and Roach (2013) reported that there is no significant data on days and time for response rates, however, weekdays tend to be better. Follow up reminders were sent to elicit a greater response rate (Sauermann & Roach, 2013).

Questionnaires were sent out to 278 program graduates, 155 were returned for a 56% response rate. Data were reviewed and two responses did not consent to participation lowering the number to 153. The data set was reviewed for incomplete data sets. Data sets were considered complete if they answered all survey questions up to number 52. Questions 53 and above are demographic information. After the inspection of the data set it was determined that 18 data sets were considered incomplete and were removed, leaving 133 completed data sets for a 49% completion rate.

### **Data Analysis**

Data were downloaded from Qualtrics and imported into Statistical Package for Social Sciences (SPSS) software (IBM, 2016). Data were checked and assigned to the appropriate construct scale. Demographic data collected from these participants also include the following demographic information: gender, age, and ethnic identification. Singleton and Straits (2009) suggested giving a nominal code to the demographic data. This will be a nominal code to help allow for the statistical analysis of the demographic data. For gender identity, males were assigned as 0 and females were assigned 1. Ethnic identity was grouped into Caucasian and Non-Caucasian groupings. Caucasians were grouped as 0 and Non-Caucasians were grouped as 1. I decided to do this because 65% of respondents' self-reported as Caucasians. I had age broken into 10 year intervals, the coding for these intervals was broken down into 21-30 and were coded 0, 31-40 coded 1, and >40, coded 2. For the variables, participants saw a Likert-type scale category labels with each of the questions. When the data was downloaded, I gave each individual scale a nominal coding of 1-4. I did not include the specific numbers on the response

scales because I did not want to influence the participant responses (Dillman, Smyth, & Christian, 2014, p.160).

Using SPSS, I calculated the mean scores for each scale (knowledge, skill, and disposition). Questionnaire items were based on an ordinal 4 point Likert Scale with the first response being weighted as 1 and the last response being weighted as a 4. Question number 46 was reversed coded to help measure participant disposition. Likert scale coding for each construct can be seen in Table 1.

Table 1

*Likert Scale Coding for Each Variable*

	1	2	3	4
Knowledge	Not prepared at all	Somewhat prepared	Well prepared	Very well prepared
Skills	Not at all	Sometimes skillful	Often skillful	Very often skillful
Disposition	Not at all important to me	Not very important to me	Somewhat important to me	Very important to me
Disposition	Very untrue of me	Somewhat untrue of me	Somewhat true of me	Very true of me

Descriptive statistics (i.e., means and standard deviation) were calculated on each variable totaling the scores from each construct and then calculating mean scores. Inferential statistics employing the general linear modeling (GLM) Analysis of Variance (ANOVA) was used for each dependent variable of knowledge, skills, and disposition and each independent variable of age, ethnic identity, and gender.

The questions that correspond for the variables of knowledge, skills, and dispositions were each grouped together to find a mean score and standard deviation. Reliability estimates were taken for each scale and subscale with. Using a general linear model with the main effects for gender identity, ethnic identity, and age and the interactions between each effect (gender identity x ethnic identity; gender identity x age; ethnic identity x age) were fitted to the data and compared to knowledge, skills, and dispositions. Hodge and Elliot (2013) reported undergraduate females felt that they needed more training in working with students with disabilities. Hodge and Elliot (2013) also reported that Caucasian PE teachers were more accepting of students with disabilities than Black PE teachers. However, both Caucasian and Black PE teachers who work with students who have disabilities felt that they needed more education and skill development working with students who what a disability (Hodge & Elliot, 2013).

### **Summary**

The purpose of the study was to describe adapted physical education in-service teachers' perception of their knowledge, skills, and disposition who received funding from the Office of Special Education Programs Personnel Preparation grant program. In this chapter, I outlined the methods used for this study. Research questions addressed factors such as: (a) knowledge, (b) skills, (c) disposition, (d) gender, (e) ethnic identity, and (f) age. Procedural strategies related to instrument development, research design, data collection, and data analysis provided appropriate defensible methods for accomplishing the purpose of the study.



## **CHAPTER IV**

### **RESULTS AND DISCUSSION**

This chapter presents the analysis of data collected during this study and related discussion. This chapter is divided into the following sections: introduction, descriptive statistics for the variables, descriptive and inferential statistics for the related questions, discussion, and summary.

#### **Introduction**

The purpose of the study was to describe adapted physical education in-service teachers' perception of their knowledge, skills, and disposition who received funding from the Office of Special Education Programs Personnel Preparation grant program. Therefore, the primary research questions for this study were:

1. How do APE in-service Teachers, who participated in the OSEP Training program, perceive their APE knowledge?
2. How do APE in-service Teachers, who participated in the OSEP Training program, perceive their APE skills?
3. How do APE in-service teachers, who participated in the OSEP Training program, perceive their disposition towards working with people with disabilities?
4. To what extent does the in-services' age, gender, and ethnic identification affect their perceived knowledge, skills, and dispositions?

#### **Descriptive Statistics of Participants**

Nine institutes of higher education (IHE) were asked to participate in the study, seven of the nine responded and participated. Two hundred seventy-eight (278) invitations to participate

were sent out to graduates of the OSEP APE Personnel Preparation Grant program from seven IHE. Distribution of questionnaires was completed Feb 2017. Follow-up requests were done weekly for the next four weeks. Based on the initial and follow-up procedures, one hundred fifty-five participants (155) responded for a response rate of 55.76%. Final usable and completed questionnaires included 133 for a completion rate of 47.12%. Table 2 shows that response rate and completion rate of the questionnaire for each IHE. The University of Hawai'i at Mānoa had

Table 2

*Summary of Participating Schools*

	Sent	Responded	
Response Rate	278	155	55.76%
	Sent	Completed	Completion Rate
Slippery Rock University	25	13	52.00%
State University of New York (SUNY), Brockport	31	12	38.71%
Texas Woman's University	24	11	45.83%
University of Hawaii at Mānoa	76	38	50.00%
University of Utah	33	15	45.45%
University of Wisconsin-La Crosse	43	21	48.84%
Western Michigan University	46	21	45.65%
Overall Completion Rate	278	133	47.12%

thirty-eight (38) respondents (29%). The University of Wisconsin – La Crosse and Western Michigan University each had twenty-one (21) responses (16%). The University of Utah had fifteen responses (11%). Slippery Rock University had 13 responses (10%). The State University

of New York (SUNY) - Brockport had twelve (12) responses (9%). Texas Woman's University had 11 responses (8%), and three participants did not answer (2%)

### **Participant Characteristics**

Demographic data collected from these participants also include the following demographic information: gender, age, and ethnic identification. Table 3 shows the characteristics of the participants in the study. Participants were asked to record gender they identified for which 47 (35.3%) were male and 83 (62%) acknowledged as female. Participants' age ranged from 21 years old to greater than 61 years. The largest percent of participants were in the 21-30 year old range with 51%. The next largest range is 30% of the participants are in the 31-40 year range, 8.5% in 41-50 year old, and 7.7% 51-60. Finally, 1.5% of participants identified in the 61+ range. Participant's age was collapsed into three distinct groups, 21-30; 31-40; 41> and above. Participants self-reported on their ethnic background. Eighty-seven (87) reported Caucasian (65%), nineteen (19) participants reported Asian (14%), thirteen (13) were Hawaiian or Pacific Island (10%), five (5) reported as other (4%), three (3) were African American or Black (2%), three (3) were Hispanic (2%), and three (3) did not respond (2%). Due to the low numbers for certain ethnic groups, ethnic data were collapsed into two categories Caucasian and Non-Caucasian.

Participants self-reported on their ethnic background. Eighty-seven (87) reported Caucasian (65%), nineteen (19) participants reported Asian (14%), thirteen (13) were Hawaiian or Pacific Island (10%), five (5) reported as other (4%), three (3) were African American or Black (2%), three (3) were Hispanic (2%), and three (3) did not respond (2%). Due to the low

numbers for certain ethnic groups, ethnic data were collapsed into two categories Caucasian and Non-Caucasian.

Table 3

*Descriptive Characteristics of Participants*

Gender	Frequency	Percent
Male	47	35.3
Female	83	62.4
N/A	3	2.3
Total	133	100.0

Ethnic identification	Frequency	Percent
Caucasian	87	65.4
Black or African American	3	2.3
Asian	19	14.3
Native Hawaiian or Pacific Islander	18	13.5
Hispanic	3	2.3
N/A	3	2.3
Total	133	100.0

Age	Frequency	Percent
21-30	68	51.1
31-40	39	29.3
41-50	11	8.3
51-60	10	7.5
61 and older	2	1.5
N/A	3	2.3
Total	133	100.0

## Descriptive and Inferential Statistics as Related to the Specific Research Questions

### Knowledge

The first scale to be measured was knowledge. The knowledge scale consisted of 22 questions. Cronbach's Alpha for the reliability of the knowledge scale was  $r=.93$  which is considered to have a strong relationship of internal consistency for the knowledge scale.

Table 4 shows the reliability and the descriptive values for the scale and subscales for knowledge. Participants mean for knowledge scale was 3.36 with a standard deviation of .44.

Table 4

*Descriptive Statistics and Reliability Estimates for Knowledge Scale and Sub Scale Items*

	Knowledge total	Knowledge special ed.	Knowledge management	Knowledge preparation
N	133	133	133	133
Number of items	22	5	8	8
Cronbach's alpha	0.93	0.81	0.88	0.83
Mean	3.36	3.25	3.27	3.49
Std. Deviation	0.44	0.57	0.50	0.42

For the knowledge of special education subscale, Cronbach's alpha for reliability was  $r=.82$  which demonstrates a strong level of internal consistency. Participant mean is for the subscale measuring knowledge of special education is  $X=3.35$  with a SD of .57 who felt they have special education knowledge. The subscale for preparation knowledge Cronbach's alpha for reliability was  $r=.83$ , suggesting a strong level of reliability. The mean for the preparation knowledge was a  $X=3.49$  with a SD of .42 who felt that they were prepared. For the third subscale of knowledge, eight questions dealt with teacher preparation to manage an adapted physical education class. Cronbach's alpha for the reliability of this subscale was  $r=0.88$

suggesting a high internal consistency. Items for the management subscale scored a mean of  $X=3.27$ .

