An online developmental adapted physical education licensure: The potential of adding student voices in graduate program improvement

by

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Abstract

Many physical education teachers do not feel adequately prepared during their university programs to meet the needs of students with disabilities in their classrooms (McGrath et al., 2019). These professionals must navigate the demands of large class sizes, a wide variety of abilities, numerous aspects of motor assessments, individual education plan (IEP) implementation, and mandated special education regulations with usually only one 3-credit course specific to teaching this population in the physical education setting. Additional licensing in special education in graduate programs tends to focus on required content; however, little attention is given to university student experiences when designing license programming (Bourke & MacDonald, 2018; Seale, 2016; Thrill, 2019). While obtaining an adapted physical education license, graduate students' voices are rarely heard, and the content of the added licensure only occasionally aligns with the job-related demands of teaching special education (Lirgg et al., 2017). This research aimed to explore graduate students' experiences in an add-on license program in developmental adapted physical education. Knowles' (1984) theory of andragogy and Dewey's (1938) theory of lived experiences are the dual foundational lenses for developing the Developmental Adapted Physical Education Program at Bemidji State University. Using interpretive inquiry (Ellis, 1989) and hermeneutics, the process included personal stories and practical examples to uncover the student's experiences in an online program. Data was gathered from in-service teachers who had completed an online adapted physical education licensure graduate program from Bemidji State, a 4-year university in the upper mid-west United States. Data included an introductory survey, pre-interview activities, virtual interviews, and a follow-up meeting as the analysis and interpretation (hermeneutic circle) to identify emergent

themes regarding program components and online delivery. The themes uncovered in the findings include providing online asynchronous learning opportunities for graduate students, building prior educational experience as a foundation for future learning, delivering quality content knowledge and skills through active learning, and increasing hands-on practical learning opportunities, including positive examples of collaboration. Findings from this research give professors and universities a broader understanding of graduate students' experiences with the content standards of a developmental adapted physical education licensing program and online delivery methods.

Keywords: developmental adapted physical education, adapted physical education, online education, physical education, teacher licensing, content standards, *core skills, content standards*

Preface

This thesis is an original work by Sherry K Holloway. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, An online adapted physical education licensure program: The power of integrating student voices in graduate program improvement, No. Pro0000089606, February 8, 2022.

Dedication

To my participants: Your willingness to share stories and teaching experiences with a vision to improve developmental adapted physical education teacher training programs shows your commitment to your students and families. The trust you gave me and the research process in discovering shared *truths*.

To my university: I am proud to work at an institution that values inclusion and diversity in the pillars of the university. Thank you for your ongoing support of the Bemidji State University Online Developmental Adapted Physical Education Program.

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To my husband, you have lovingly supported me through two countries and several years of writing. Thank you for always having a hot cup of coffee and a listening ear ready each morning.

To my daughter, you have the strongest and wisest soul I have ever embraced. I am lucky to have the blessing of being your mom every day.

The Grands, you inspire me to be a more inclusive teacher. Keep teaching me to learn new things.

To Shirley, you kicked my butt to do this work. I am forever grateful.

To my advisors, Dr. Lauren Sulz and Dr. Doug Gleddie, for seeing my passion for teaching developmental adapted physical education and your expertise in research and for agreeing to take me under your wing.

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Glossary

Academic Standards: A summary describing student learning in a content area developed at the national, state, or school district level (Minnesota Department of Education, 2020).

Adapted Physical Education: Adapted Physical Education is defined as physical education that has been adapted or modified so it is as appropriate for a person with a disability as it is for a person without a disability (Adapted Physical Education National Standards [APENS], 2021).

Andragogy: The art and science of adult learning (Knowles, 1984).

Cohort Model: In higher education, an instructional delivery model groups students who share a common set of courses or programs for an extended period (Barnette & Muse, 1993).

Developmental Adapted Physical Education: Individualized physical education based on the student's developmental needs in physical education. The individualized education plan is based on student, parent, and individualized education plan team recommendations. Some research defines developmental adapted physical education as adapted physical education (Minnesota Developmental Adapted Physical Education, 2020).

Graduate Student: A student with a completed K-12 license in physical education, adding a developmental adapted physical education license (Bemidji State University, 2020). Minnesota requires a K-12 physical education license to pursue an add-on developmental adapted physical education license (Professional Education Licensing Standards Board, 2021)

Individualized Education Plan: The United States Department of Education describes an individualized education plan as a legal document developed, reviewed, and revised yearly by federal law for a child with a disability (United States Department of Education, 2019). In Minnesota, this document must include a team decision as to services, as well as present level of academic achievement and functional performance, statement of need, assessment tools, assessment procedures, assessment data & results, determination of service delivery, disability criteria checklist, and yearly goals and objective (Minnesota Department of Education, 2020)

In-service Teacher: An educator with a certification or is currently working in the physical education field as a general physical education teacher (Oxfordbibliographies.com).