The scale used to measure participant skills has eleven (11) questions scaled from 1-4. Table 5 shows that interaction effects that were calculated between knowledge and three independent variables age, gender, and ethnic identity.

Table 5

*Interaction Effects Among Age, Gender, and Ethnic Identity for Knowledge*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.673a	9	0.41	2.51	0.011
Intercept	1131.258	1	1131.26	6946.17	< .001
Gender * Age	0.03	2	0.01	0.08	0.924
Ethnic Identity * Gender	0.84	1	0.84	5.13	0.025
Age * Ethnic Identity	0.56	2	0.28	1.71	0.185
Ethnic Identity	2.2	1	2.2	13.63	<0.001
Gender	0.2	1	0.2	0.92	0.339
Age	0.27	2	0.14	0.84	0.433
Error	20.03	123	0.16		
Total	1574.65	133			
Corrected Total	23.71	132			

a. R Squared = .155 (Adjusted R Squared = .093)

Statistical significance was found for main effect of ethnic identity  $F(9,1) = 13.63, p<.05$ ) and an interaction effect between ethnic identity and gender  $F(9,-2) = 5.13, p<.05$ ). No statistical significance ( $p>.05$ ) was found when I tested the main effect at gender and age. No

statistical significance ( $p>.05$ ) was found when I tested interaction between gender and age or ethnic identity and age.

**Skills**

The second scale to be measured was skill. The skill scale consisted of eleven questions. Using Cronbach’s Alpha for the reliability of the skill scale was  $r=.85$  which is considered to have a strong relationship of internal consistency for total skill. Table 6 shows the descriptive data for skill scale and subscales.

Table 6

*Descriptive Statistics and Reliability Estimates of the Skill Scale and Sub Scale Items*

	Skills Total	Skills Planning	Skills Instruction	Skills Assessment
N	133	133	133	133
Items	11	3	5	3
Cronbach's alpha	0.85	0.71	0.65	0.73
Mean	3.57	3.57	3.57	3.54
Std. Deviation	0.27	0.45	0.38	0.44

For the planning skill subscale, three items were used to calculate a Cronbach’s alpha of reliability was  $r=.71$  which demonstrates a moderate to strong level of internal consistency. Participants mean for measuring the subscale of planning skills was  $X=3.56$  with a standard deviation of .45. The second subscale for the skill was instruction, using five questions calculated using Cronbach’s alpha for the reliability of  $r=.65$ , suggesting a low to moderate level of reliability. The mean for the instruction skill was  $X=3.56$  with a standard deviation  $SD=.27$  of who felt that they were prepared. For the third subscale assessment skills, three questions dealt with teacher skills to assess students adapted physical education class. Cronbach’s alpha for the

reliability of this subscale was  $r=0.73$  deeming the internal consistency moderate. Items for the assessment subscale scored a mean of 3.54 who felt they were prepared to do assessments.

The scale used to measure participant skills has eleven questions scaled from 1-4. Table 7 shows that interaction effects that were calculated between skill and three independent variables age, gender, and ethnic identity.

Table 7

*Interaction Effects Among Age, Gender, and Ethnic Identity for Skills*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	0.987a	9	0.11	1.78	.079
Intercept	1331.85	1	1331.85	21620.99	<.001
Ethnic Identity	0.34	1	0.34	5.51	.021
Age	0.00	2	0.00	0.02	.979
Gender	0.17	1	0.17	2.79	.097
Gender * Age	0.15	2	0.08	1.24	.293
Ethnic Identity * Gender	0.35	1	0.35	5.64	.019
Ethnic Identity * Age	0.03	2	0.01	0.21	.807
Error	7.58	123	0.06		
Total	1812.94	133			
Corrected Total	8.56	132			

a. R Squared = .115 (Adjusted R Squared = .050)

Statistical significance was found at main effect of ethnic identity  $F(9,1) = 13.63, p<.05$ . An interaction effect at ethnic identity and gender  $F(9,2) = 5.64, p<.05$ . No statistical significance ( $p>.05$ ) was found for the main effect at gender and age. No statistical significance ( $p>.05$ ) was found for the interaction effects of gender and age or at ethnic identity and age.



## Disposition

The third scale to be measured was disposition. The disposition scale originally consisted of 17 questions, due to low internal consistency question 46 was omitted to increase Cronbach's alpha to a moderate level. Using Cronbach's Alpha for the reliability of the disposition scale was  $r=.73$  which is considered to have a moderate relationship of internal consistency for the disposition scale. Table 8 shows the reliability and the descriptive values for the scale and subscales for disposition. Participants' mean for disposition scale was  $X=3.69$  with a standard deviation of .22.

Table 8

*Descriptive Statistics and Reliability Estimates for Disposition Scale and Sub Scale Items*

	Disposition total	External disposition	Internal disposition
N	133	133	133
Items	16	8	8
Cronbach's alpha	0.73	0.68	0.63
Mean	3.69	3.54	3.85
Std. Deviation	0.23	0.29	0.21

Note: Question 46 was omitted due to low internal consistency scores

For the internal disposition subscale, seven items were used to calculate a Cronbach's alpha of reliability was  $r=.63$  which demonstrates a low to moderate level of internal consistency. Participant mean for measuring the subscale of internal disposition is 3.85 with a standard deviation of .21 who felt they have a positive disposition towards working with people with a disability. The second subscale was for external disposition, using eight (8) questions it had a calculated Cronbach's alpha for the reliability of  $r=.68$ , suggesting a low to moderate level

of reliability. The mean for the external disposition was  $X=3.54$  with a standard deviation of .29 who felt that they had a positive external disposition.

Table 9 displays that interaction effects that were calculated between disposition and three independent variables: age, gender, and ethnic identity. No statistical significance ( $p>.05$ ) was found for the interaction effects of gender and age or at ethnic identity and age.

Table 9

*Interaction Effects Among Age, Gender, and Ethnic Identity for Disposition*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	0.509a	9	0.06	1.11	.363
Intercept	1332.31	1	1332.31	26066.76	< .001
Ethnic Identity	0.02	1	0.02	0.41	.522
Age	0.25	2	0.12	2.43	.093
Gender	0.04	1	0.04	0.75	.387
Gender * Age	0.01	2	0.00	0.06	.940
Ethnic Identity * Gender	0.02	1	0.02	0.30	.586
Ethnic Identity * Age	0.17	2	0.09	1.67	.192
Error	6.29	123	0.05		
Total	1801.02	133			
Corrected Total	6.80	132			

a. R Squared = .075 (Adjusted R Squared = .007)

**Discussion**

The findings presented in this dissertation are subject to the limitations that are commonly accepted with nonrandomized sampling techniques. In this study, I looked at a sample of graduates from an IHE who participated in the Federally funded OSEP Personnel Preparation Training grant degree program in APE. These participants have been trained and credentialed in

APE and it is assumed they work in the area of adapted physical education as either direct service providers, collaborators with other educators, or consultants with students with disabilities. All participants were volunteers and the questionnaire was a self-reported format of information. The response rate for this study was 55.75% and was considered an acceptable response rate for online surveys (Nulty, 2008). Social desirability was lessened in the study by letting students know their responses were confidential and their IHE advisors would not know what their responses were to the survey.

The use of multiple IHE's also means that the method of instruction differs from university to university. While each IHE follows the Adapted Physical Education National Standards (APENS) that are set forth by the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID) the ability to control the classroom environment, materials presented and specific instruction to participants in the OSEP Personnel Program is a limitation (Kelly, 2006). Relatedly, the inability to control participant's experience working with people with disabilities may influence results. The number of contact hours with students with a disability can influence a teacher's knowledge, skills, and disposition (Hodge, Davis, Woodard, & Sherrill, 2002; Hodge & Jansma, 1999; Roper & Santiago, 2014). Finally, participants have different reasons for participation in the OSEP program, while some may truly wish to have an impact on students with disabilities some participants may have other reasons for participation such as career advancement and salary reclassification.

To account for these limitations and restrictions, several methodological and statistical strategies were employed. Participating IHE were from geographically different areas of the United States ranging from New York to Hawai'i. The OSEP APE personnel preparation grant

also had participants who are teaching in U.S. territories such as Guam, Saipan and American Samoa. This sample allowed for gender, ethnic, cultural influences, and age. Moreover, the study allowed both the male and female perspectives and established content validity had four reviewers (2 male and 2 female) from different regions of the United States. These reviewers were also from different ethnic and cultural backgrounds.

The creation of a new instrument created a limitation itself. While the internal consistency for each construct was above an alpha of .70, there were sub-constructs that fell below that level. This could be several reasons for this such as each sub-construct may need additional questions to measure each facet more accurately. An example of this could be internal disposition. Seven questions were developed about internal disposition each measuring a different aspect of APE as pertains to internal disposition. These questions are based on what the teacher would do in a particular situation according to their beliefs; by adding more questions about similar experiences a higher internal reliability can be established. Another example was a question that stated if given the opportunity to present on APE you would be willing to speak about it. There are other factors that might influence a participant such as a fear of public speaking that could potentially affect the reliability of this question to measure disposition.

### **Knowledge**

This study was a descriptive study of participants who received an OSEP federally funded training grant. Very little research has been done on this population particularly within the focus of teacher effectiveness, efficiency, and student with disabilities learning. While all field-based research is vulnerable to various limitations, this study was unique in that the amount of funding provided by the U.S. Department of Education for training is modest; providing

information that can be useful in confirming that such funding is being used effectively and efficiently is a start. To be specific this study examined content knowledge, skills, and disposition of adapted physical education teachers who received an OSEP Personnel Preparation grant to pursue certification in APE. These results show a  $X=3.42$ ,  $SD .41$  that participants felt confident about their knowledge of the legal aspects of special education, the history behind APE, and their academic content knowledge, and their preparation about how to work with the 13 disability categories listed in IDEA. Participants overall felt that content knowledge was an important factor as part of their training and eventual interaction and teaching with students with disabilities. Understanding specific disability related content, how this disability influences physical activity with respect to contra-indicated activities was essential for OSEP participants. Consequently, application of federal and state laws pertaining to service delivery in APE was also mentioned as an important component within this study. While it is understood that individual states can interpret federal laws concerning special education, the delivery of physical education to students with disabilities is required by law and in fact physical education is the only content area mentioned in the definition of special education.

Significant differences were found with perceived knowledge and ethnic identity and between gender and ethnic identity were found. More specifically, Caucasian females aged 21-30 showed the highest estimated knowledge, followed by Caucasian males. Non-Caucasian males aged 21-30 were higher than their female counterparts who scored the lowest estimated knowledge. However, Hodge and Elliot (2013) reported that in preservice teachers, females felt there is more a need for personal preparation than males. This could be argued that the OSEP

APE personnel preparation program could have influenced the perception of knowledge and skills of females.

Ethnic identification had a significant difference when looking at Caucasian and Non-Caucasian. There are a few studies that examined ethnic identification. Hodge and Elliot (2013) looked at Caucasian and African American's and found that Caucasian teachers are more willing to accept students with disabilities in PE. Zusho, Pintrich, and Cortina (2005) also suggest that Asian American students do not have a lesser knowledge base than their Anglo-American counterparts, often they display a larger knowledge base. Asian American students do display more anxiety than their Anglo-American counterparts which could affect their knowledge. These are some of the reasons that could account for lower scores for Non-Caucasian and knowledge.

The instrument that was used was developed to look at the descriptive properties of those who participated in the OSEP personnel preparation program. Knowing the demographic population of the participants it is easy to assume that they would look favorable on working with people who have a disability. The participants looked favorably on their knowledge and skills working with people who have a disability is also supported by other research (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014).

As more teachers, both pre-service and in-service gained knowledge and experience working with student with disabilities, there appears to be a positive correlation in knowledge and experienced gained and the individual's confidence level in teaching students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014).

## **Skills**

Participants were asked questions about their skills in the areas of planning, instruction, and assessment. A highly qualified APE teacher should be able to use the skills taught and apply them to their planning, instruction, and assessment of their students in an APE setting. Participant skills were found to be *at*  $X=3.56$  with a SD of .27. Closer examination of interactions between the independent variables of age, ethnic identity, and gender revealed no significant differences. Significant differences were noted as ethnic identity, gender, and the interaction between ethnic identity and gender. These interactions showed that males both, Caucasian and Non-Caucasian, generally perceived their skills to plan, instruct, and assess, higher than females. Caucasian males and Caucasian females also generally felt confident about their skills to plan, instruct, and assess, in APE. There was an interaction between gender and ethnic identity this difference was between non-Caucasian males and non-Caucasian females for which non-Caucasian males perceived their skills at planning, instructing, and assessing are higher compared to non-Caucasian females. Caucasian females perceive their skills to plan, instruct, and assess, students in APE is higher when compared to non-Caucasian females of the same age.

### **Disposition**

Finally, participant disposition is related to their perceived competence participant the more comfortable a teacher feels his/her knowledge and skills are the higher their disposition towards working with students with a disability (Obrusnikova, 2008). The results for this study suggests participants scored a mean disposition of  $X=3.67$  with a SD of .23 showing that participants disposition to working with students with a disability have a positive view on those who are working with students with a disability. By using the general linear model to look at

interactions between the independent variables of age, ethnic identity, and gender, no significant differences were found between any of the independent variables.

A good predictor to teach PE to students with a disability is perceived competence is self-perception of an individual in their capabilities and ability to control their environment and situation (Obrusnikova, 2008). This perceived competence is linked to teaching experience with students with disabilities and adapted coursework and preparedness (Obrusnikova, 2008). Training and experience are can affect perceived competence for inclusion in PE through. The more years' experience a teacher has working with a student with a disability significantly correlated with the quality of experience in PE (Obrusnikova, 2008). Many PE teachers felt that initial training did not prepare them to teach in a truly inclusive environment (Vickerman & Coates, 2009) and that their training should have focused more on practical experiences over theoretical aspects (Lieberman et al., 2002).

Coates and Vickerman (2010) suggest that with more experience, teachers can increase management skills leading to a higher perceived competence. In a relationship between age, gender, and ethnic identity there was no significant difference between groups. Roper and Santiago (2014) reported that as teachers gain more exposure working with people who have a disability, they become more comfortable and relaxed which can explain the findings.

Participants in the OSEP personnel preparation grant program work with people who have a disability and gain exposure working with them, therefore, the participants disposition would become more positive. As more teachers, both preservice and in-service gained knowledge and experience working with student with disabilities, there appears to be a positive correlation in



knowledge and experienced gained and the individual's disposition towards teaching students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014).

## **CHAPTER V**

### **SUMMARY AND RECOMMENDATIONS**

#### **Introduction**

This section is a summative review and interpretation of the Descriptive Study of Grant Funded Physical Educators' Perceptions of their Knowledge, Skills, and Disposition in Adapted Physical Education. In this section I will be discussing the development of the survey process, findings and interpretation of the survey results, limitations on the survey, and recommendations for further research.

#### **Summary**

The purpose of the study was to describe adapted physical education in-service teachers' perception of their knowledge, skills, and disposition who received funding from the Office of Special Education Programs Personnel Preparation grant program. The OSEP Personnel Preparation Grant is designed to "improve the quality and increase the number of personnel who are fully credentialed to serve children, including infants and toddlers, with disabilities especially in the areas of chronic personnel shortages by supporting projects that prepare early intervention, special education, and related services personnel at the associate, baccalaureate, master's and specialist levels" (U.S. Department of Education, 2017, pA-2). To my knowledge, no other specific research has addressed the knowledge, skills and dispositions of adapted physical educators who received OSEP funding to serve students with disabilities. With the amount of funding being spent by the Federal Government for Personnel Preparation in the United States, being able to confirm that the training received is being used effectively and efficiently. To this, seven IHE's participated in this survey totaling two hundred seventy-eight (278) past participants

in the OSEP APE Personnel Preparation Grant Program. Rizzo & Kirkendall (1995) suggested that increased knowledge and training in APE are important for current and future PE teachers since many feel they are unprepared. Ammah and Hodge (2005) showed that there is also a positive correlation between how prepared teachers are to teach APE and teacher confidence. There is a positive correlation between knowledge and experienced gained and a teacher's confidence level in teaching students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014). The overall findings of this descriptive study showed that OSEP participants perceived their knowledge, skills, and disposition favorably overall.

**How do APE Teachers, who participated in the OSEP personnel preparation program, perceive their APE knowledge?**

Participants of the OSEP personnel preparation grant program overall found that they were confident in their knowledge of APE. These findings show that the OSEP APE personnel preparation grant is beneficial to PE teachers. As seen in the literature review, many teachers felt their knowledge in APE is limited to only one APE class in PETE programs (Piletic, 2010). By providing further training participants in the OSEP participants can understand the legal ramifications of special education, the knowledge of the 14 categories of disabilities as defined in IDEIA, and an understanding of unique learners. The participants in the OSEP APE personnel preparation program understand that each child is unique and should be treated as individuals. As seen in the summative mean score  $X=3.43$ ,  $SD .41$ , for the participant group suggests that participants in OSEP APE personnel preparation grant program have a high level of knowledge in APE.

**How do APE Teachers, who participated in the OSEP APE personnel preparation program, perceive their APE skills?**

Participants of the OSEP personnel preparation program perceived their skills as highly skillful. These skills incorporate the planning of an APE class, the instruction of an APE, and the assessment of an APE class. Participants perceive their skills about the same across all three subscales. This shows that the participants have a comfort in their abilities to plan lessons with modifications for all students to achieve. To instruct students with disabilities and include them in general physical education classes. Finally, it shows that participants in the OSEP APE personnel preparation program can select appropriate assessments to use for their students. Summated mean score for skills was  $X=3.57$ ,  $SD .27$  suggesting that participants in the OSPE APE personnel preparation grant program perceive themselves to be very often skillful in the application of APE.

**How do APE teachers, who participated in the OSEP APE personnel preparation program, perceive their disposition towards working with people with disabilities?**

Participants in the OSEP APE personnel preparation program view their disposition as very high with a mean of  $X=3.67$ ,  $SD=.23$ . This suggests that OSEP APE personnel preparation grant recipients tend to have a good disposition working with students with disabilities and with other providers for their students. These participants adhere and practice ethical practices as related to APE. They are advocates for their students and remain current in the field.

## **To what extent does the participants' age, gender, and ethnic identification affect their perceived knowledge, skills, and participation?**

In-service teachers' age, gender, and ethnic identification has some effect on their knowledge, skills, and disposition towards working with students with disabilities. Using the general linear model were found at the main effect of ethnic identity  $F(9,-1) 13.63, p<.05$  suggesting that Caucasians perceive their knowledge higher than non-Caucasians.. A gender by ethnic identity interaction was found to be significant  $F(9,-2) 5.13, p<.05$  this interaction suggests that knowledge varies between male and females and Caucasian and non-Caucasians. The results suggest that Caucasian female APE teachers' perception of their knowledge is higher than what non-Caucasian female APE teachers perceive their knowledge. This specific finding is contrary to Hodge and Elliot (2013) who reported that preservice female teachers felt that their perceived knowledge was less than that of male preservice teachers. Zusho, Pintrich, and Cortina (2005) reported that Asian American students sometimes experience anxiety about their perceived knowledge which could also explain why Non-Caucasian participants perceived their knowledge as lower. Finally, there appears to be a positive correlation in knowledge and experienced gained and the individual's confidence level in teaching students with disabilities (Rizzo, 1985; Rizzo & Kirkendall, 1995; Roper & Santiago, 2014).