Least Restrictive Environment: Each student with an individualized education plan must receive services in which they are afforded the highest level of independence while having equitable access to the general education curriculum. This is an educational philosophy and not a physical placement.

License/ licensure: Official permission or legal permit granted to a party needed for teaching (Minnesota Department of Education, 2020).

Lived Experience: Constructivism views knowledge as constructed as people work to make sense of their experiences (Creswell & Poth, 2018).

Physical Literacy: The motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life (Society of Health and Physical Education of America, 2020).

Pre-service Teacher: A student currently enrolled and actively working toward a degree in physical education at the undergraduate level for coursework and field experience (Minnesota Department of Education, 2020).

Special Education: The practice of educating students to address their individual differences and needs (Minnesota Department of Education, 2020).

Standards of Effective Teaching: A teacher education candidate must be held accountable to verify completing the approved teacher licensure program's core skills and content standards. These include pedagogy, content, special education core (for special education students), and preK-12 student standards in specific content areas (Minnesota Department of Education, 2020)

Chapter 1: Introduction

We learn differently as children than as adults. For grown-ups, a new skill can be painful, attention-demanding, and slow. Children learn unconsciously and effortlessly.

-Alison Gopnik, The Gardener, and the Carpenter

Childhood Reflections

Daisy was my first best friend. I did not realize until many years after becoming a teacher how her presence in my life has guided my teaching philosophy. Daisy was born during the 1960s in a northern Minnesota town to a mother who had been given Thalidomide (Dana-Farber, 2018) for morning sickness. She had beautiful, blonde, curly hair, a huge smile, blue eyes, and one leg. Daisy was also missing both arms at the shoulder, but that is not what I genuinely remember about her.

I remember riding tirelessly up and down the streets--she on a Hot Wheel and me on my big red tricycle. We played Barbies. We cooked in the sand. We coloured. We shared popsicles from my grandmother's Twisty Top Ice Cream Shoppe. Grandma Henrietta would break the frozen treat in half and hand us the wooden sticks. Daisy would hold the tiny handle between her toes, never dripping a drop. Once she was getting ready to come out and play, her mother invited me into their house. From the chair in the living room, her mom said, "Don't forget to brush your hair." Without skipping a beat, Daisy jumped up on the bathroom counter, opened the drawer, grabbed the brush, and started to stroke her long, blonde hair. I don't remember her parents being outside or hovering over our play. I don't remember my family having concerns about our friendship. I only remember she was my best friend. This relationship taught me that movement is vital in our daily lives. My foundation for teaching and my philosophy are shaped by my experiences playing with Daisy in that I believe every individual is highly capable. Still, we need

not assume or judge them based on ability. Lastly, my passion as an educator revolves around creating meaningful experiences for students and, specifically, in developmental adapted physical education, so I can share my passion with fellow educators working with students like Daisy. To this day, Daisy is my favourite flower.

Professional Realizations

My research interests come from twenty years of experience teaching grades K-12 developmental adapted physical education and general physical education. I have been a district lead teacher for the special education department, a mentor to new professionals in our district, and a resource for general physical education professionals. Over time, advocacy groups, state licensing agencies, and universities sought my experience and special education training to plan and design new programs. Parents and teachers also asked for guidance and support in implementing individualized education plans and community transition. Through these professional experiences, I discovered that many developmental adapted physical education teachers felt overwhelmed and unsure of their teaching responsibilities between general physical education and developmental adapted physical education under the growing demands of students' unique needs and diverse school district expectations. I listened to and supported parents who expressed their concerns and frustrations in the special education system while advocating for their children's education. As part of the state review board for developmental adapted physical education, a member of state and national professional physical education organizations, and an instructor in higher education, I realize the struggle to deliver quality instruction, provide professional teaching materials, and maintain sustainable programs to provide effective and efficient delivery for all stakeholders.