The general linear model for predicting participant skills revealed that the main effect from ethnic identity was statistically significant  $F(9,1) 5.51, p<.05$  and an interaction effect at ethnic identity and gender. This suggests that Caucasian females perceive their skills in APE higher than non-Caucasian females perceive their skills in APE. A non-Caucasian male perceives his skills, in APE, higher than a non-Caucasian female perceives her skills.

The general linear model for predicting disposition revealed that there was no significant difference with respect to disposition and gender, age, and ethnic identity. There were also no significant effects between the interactions between gender, age, and ethnic identity. Hodge and Elliot (2013) reported that Caucasian teachers were more willing to accept students with disability in their classes than African American teachers. Our findings show that there was no significant difference when it came to the disposition of Caucasian and Non-Caucasian students.

### **Limitations**

This dissertation and its findings are subject to the limitations that are commonly found with non-probability based sampling techniques such as in this study. This limitation does not allow me to make strong claims about a broader population. In this study, I looked at a sample of graduates from seven IHE who participated in a federally funded grant master's degree program. The core instruction is based on national standards and specific programs can vary in instructional delivery, mentoring and practicum experiences. Social desirability is another factor that could affect the results of the study. In order to reduce social reliability, participants were notified that this survey was confidential. Participants self-reported their perceptions on knowledge, skills, and dispositions in APE. This was to reduce participants who might feel otherwise about their knowledge, skills, and dispositions in APE. However, it should be noted that some perceptions might reflect what they feel is socially desirable (Dillman, Smyth, & Christian, 2014).

Another limitation was the contact with participants. Due to privacy, some OSEP grant directors preferred to contact their past participants directly and would notify me when they did so. Each director was given procedures to send out the invitation emails, however certain schools

were late with their correspondence. To help minimize this each director was given an email with four letters labeled with their school name and “email 1”, “email 2”, “email 3”, “email 4” to help clarify what email to send out and when.

Finally, another limitation is population; the survey used a sample that was from several IHE’s that are federally funded. I have no control over the diversity that is enrolled in the programs. As the demographic information pointed out, sixty-five percent (65%) of participants are Caucasian, while the next highest ethnic population was 14.3% Asian. This limitation is important because in order to further look at knowledge, skills, and dispositions between ethnic identities a larger sample size of different ethnic identities would be needed. I cannot control the ethnic identities in the enrollment of the OSEP grant programs. Further studies can be directed at any variances between ethnic populations.

### **Future Research**

There is very little research done on this specific population. Further research on the participants of the OSEP personnel preparation grant program is needed. As mentioned previously in the discussion, breaking down APE teacher’s perception of knowledge, skills, and disposition more specific to their age, gender, and ethnic background may be able to help IHE prepare future participants better. I propose the following studies for future research.

The continued development and refinement of the questionnaire. The final questionnaire was 52 questions to measure the constructs not including the demographic information. Using inter item correlation, Cronbach’s alpha was set at the 0.70. Each construct was found at an acceptable level; however, each construct showed lower internal consistency than the previous one (knowledge, 0.91; skills, 0.85; disposition, 0.73). The reliability of these items decreased

with each construct the participant could potentially be experiencing fatigue due to the length of the questionnaire. I would recommend further psychometric analysis for the disposition construct. The internal and external sub-constructs for disposition both were below the acceptable level of 0.70; 0.66 and 0.60 respectively. Internal consistency lowered as the survey went further, this shows that the participants were still engaged in the survey by adding more questions to increase internal consistency participants may experience fatigue and lose interest in the survey. Another benefit could be a potential decrease in the time commitment for the survey, therefore a potential increase in response rate. Further analysis of each subconstruct related to dispositions is recommended. The addition of more questions related to both subconstructs would allow a stronger correlation between each sub construct. Due to the increasing of questions, I would consider splitting the questionnaire into two separate instruments, one to measure participant knowledge and one to measure participant disposition.

A qualitative study on participants' experiences in the OSEP personnel preparation program. In this study can be a descriptive study based on the how program helped them form their dispositions towards working with people who have disabilities. Included in this study, I would plan to see what factors in the training program participants find most beneficial and what factors do they find not beneficial. This study could also be expanded and compared to teachers' dispositions who do not receive training teaching with students with disabilities. Another aspect that can be looked at is why the participants decided to participate in the OSEP program preparation program in the first place. Finally, using this research you could also incorporate questions on how teachers felt about inclusion and compare them between those who had training and teachers who did not have the training.



A quantitative study using pre-and post testing on participant's knowledge, skills, and dispositions before and after participation in the OSEP personnel preparation grant program. Using the instrument that I have developed for this study, pretest participants at the start of their participation of the OSEP training program. After participants' enrollment in the OSEP personnel preparation grant program, participants take an exit survey to measure to what effect, if any the OSEP personnel preparation grant program had on their knowledge, skills, and disposition.

A longitudinal study that tracks OSEP participants over the next five years after program completion will allow me to obtain information about the participants and their APE goals. What is the contribution they are making to the field after they leave? Do they stay in PE? Perhaps participants move into administrative roles, or go on to obtain advance degrees. By tracking the participant's contributions to the field throughout their professional career, I can see what the long-term effect the OSEP personnel preparation grant has on those who participated long term. Data can be compared to national average and see if OSEP preparation helps to increase teacher retention rate.

## **Conclusion**

The purpose of the study was to describe adapted physical education in-service teachers' perception of their knowledge, skills, and disposition who received funding from the Office of Special Education Programs Personnel Preparation grant program. This description is important so we can understand the degree to which teachers funded by the OSEP APE personnel preparation grant perceive themselves as having enough knowledge, skills, and dispositions to

teach students with disabilities. After a comprehensive review of literature, there is no current research on the participants in the OSEP APE personnel preparation grant program.

Adapted physical education is an important field for both general physical education teacher and adapted physical education teachers. With the reauthorization of the Individuals with Disabilities Education Improvement Act, (IDEA, 2004) and Every Student Succeeds Act (ESSA, 2015) there is an increased need for highly qualified adapted PE teachers, particularly in special educational fields such adapted physical education (McLeskey & Billingsley, 2008). The expertise and APE teacher can provide a physical education program because they can modify curriculum, know and fulfill the needs of special education law, administer special education assessments, and make any necessary accommodations to students learning plan (McLeskey & Billingsley, 2008). The demand for personnel to provide special education services to children from infancy to 21 and the shortage of available personnel continues and even became exacerbated, which can negatively impact the quality of services to students (McLeskey & Billingsley, 2008; McLeskey et al., 2004; Zhang, 2010).

The OSEP APE personnel preparation grant helps prepare teachers to work with students who have a disability in physical education. The data reflected in this dissertation show that those who participated in the program have high level of APE knowledge, skills, and dispositions. This is important because the number of APE positions has increased and increasing the need for highly trained APE professionals both at the K-12 and post-secondary levels (Zhang, 2010). Findings within this dissertation can help provide support for continue of funding for programs such as the OSEP APE personnel preparation grant has allowed IHE to

prepare individuals fill the needs of APE teachers at the elementary, secondary, and higher education levels.

## References

- America, S., Couturier, L., Chepko, S., & Holt, S. A. (2014). *National Standards & Grade-Level Outcomes For K-12 Physical Education: Human Kinetics*.
- Americans with Disabilities Act Pub. L. No. Public Law 101-336 (1991).
- Ammah, J. O. A., & Hodge, S. R. (2005). Secondary Physical Education Teachers' Beliefs and Practices in Teaching Students with Severe Disabilities: *A Descriptive Analysis*. *High School Journal*, 89(2), 40-54.
- AREA, APA, NCME (2014) *Standards for Educational and Psychological Testing*. Washington, DC: AREA.
- Beamer, J. A., & Yun, J. (2014). Physical Educators Beliefs and Self-Reported Behaviors Toward Including Students with Autism Spectrum Disorder. *Adapted Physical Activity Quarterly*, 31(4), 362-376.
- Block, M. E., Lieberman, L. J., & Connor-Kuntz, F. (1998). Authentic Assessment in Adapted Physical Education. *Journal of Physical Education, Recreation & Dance*, 69(3), 48-55.  
doi:10.1080/07303084.1998.10605094
- Block, M. E., & Rizzo, T. L. (1995). Attitudes and Attributes of Physical Educators Associated with Teaching Individuals with Severe and Profound Disabilities. *Research and Practice for Persons with Severe Disabilities*, 20(1), 80-87. doi:10.1177/154079699502000108
- Butler, S. A., & Hodge, S. R. (2001). Enhancing Student Trust Through Peer Assessment in Physical Education. *Physical Educator*, 58(1), 30.

- Campos, M. J., Ferreira, J. P., & Block, M. E. (2015). Exploring Teachers' Voices about Inclusion in Physical Education: A Qualitative Analysis with Young Elementary and Middle School Teachers. *Comprehensive Psychology*, 4. doi:10.2466/10.it.4.5
- Casebolt, K. M., & Hodge, S. R. (2010). High school physical education teachers' beliefs about teaching students with mild to severe disabilities. *Physical Educator*, 67(3), 140.
- Choi, B. C., & Pak, A. W. (2005). A Catalog of Biases in Questionnaires. *Preventing Chronic Disease*, 2(1).
- Coates, J., & Vickerman, P. (2010). Empowering Children with Special Educational Needs to Speak Up: Experiences of Inclusive Physical Education. *Disability and Rehabilitation*, 32(18), 1517-1526.
- Colquitt, G., Pritchard, T., & McCollum, S. (2011). The Personalized System of Instruction in Fitness Education. *Journal of Physical Education, Recreation & Dance*, 82(6), 46-54.  
doi:10.1080/07303084.2011.10598645
- Columna, L., Lieberman, L. J., Lytle, R., & Arndt, K. (2014). Special Education Terminology Every Physical Education Teacher Should Know. *Journal of Physical Education, Recreation & Dance*, 85(5), 38-45. doi:10.1080/07303084.2014.897659
- Combs, S., Elliott, S., & Whipple, K. (2010). Elementary Physical Education Teachers' Attitudes towards the Inclusion of Children with Special Needs: A Qualitative Investigation. *International Journal of Special Education*, 25(1), 114-125.
- Connor, C. M., & Morrison, F. J. (2016). Individualizing Student Instruction in Reading Implications for Policy and Practice. *Policy Insights from the Behavioral and Brain Sciences*, 3(1), 54-61.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: the tailored design method*. Hoboken, NJ: John Wiley & Sons.

Education for All Handicapped Children Pub. L. No. 94-142 (1975).

Elliott, S., McCollum, S., Colquitt, G., & Pritchard, T. (2013). Perceptions of the Impact of a PEP Grant on Elementary Physical Education Programs in One School District. *Physical Educator*, 70(4), 429.

Every Student Succeeds Act, Pub. L. No. Public Law No: 114-95 (2015).

Fitzgerald, H., & Stride, A. (2012). Stories about Physical Education from Young People with Disabilities. *International Journal of Disability, Development & Education*, 59(3), 283-293.  
doi:10.1080/1034912X.2012.697743

French, K. E., Werner, P. H., Rink, J. E., Taylor, K., & Hussey, K. (1996). The effects of a 3-week unit of tactical, skill, or combined tactical and skill instruction on badminton performance of ninth-grade students. *Journal of Teaching in Physical Education*, 15(4), 418-438.

García, A. A. (2011). Cognitive Interviews to Test and Refine Questionnaires. *Public Health Nursing*, 28(5), 444-450. doi:10.1111/j.1525-1446.2010.00938.x

Gubacs-Collins, K., & Olsen, E. B. (2010). Implementing a Tactical Games Approach with Sport Education. *Journal of Physical Education, Recreation & Dance*, 81(3), 36-42.  
doi:10.1080/07303084.2010.10598447

Hastie, P. A. (1998). Skill and Tactical Development during a Sport Education Season. *Research Quarterly for Exercise and Sport*, 69(4), 368-379. doi:10.1080/02701367.1998.10607711

- Hersman, B. L., & Hodge, S. R. (2010). High school physical educators' beliefs about teaching differently abled students in an urban public school district. *Education and Urban Society*, 42(6), 730-757.
- Hodge, S. R., Davis, R., Woodard, R., & Sherrill, C. (2002). Comparison of Practicum Types in Changing Preservice Teachers' Attitudes and Perceived Competence. *Adapted Physical Activity Quarterly*, 19(2).
- Hodge, S. R., & Elliott, G. (2013). Physical education majors' judgments about inclusion and teaching students with disabilities. *Journal of Education and Training Studies*, 1(1), 151-157.
- Hodge, S. R., & Jansma, P. (1999). Effects of contact time and location of practicum experiences on attitudes of physical education majors. *Adapted Physical Activity Quarterly*, 16(1), 48-63.
- Hopper, T. (2002). Teaching Games for Understanding: The Importance of Student Emphasis over Content Emphasis. *Journal of Physical Education, Recreation & Dance*, 73(7), 44-48.  
doi:10.1080/07303084.2002.10607847
- IBM. (2016). Statistical Software for Social Sciences (SPSS) (Version 23): IBM.
- Individuals with Disabilities Education Act Amendments of 1997, Pub. L. No. 105-17 (1997).
- Individuals with Disabilities Education Improvement Act, Pub. L. No. Public Law 108-446 (2004).
- Johnson, D. W., Maruyama, G., Johnson, R., Nelson, D., & Skon, L. (1981). Effects of cooperative, competitive, and individualistic goal structures on achievement: A meta-analysis. *Psychological Bulletin*, 89(1), 47.

Kelly, L. (2006). *Adapted Physical Education National Standards: Human Kinetics*.

Knafl, K., Deatrick, J., Gallo, A., Holcombe, G., Bakitas, M., Dixon, J., & Grey, M. (2007). The analysis and interpretation of cognitive interviews for instrument development. *Research in Nursing & Health*, 30(2), 224-234. doi:10.1002/nur.20195

Ko, B., & Boswell, B. (2013). Teachers' Perceptions, Teaching Practices, and Learning Opportunities for Inclusion. *Physical Educator*, 70(3), 223-242.

Krull, D. S. (2001). On partitioning the fundamental attribution error: Dispositionalism and the correspondence bias. *Cognitive social psychology: The Princeton Symposium on the Legacy and Future of Social Cognition* (pp. 211-227). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Lieberman, L., Lytle, R., & Clarcq, J. A. (2008). Getting it Right from the Start. *Journal of Physical Education, Recreation & Dance*, 79(2), 32-39. doi:10.1080/07303084.2008.10598132

MacPhail, A., Gorely, T., Kirk, D., & Kinchin, G. (2008). Children's Experiences of Fun and Enjoyment During a Season of Sport Education. *Research Quarterly for Exercise and Sport*, 79(3), 344-355. doi:10.1080/02701367.2008.10599498

Mangope, B., Mannathoko, M. C., & Kuyini, A. B. (2013). Pre-Service Physical Education Teachers and Inclusive Education: Attitudes, Concerns and Perceived Skill Needs. *International Journal of Special Education*, 28(3), 82-92.



- McLeskey, J., & Billingsley, B. S. (2008). How Does the Quality and Stability of the Teaching Force Influence the Research-to-Practice Gap?: A Perspective on the Teacher Shortage in Special Education. *Remedial and Special Education, 29*(5), 293-305. doi:10.1177/0741932507312010
- McLeskey, J., Tyler, N. C., & Flippin, S. S. (2004). The Supply of and Demand for Special Education Teachers: A Review of Research Regarding the Chronic Shortage of Special Education Teachers. *Journal of Special Education, 38*(1), 5.
- McMillan, J. H., & Schumacher, S. (1984). *Research in education: A conceptual introduction*: Little, Brown.
- McMillan, J. H., & Schumacher, S. (2014). *Research in education: Evidence-based inquiry*: Pearson Higher Ed.
- Meegan, S., & MacPhail, A. (2006). Irish physical educators' attitude toward teaching students with special educational needs. *European Physical Education Review, 12*(1), 75-97.
- National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID) (2006). *Adapted Physical Education National Standards: Human Kinetics*.
- No Child Left Behind Act, 115, Pub. L. No. 107-110, 1425 Stat. (2001).
- Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301-314.  
doi:10.1080/02602930701293231
- Obrusnikova, I. (2008). Physical educators' beliefs about teaching children with disabilities. *Perceptual and Motor Skills, 106*(2), 637-644.

- Piletic, C. K., & Davis, R. (2010). A profile of the introduction to adapted physical education course within undergraduate physical education teacher education programs. *The ICHPER-SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance*, 5(2), 26.
- Pressé, C., Block, M. E., Horton, M., & Harvey, W. J. (2011). Adapting the Sport Education Model for Children with Disabilities. *Journal of Physical Education, Recreation & Dance*, 82(3), 32-39. doi:10.1080/07303084.2011.10598595
- Rizzo, T., & Vispoel, W. (1991). Physical educators' attributes and attitudes toward teaching students with handicaps. *Adapted Physical Activity Quarterly*, 8, 4-11.
- Rizzo, T. L., & Kirkendall, D. R. (1995). Teaching students with mild disabilities: What affects attitudes of future physical educators? *Adapted Physical Activity Quarterly*.
- Rizzo, T. L., & Wright, R. G. (1988). Physical Educators' Attitudes toward Teaching Students with Handicaps. *Mental Retardation*, 26(5), 307-309.
- Roper, E. A., & Santiago, J. A. (2014). Influence of service-learning on kinesiology students' attitudes toward P-12 students with disabilities. *Adapted Physical Activity Quarterly*, 31(2).
- Sauermann, H., & Roach, M. (2013). Increasing web survey response rates in innovation research: An experimental study of static and dynamic contact design features. *Research Policy*, 42(1), 273-286. doi:http://dx.doi.org/10.1016/j.respol.2012.05.003
- Scruggs, T. E., & Mastropieri, M. A. (2013). Individual Differences and Learning Challenges. *Theory Into Practice*, 52(sup1), 63-72.

- Sherman, J. G. (1992). Reflections on PSI: Good news and bad. *Journal of Applied Behavior Analysis*, 25(1), 59-64. doi:10.1901/jaba.1992.25-59
- Siedentop, D. (1998). What is Sport Education and How Does it Work? *Journal of Physical Education, Recreation & Dance*, 69(4), 18-20. doi:10.1080/07303084.1998.10605528
- Siedentop, D. (2002). Sport Education: A Retrospective. *Journal of Teaching in Physical Education*, 21(4), 409-418. doi:doi:10.1123/jtpe.21.4.409
- Siedentop, D., Hastie, P. A., & Van der Mars, H. (2011). *Complete Guide to Sport Education: Human Kinetics*.
- Singleton Jr, R. A., & Straits, B. C. (2009). *Approaches to social research* (5 ed.). New York, NY: Oxford University Press.
- Society of Professional Health and Physical Educators (SHAPE) America. (2016). Every Student Succeeds Act: Game Changer for Health and Physical Education Retrieved from <http://www.shapeamerica.org/advocacy/upload/ESSA-fact-sheet-SHAPE-America-temp.pdf>
- Turner, A. P., & Martinek, T. J. (1999). An Investigation into Teaching Games for Understanding: Effects on Skill, Knowledge, and Game Play. *Research Quarterly for Exercise and Sport*, 70(3), 286-296. doi:10.1080/02701367.1999.10608047
- U.S. Department of Education, Office of Special Education Programs. (2015). 37th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education

- Act, 2015. Retrieved from Washington, D.C:  
<http://www2.ed.gov/about/reports/annual/osep/2015/parts-b-c/37th-arc-for-idea.pdf>
- US Department of Education. (2016). Carol M. White Physical Education Program. Retrieved from <http://www2.ed.gov/programs/whitephysed/index.html>
- U.S. Department of Education, Office of Special Education Programs. (2017). Application for New Grants Under the Individuals with Disabilities Education Act (Idea): Personnel Development to Improve Services and Results for Children With Disabilities (CFDA 84.325). Retrieved from <https://www2.ed.gov/programs/osepprep/2017-325k.pdf>
- Wilczenski, F. L. (1992). Measuring attitudes toward inclusive education. *Psychology in the Schools*.
- Wilczenski, F. L. (1995). Development of a scale to measure attitudes toward inclusive education. *Educational and Psychological Measurement*, 55(2), 291-299.
- Willis, G. B. (1994). Cognitive interviewing and questionnaire design: A training manual: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.
- Zhang, J. (2010). Quantitative Analysis of the Adapted Physical Education Employment Market in Higher Education. *The ICHPER-SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance*, 5(2), 21.

Zusho, A., Pintrich, P. R., & Cortina, K. S. (2005). Motives, goals, and adaptive patterns of performance in Asian American and Anglo American students. *Learning and Individual Differences*, 15(2), 141-158. doi:<http://doi.org/10.1016/j.lindif.2004.11.003>

Appendix A  
Human Studies Program  
The University of Hawai`i at Mānoa  
Approval for Research



UNIVERSITY  
of HAWAII<sup>®</sup>  
MĀNOA

Office of Research Compliance  
Human Studies Program

April 13, 2015

TO: James Barry  
Principal Investigator  
KRS

FROM: Denise A. Lin-DeShetler, MPH, MA  
Director

A handwritten signature in black ink, appearing to read 'Denise A. Lin-DeShetler'.

SUBJECT: CHS #23007 - "Physical Educators' Knowledge, Skills, and Dispositions on Teaching Student with Disabilities"

This letter is your record of the Human Studies Program approval of this study as exempt.

On April 13, 2015 the University of Hawai'i (UH) Human Studies Program approved this study as exempt from federal regulations pertaining to the protection of human research participants. The authority for the exemption applicable to your study is documented in the Code of Federal Regulations at 45 CFR 46.101(b) (Category 2).

Exempt studies are subject to the ethical principles articulated in The Belmont Report, found at <http://www.hawaii.edu/irb/html/manual/appendices/A/belmont.html>

Exempt studies do not require regular continuing review by the Human Studies Program. However, if you propose to modify your study, you must receive approval from the Human Studies Program prior to implementing any changes. You can submit your proposed changes via email at [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). (The subject line should read: Exempt Study Modification.) The Human Studies Program may review the exempt status at that time and request an application for approval as non-exempt research.

In order to protect the confidentiality of research participants, we encourage you to destroy private information which can be linked to the identities of individuals as soon as it is reasonable to do so. Signed consent forms, as applicable to your study, should be maintained for at least the duration of your project.

This approval does not expire. However, please notify the Human Studies Program when your study is complete. Upon notification, we will close our files pertaining to your study.

If you have any questions relating to the protection of human research participants, please contact the Human Studies Program at 956-5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). We wish you success in carrying out your research project.

1960 East-West Road  
Biomedical Sciences Building B104  
Honolulu, Hawai'i 96822  
Telephone: (808) 956-5007  
Fax: (808) 956-8683

An Equal Opportunity/Affirmative Action Institution





## Appendix B

### Physical Educator's Knowledge, Skills, and Dispositions Questionnaire

Q1

University of Hawai`i at Mānoa  
College of Education,  
Department of Kinesiology and Rehabilitation Science  
1337 Lower Campus Road, PE/A 231  
Honolulu, Hawaii 96822

Physical Educator's Knowledge, Skills, and Disposition Towards Working with Students with  
Disabilities

Consent to Participate in Research

My name is James Barry and I am a doctoral student in Kinesiology and Rehabilitation Science Department, College of Education. Along with Dr. Murata and Allison Tsuchida, we are interested in finding out your knowledge and about your experiences in the Adapted Physical Education program.

The purpose of this project is to obtain information from you regarding your preparation in the Office of Special Education Programs - Adapted Physical Education Preparation Grant Program. Participation in this study will involve the completing a confidential on-line (Internet) or mail delivered questionnaire. We are asking your permission to participate in this project.

**Project Description – Activities and Time Commitment:** The Office of Special Education Programs (OSEP) has provided funding to Universities to assist in the preparation of Adapted Physical Education teachers for many years. To further continue their efforts, we are conducting an study of APE Federal OSEP Personnel Development Graduates to help determine program effectiveness. Your knowledge in adapted physical education and your participation in the program are reasons why we are contacting you.

The questionnaire is based on a 4-point Likert scale and will take approximately 20-30 minutes to complete. An emailed questionnaire can be sent to participants who have one and US postal mail for those who would prefer to use a paper survey. The survey will assess your attitudes and dispositions towards Adapted Physical Education and Teaching Students with Disabilities.

At the end of the study, you will be asked if you are willing to participate in a follow up interview. By selecting yes, you will be asked to provide your contact information. Those

who elect to participate in a follow up interview will participate in a short telephone interview. The purpose of the interview will be to ask your thoughts about your experiences in the Office of Special Education Training APE Program.

The interview will last about 15 minutes. During this interview notes, will be taken about your experiences. The data will be kept in a secured location and your identity will be kept confidential. At the conclusion of the study your information will be destroyed.

**Benefits and Risks:** There will be no direct benefit to your participating in this survey. The results of this project may help us determine the effectiveness of the Office of Special Education Programs: Adapted Physical Education grant program and whether this opportunity is something that should be continued in the future.

**Confidentiality and Privacy:** This survey is confidential. However, a subject number will identify your name and email address. Your email address will be used only for the sole purposes of distributing the survey. Your email address will NOT be given or sold to anyone. Interview data will be kept in a secured filing cabinet. All personal information will be removed. At the conclusion of the study this information will be destroyed.

**Voluntary Participation:** Participation in this project is voluntary. You can participate or not to participate in this study, and there will be no penalty or loss of benefits for either decision. If you agree to participate, you can stop at any time without any penalty or loss of benefits to which you are otherwise entitled.

**Questions:** If you have any questions about this study, you can contact me at [barryj@hawaii.edu](mailto:barryj@hawaii.edu). If you have any questions about your rights as a research participant, you can contact the UH Human Studies Program at 808 956-5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu).

**Signature for Consent:** I agree to participate in this research project entitled, Physical Educators' Knowledge, Skills, and Dispositions on Teaching Student with Disabilities. I understand that I can change my mind about participating, at any time, by notifying the researcher of my decision to end participation in this project.

Please Check the appropriate box(es) I consent to participate in the Physical Educators' Knowledge, Skills, and Dispositions on Teaching Student with Disabilities Survey. You must agree to participate in the survey portion of the project.

- Yes (1)
- No (2)

Condition: No Is Selected. Skip To: End of Survey.

Q2 I consent to participate in the Physical Educators' Knowledge, Skills, and Dispositions on Teaching Student with Disabilities Interview. You do not have to agree to be part of the survey.

- Yes (1)
- No (2)

Q3 I am prepared to know when to adapt lesson plans to meet student needs

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q4 I am prepared to know how to adapt lesson plans to meet student needs.

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q5 I am prepared to write lessons that create positive learning experiences for students with and without disabilities who are in class together

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q6 I am prepared to suggest appropriate placements at an Individualized Education Plan (IEP) meeting

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q7 I am prepared to select validated assessments to measure student performance in physical education.

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q8 I am prepared to write physical education goals and objectives for a student's Individualized Education Plan (IEP)

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q9 I am prepared to create a positive learning environment for all students

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q10 I am prepared to know how to write differentiated lesson plans that are inclusive towards all students

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q11 I am prepared to include students with intellectual disabilities in the general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q12 I am prepared to include students with behavioral disabilities in the general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q13 I am prepared to include students with an emotional disturbance general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q14 I am prepared to include students with physical disabilities in the general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q15 I am prepared to include students with Autism Spectrum Disorder in the general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q16 I am prepared to include students with hearing impairments in the general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q17 I am prepared to include students with visual impairments in the general physical education class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q18 I am prepared to serve as a consultant for your school on Adapted Physical Education.

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q19 I am prepared to use a validated assessment to prepare a progress report on student performance.

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q20 I am prepared to know how to make appropriate modifications to help a student achieve full participation in class

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q21 I am prepared to use a valid assessment (ie. TGMD-2, Brockport Fitness Test) to perform initial assessments

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q22 I am prepared to serve as a consultant for students, and their families, who participate in adapted sport programs (i.e. Special Olympics, Paralympics, local sport club, etc.)

- Not prepared at all (1)
- Somewhat prepared (2)
- Well prepared (3)
- Very well prepared (4)

Q23 At interpreting assessment results at an Individualized Education Plan (IEP) meeting

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q24 At writing student physical education objectives and goals for a student's Individualized Education Plan (IEP)

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q25 At recognizing a student who is having difficulties in physical education class

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q26 At writing differentiated lesson plans that are inclusive towards all students

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)



Q27 At making modifications with equipment to help a student be more successful

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q28 At incorporating technology such as iPads and videos into lessons

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q29 At helping a student's reach his/her Individualized Education Plan (IEP) goals

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q30 At using a variety of assessment strategies to promote student learning

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q31 At incorporating student's Individualized Education Plan (IEP) goals and objectives into your lessons

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q32 To train a student for an adaptive sport (i.e. Special Olympics, Paralympics, local sport club, etc.)

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q33 At using instructional methods to teach students with disabilities. (hand over hand, visual prompting, verbal prompting, etc.)

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q34 At creating a positive learning environment for all children

- Not at all (1)
- Rarely skillful (2)
- Sometimes skillful (3)
- Often skillful (4)

Q35 Collaboration with related services providers of students with a disability in physical education (Occupational, Physical, Speech, or Behavior Therapists, etc.)

- Not at all important to me (1)
- Not very important to me (2)
- Somewhat important to me (3)
- Very important to me (4)

Q36 Collaboration with direct service providers of students with a disability in physical education (Special Education Teachers, Guidance Counselors, etc.)

- Not at all important to me (1)
- Not very important to me (2)
- Somewhat important to me (3)
- Very important to me (4)

Q37 Attending a student's Individualized Education Plan (IEP) meeting of a student with a disability in physical education

- Not at all important to me (1)
- Not very important to me (2)
- Somewhat important to me (3)
- Very important to me (4)

Q38 Collaboration with parents of students with a disability in physical education

- Not at all important to me (1)
- Not very important to me (2)
- Somewhat important to me (3)
- Very important to me (4)

Q39 Creating a positive learning environment for all my students

- Not at all important to me (1)
- Not very important to me (2)
- Somewhat important to me (3)
- Very important to me (4)

Q40 Preparing differentiated lessons for all your students

- Not at all important to me (1)
- Not very important to me (2)
- Somewhat important to me (3)
- Very important to me (4)

Q41 If given the opportunity, I would speak about working with students with disabilities at a school in-service

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q42 If given the opportunity, when I hear a colleague use an inappropriate word like “retarded”; I would quickly correct their language

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q43 I volunteer at an adapted sports program such as Special Olympics or Camp Abilities

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q44 I give up my free time at work to help a student during the school day

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q45 I always accommodate the individual needs of all my students in my lessons

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q46 I allow students in my class to sit out because of their disability

- Very untrue of me (4)
- Somewhat untrue of me (3)
- Somewhat true of me (2)
- Very true of me (1)

Q47 I would correct students who use an inappropriate word like “retarded”

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q48 I am willing to participate in my student’s Individualized Education Plan (IEP) meetings.

- Very untrue of me (1)
- Somewhat untrue of me (2)
- Somewhat true of me (3)
- Very true of me (4)

Q49 Answer with the most closely related response to the following scenario: You notice that one of your colleagues does not modify a lesson to accommodate a student with a disability. To what extent can you use the knowledge you have about Adapted Physical Education (APE) to help your colleague modify the lesson?

- I don’t have a deep enough understanding to help (1)
- I understand enough about APE to provide resources only (2)
- I understand enough about APE to provide resources and feedback on the lesson (3)
- I understand enough to be a resource my colleague(s) on APE (4)

Q50 How much knowledge do you have about lesson modifications?

- No knowledge at all (1)
- Not enough to help my colleague (2)
- Enough to help my colleague get started (3)
- Enough to guide my colleague through the lesson (4)

Q51 How willing are you to tell that person that they should modify their lesson?

- Not at all willing (1)
- Not very willing (2)
- Somewhat willing (3)
- Very willing (4)

Q52 How confident are you in your ability to get that person to modify their lesson?

- Not confident at all (1)
- Not very confident (2)
- Somewhat confident (3)
- Very confident (4)

Demographics – This section will ask you questions about who you are

Q53 With what gender do you identify?

- Male (1)
- Female (2)

Q54 Please select your age range...

- 21-30 (1)
- 31-40 (2)
- 41-50 (3)
- 51-60 (4)
- 61 and older (5)

Q55 What ethnic/cultural background do you identify with?

- White (15)
- Black or African American (16)
- American Indian or Alaska Native (17)
- Asian (18)
- Native Hawaiian or Pacific Islander (19)
- Other (20) \_\_\_\_\_

Q56 Where did you participate in the APE Master's Grant Program?

- California State University, Chico (9)
- Slippery Rock University (7)
- State University of New York (SUNY), Brockport (1)
- Texas Woman's College (2)
- University of Hawaii at Mānoa (5)
- University of Utah (4)
- University of Wisconsin-La Crosse (3)
- Western Michigan University (8)
- Other (6) \_\_\_\_\_

Q57 Have you ever taught General Physical Education?

- Yes (1)
- No (2)

Q58 What state(s) are you certified to teach physical education? Check all that apply

- Alabama (87)
- Alaska (88)
- Arizona (89)
- Arkansas (90)
- California (91)
- Colorado (92)
- Connecticut (93)
- Delaware (94)
- Florida (95)
- Georgia (96)
- Hawaii (97)
- Idaho (98)
- Illinois (99)
- Indiana (100)
- Iowa (101)
- Kansas (102)
- Kentucky (103)
- Louisiana (104)
- Maine (105)
- Maryland (106)
- Massachusetts (107)
- Michigan (108)
- Minnesota (109)
- Mississippi (110)
- Missouri (111)
- Montana (112)
- Nebraska (113)
- Nevada (114)
- New Hampshire (115)
- New Jersey (116)
- New Mexico (117)
- New York (118)
- North Carolina (119)
- North Dakota (120)
- Ohio (121)
- Oklahoma (122)
- Oregon (123)
- Pennsylvania (124)
- Rhode Island (125)



- South Carolina (126)
- South Dakota (127)
- Tennessee (128)
- Texas (129)
- Utah (130)
- Vermont (131)
- Virginia (132)
- Washington (133)
- West Virginia (134)
- Wisconsin (135)
- Wyoming (136)
- District of Columbia (138)
- Puerto Rico (139)
- Guam (140)
- American Samoa (141)
- U.S. Virgin Islands (142)
- Northern Mariana Islands (143)
- Other (144) \_\_\_\_\_

Q59 Are you still teaching General Physical Education?

- Yes (1)
- No (2)

Q60 How many years have you taught General Physical Education?

- (1)
- 6 -10 years (2)
- 11-15 years (3)
- 16-20 years (4)
- 21-25 years (5)
- 26 - 30 years (6)
- 31 - 35 years (7)
- more than 35 years (8)
- not applicable (9)

Q61 How many years have you taught Adapted Physical Education?

- (1)
- 6 -10 years (2)
- 11-15 years (3)
- 16-20 years (4)
- 21-25 years (5)
- 26 - 30 years (6)
- 31 - 35 years (7)
- more than 35 years (8)
- not applicable (9)

Q62 How many years have you taught Students with Disabilities in General Physical Education Class?

- (1)
- 6 -10 years (2)
- 11-15 years (3)
- 16-20 years (4)
- 21-25 years (5)
- 26 - 30 years (6)
- 31 - 35 years (7)
- more than 35 years (8)
- not applicable (9)

Q63 In what setting do you teach, have taught, or are currently working? Check all that apply

- Special School (i.e. School for the Deaf, Residential Institution) explain (1)  
\_\_\_\_\_
- Public School (2)
- Private School (3)
- Private Company (i.e. Easter Seals, Special Olympics) (4)
- Other (5) \_\_\_\_\_

Q64 What level do you have the most experience teaching?

- Pre - K (1)
- Elementary (Grades K-5 approximately) (2)
- Middle School ( Grades 6-8 approximately) (3)
- High School (Grades 9-12 approximately) (4)
- Higher Education (Post High School) (5)
- other explain (6) \_\_\_\_\_

Q65 What is your highest level of Education

- Bachelor's Degree (1)
- Master's Degree (2)
- Doctorate Degree (3)
- Other explain (4) \_\_\_\_\_

Q66 After completion of the Federally Funded APE Training Grant Program, have you considered pursuing a Doctorate in Adapted Physical Education?

- Definitely yes (5)
- Maybe (6)
- Definitely not (7)
- I am currently enrolled in an APE doctoral program (8)

Q67 In what state are you currently teaching?

- Alabama (8)
- Alaska (9)
- Arizona (10)
- Arkansas (11)
- California (12)
- Colorado (13)
- Connecticut (14)
- Delaware (15)
- Florida (16)
- Georgia (17)
- Hawaii (18)
- Idaho (19)
- Illinois (20)
- Indiana (21)
- Iowa (22)
- Kansas (23)
- Kentucky (24)
- Louisiana (25)
- Maine (26)
- Maryland (27)
- Massachusetts (28)
- Michigan (29)
- Minnesota (30)
- Mississippi (31)
- Missouri (32)
- Montana (33)
- Nebraska (34)
- Nevada (35)
- New Hampshire (36)
- New Jersey (37)
- New Mexico (38)
- New York (39)
- North Carolina (40)
- North Dakota (41)
- Ohio (42)
- Oklahoma (43)
- Oregon (44)
- Pennsylvania (45)
- Rhode Island (46)

- South Carolina (47)
- South Dakota (48)
- Tennessee (49)
- Texas (50)
- Utah (51)
- Vermont (52)
- Virginia (53)
- Washington (54)
- West Virginia (55)
- Wisconsin (56)
- Wyoming (57)
- District of Columbia (59)
- Puerto Rico (60)
- Guam (61)
- American Samoa (62)
- U.S. Virgin Islands (63)
- Northern Mariana Islands (64)
- Other (58)
- I am not currently teaching (1)

Q68 Do you have a state certification in Adapted Physical Education?

- Yes (1)
- No, my state offers an Adapted Physical Education Certification but I am not certified (2)
- No, my state does not have a state certification for Adapted Physical Education (3)

Condition: No, my state does not have ... Is Selected. Skip To: Do you hold the Adapted Physical Educ....Condition: No, my state offers an Adap... Is Selected. Skip To: Do you hold the Adapted Physical Educ....

Q69 What state(s) are you certified to teach adapted physical education? Check all that apply

- Alabama (87)
- Alaska (88)
- Arizona (89)
- Arkansas (90)
- California (91)
- Colorado (92)
- Connecticut (93)
- Delaware (94)
- Florida (95)
- Georgia (96)
- Hawaii (97)
- Idaho (98)
- Illinois (99)
- Indiana (100)
- Iowa (101)
- Kansas (102)
- Kentucky (103)
- Louisiana (104)
- Maine (105)
- Maryland (106)
- Massachusetts (107)
- Michigan (108)
- Minnesota (109)
- Mississippi (110)
- Missouri (111)
- Montana (112)
- Nebraska (113)
- Nevada (114)
- New Hampshire (115)
- New Jersey (116)
- New Mexico (117)
- New York (118)
- North Carolina (119)
- North Dakota (120)
- Ohio (121)
- Oklahoma (122)
- Oregon (123)
- Pennsylvania (124)
- Rhode Island (125)

- South Carolina (126)
- South Dakota (127)
- Tennessee (128)
- Texas (129)
- Utah (130)
- Vermont (131)
- Virginia (132)
- Washington (133)
- West Virginia (134)
- Wisconsin (135)
- Wyoming (136)
- District of Columbia (138)
- Puerto Rico (139)
- Guam (140)
- American Samoa (141)
- U.S. Virgin Islands (142)
- Northern Mariana Islands (143)
- Other (144) \_\_\_\_\_

Q70 Do you hold the Adapted Physical Education National Standards (APENS) Certificate?

- Yes (1)
- No (2)

Q71 In what year did you complete the grant program?

- before 2005 (1)
- 2005 (2)
- 2006 (3)
- 2007 (4)
- 2008 (5)
- 2009 (6)
- 2010 (7)
- 2011 (8)
- 2012 (9)
- 2013 (10)
- 2014 (11)
- 2015 (12)
- 2016 (13)

Q72 What was your Grade Point Average (GPA) during your master's degree?

- 4.0 (1)
- (2)
- (3)
- (4)
- (5)
- (6)
- not applicable (7)

Q73 Thank you for taking the time to complete this survey. Would you be willing to participate in a follow-up interview related to this survey? The interview will last approximately 15 minutes, you will be asked about your APE grant program experiences.

- Yes (1)
- No (2)

Condition: No Is Selected. Skip To: End of Survey.

Q74 Please provide your name

Q75 Please provide your email

Q76 Please provide your phone number

Q77 Preferred mode of communication

- Email (1)
- Phone (2)
- Text Message (3)
- Postal Mail (4)





Appendix C

OSEP Grant Program Director's Procedure Email

James Patrick Barry Jr.  
Doctoral Candidate  
Kinesiology and Rehabilitative Sciences  
University of Hawai`i at Mānoa  
Honolulu, HI 96822

<Grant Program Director>

<College or University>

Dear <Program Director>:

Thank you for your assistance in my study entitled “Physical Educators’ Knowledge, Skills, and Dispositions on Teaching Student with Disabilities.” I was approved to move forward on the study by the University of Hawai`i at Mānoa, Human Studies Review Board. Attached you will find a series of 4 attachments, these attachments are recommended emails to be sent to the graduates of your program. I am asking that you please send out these emails once per week to the OSEP program graduates for four weeks starting Tuesday, February 14, 2017. The survey will close on Tuesday, March 21, 2017. Anything you can do to help reach your former students is greatly appreciated.

March 3 – email #1

March 7 – email #2

March 14 – email #3

March 17 – email #4

March 21 – Survey Closes

If you have any questions, please feel free to contact me via email [barryj@hawaii.edu](mailto:barryj@hawaii.edu) or by phone 215 527 5250.

Sincerely,

Jim Barry



## Appendix D

### Recruitment Emails to Participants

Email 1

Dear <University Alumnus>:

My name is James Barry and I am a Doctoral Candidate in Kinesiology and Rehabilitation Science Department, at the University of Hawai`i at Mānoa. Along with my advisor, Dr. Nathan Murata, we are interested in finding out your knowledge and about your experiences in the Office of Special Education Programs, Adapted Physical Education Training Grant program.

You have been recognized by <Name> the grant coordinator at the <University> as a past participant in the program. This is your opportunity to give back to the program that helped you with your training. Your opinion is very important to me and your participation is greatly appreciated as it is your knowledge in adapted physical education and your participation in the program are reasons why we are contacting you.

The questionnaire is based on a 4-point Likert scale and will take approximately 20-30 minutes to complete. The survey will assess your attitudes and dispositions towards Adapted Physical Education and Teaching Students with Disabilities. To allow you to respond honestly, your responses will be kept confidential, your teachers will not know what you said. The survey is currently open and will close on <Date>.

Thank you for taking your time to participate in this study, your participation will help shape the program for future participants in the training program. If you have any questions about this study, you can contact me at [barryj@hawaii.edu](mailto:barryj@hawaii.edu). If you have any questions about your rights as a research participant, you can contact the University of Hawai`i at Mānoa Committee on Human Studies at 808 956-5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu).

Sincerely,

Jim Barry  
Doctoral Candidate  
University of Hawai`i at Mānoa

Dr. Nathan Murata  
Advisor  
University of Hawai`i at Mānoa

Dr. <Name>  
<School>

## Email 2

Dear <university> Alumnus

My name is James Barry and I am a Doctoral Candidate in Kinesiology and Rehabilitation Science Department, at the University of Hawai`i at Mānoa. Last week I contacted you about a study to find out your knowledge and about your experiences in the Office of Special Education Programs, Adapted Physical Education Training Grant program. If you have completed the survey I would like to thank you for your time and please disregard this email.

As a participant in the APE training grant program at the <University> This is your opportunity to give back to the program. Your opinion is very important to the study and your participation is greatly appreciated as it is your knowledge in adapted physical education and your participation in the program are reasons why we are contacting you.

The questionnaire is based on a 4-point Likert scale and will take approximately 20-30 minutes to complete. The survey will assess your attitudes and dispositions towards Adapted Physical Education and Teaching Students with Disabilities. To allow you to respond honestly, your responses will be kept confidential, your teachers will not know what you said. The survey is currently open and will close on <Date>.

Thank you for taking your time to participate in this study, your participation will help shape the program for future participants in the training program. If you have any questions about this study, you can contact me at [barryj@hawaii.edu](mailto:barryj@hawaii.edu). If you have any questions about your rights as a research participant, you can contact the University of Hawai`i at Mānoa Committee on Human Studies at 808 956-5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu).

Thank you for your participation.

Sincerely,

Jim Barry  
Doctoral Candidate  
University of Hawai`i at Mānoa

Dr. Nathan Murata  
Advisor  
University of Hawai`i at Mānoa

Dr. <Name>  
<School>

### Email 3

Dear <university> Alumnus

My name is James Barry and I am a Doctoral Candidate in Kinesiology and Rehabilitation Science Department, at the University of Hawai`i at Mānoa. I am conducting a study for my dissertation find out your knowledge and about your experiences in the Office of Special Education Programs, Adapted Physical Education Training Grant program. Your opinions are very important to the study and I don't want you to get left out. If you have completed the survey I would like to thank you for your time and please disregard this email.

As a participant in the APE training grant program at the <University> Your opinion is very important to the study and your participation is greatly appreciated as it is your knowledge in adapted physical education and your participation in the program are reasons why we are contacting you. This is your opportunity to give back to the program. The results for this study will help to determine the program's direction for future participants.

The questionnaire is based on a 4-point Likert scale and will take approximately 20-30 minutes to complete. The survey will assess your attitudes and dispositions towards Adapted Physical Education and Teaching Students with Disabilities. To allow you to respond honestly, your responses will be kept confidential, your teachers will not know what you said. The survey is currently open and will close on <Date>.

Thank you for taking your time to participate in this study, your participation will help shape the program for future participants in the training program. If you have any questions about this study, you can contact me at [barryj@hawaii.edu](mailto:barryj@hawaii.edu). If you have any questions about your rights as a research participant, you can contact the University of Hawai`i at Mānoa Committee on Human Studies at 808 956-5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu).

Thank you for your participation.

Sincerely,

Jim Barry  
Doctoral Candidate  
University of Hawai`i at Mānoa

Dr. Nathan Murata  
Advisor  
University of Hawai`i at Mānoa

Dr. <Name>  
<School>



## Email 4

Dear <university> Alumnus

My name is James Barry and I am a Doctoral Candidate in Kinesiology and Rehabilitation Science Department, at the University of Hawai`i at Mānoa. I am conducting a study for my dissertation find out your knowledge and about your experiences in the Office of Special Education Programs, Adapted Physical Education Training Grant program. Your opinions are very important to the study. This is your last chance for you voice to be heard. If you have completed the survey I would like to thank you for your time and please disregard this email.

<survey link>

<Dr. Name> has identified you are someone who gained the knowledge of APE through the training grant program will be used to help shape the curriculum for future participants at the <University Name>. The results for this study will help to determine the program's direction for future participants at the <university>. Please don't miss out on this opportunity to give back to the program.

To allow you to respond honestly, your responses will be kept confidential. The questionnaire is based on a 4-point Likert scale and will take approximately 20-30 minutes to complete. The survey will assess your attitudes and dispositions towards Adapted Physical Education and Teaching Students with Disabilities. This is your final opportunity to participate, the survey is currently open and will close on <Date>.

Thank you for taking your time to participate in this study, your participation will help shape the program for future participants in the training program. If you have any questions about this study, you can contact me at [barryj@hawaii.edu](mailto:barryj@hawaii.edu). If you have any questions about your rights as a research participant, you can contact the University of Hawai`i at Mānoa Committee on Human Studies at 808 956-5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu).

Thank you for your participation. To participate in the study please <click here>

Sincerely,

Jim Barry  
Doctoral Candidate  
University of Hawai`i at Mānoa

Dr. Nathan Murata  
Advisor  
University of Hawai`i at Mānoa

Dr. <Name>  
<School>