Leaving public K-12 education and entering a university setting, I changed my focus from instructing grades K-12 students to facilitating higher education courses, which challenged my skills as a teacher and self-efficacy in effectively preparing educators. My passion for working with a diverse population of learners has led me to explore the needs of in-service teachers and the structure and content of higher education programs to meet the developmentally adapted physical education specialist's ever-changing demands. This shift from teaching children (pedagogy) to teaching adults (andragogy) in the continuum of learning guides my research on how to plan a rich and rigorous licensure program. The limited pre-service training, lack of self-confidence and self-efficacy in adapted physical education assessment, due-process planning, inclusive teaching strategies, and community transition expose the need for continued learning while teaching (Lirgg et al., 2017). Physical educators must have access to practical guidance and professional development when teaching students of all abilities in school-based physical education and adapted physical education classes (Morrison & Gleddie, 2019). Scherff (2018) suggests a distinction between professional development and professional learning. Professional learning encourages participants to take responsibility, actively engage in real-life situations with peers, and align content standards. The goal of any program should be to build relationships with mentors and professionals while drawing on the teacher's learned experience in the classroom (Pocock & Miyahara, 2018). I believe that developmental adapted physical education should be individualized special instruction in physical education that promotes student success and facilitates inclusion to be more than access for students, but a holistic learning environment. Barber (2018) articulates the need to develop a new generation of teachers who can transform all physical education programs to be more effective regardless of physical skills, abilities, or disabilities. Although I have brought experience and knowledge to this research and the licensure

program, my position as a researcher and my beliefs about what physical education teachers need to support students in special education are my own. Through this research, I have gathered meaningful insights into how program content contributes to the demands of teaching students with disabilities and how the online delivery format impacts the graduate students' learning process. The research themes determined in this study uncover what knowledge content, teaching skills, and program format most benefit graduate students in an online developmental adapted physical education licensure program. The gatherings from this research also show what experiences in this online program meet the needs of the graduate students when teaching students with disabilities in the motor setting.

Research Problem

Physical education teaching demands are becoming more diverse while addressing students' motor, cognitive, emotional, and social needs (Healy, 2020; National Center for Educational Statistics, 2018; United States Department of Education, 2019). Mader (2017) suggests that physical education teachers may not feel confident teaching students with disabilities. In their first years of teaching, as discovered by research interviews, traditional teacher training programs were found to play a crucial role in the success and confidence of professionals but may not provide enough specific information or resources on how to teach students with disabilities effectively (Mader, 2017). Physical education teacher education programs are changing the paradigm and shifting content focus to deliver inclusive skills. Most teachers need to feel confident in their gymnasiums when teaching students with disabilities (Piletic & Davis, 2019). However, inclusion sometimes creates negative attitudes and a perceived lack of competency among teachers required to provide inclusive services with little training (McGrath et al., 2019).

The Parent Advocacy Center for Parents Rights (PACER) (2020) findings show that students with disabilities are reported to be less active and have fewer social interactions than peers labelled without disabilities because of the lack of training of teaching professionals. Furthermore, parents of students with disabilities are reporting that their child's needs are not being met (PACER, 2020). PACER (2020) suggests some of the most impactful training skills for teaching professionals are knowledge of individualized education plans, use of technology in the educational setting, a strong background in social-emotional and mental health interventions, and early childhood assessments. Closing the gaps in the continuity of adapted physical education training programs, such as knowledge content, accommodation of skills, and hands-on assessment with additional clinic teaching experience, may help teachers feel confident working with students with disabilities and address parent concerns. Comprehensive teacher training programs may result in students receiving individual services that lead to success in the classroom and their communities.

Dillon (2005) found that physical education teachers indicated selected teaching competencies in adapted physical education, such as assessing, participating in individualized education meetings, planning and preparing instruction, were more important for providing quality teaching services to students with disabilities than their professional training instructors suggested during training and following the training. Dillon (2005) discovered that instructors believed 47 competencies were essential or desirable in physical education teacher education programs. Meanwhile, elementary adapted physical education teachers believed 23 competencies should be the most important to training. Furthermore, teachers did not feel adequately prepared to address the needs of their students with disabilities, and there was a significant discrepancy in the level of importance of program training (Dillon, 2005). Block et al. (2016) suggest

supplemental teacher training for developmental adapted physical education content increases the self-efficacy of undergraduates and graduate students. Undergraduates in physical education should have a vast knowledge of the history and laws in developmental adapted physical education, possible disabilities they may encounter while teaching, strong strategies for behaviour interventions, and multiple hands-on experiences working with students with disabilities in a motor setting (Block et al., 2016). Graduate students should consider expanding their knowledge base to include intervention strategies, due process of educational plans, and collaboration with other education professionals, including social and cultural aspects (McNamara et al., 2022). Mader (2017) suggests that physical education teacher training programs may hinder students with disabilities by not providing explicit instruction on meeting the needs of all students. In addition, variations in required program competencies of adapted physical education and fluctuations in types of accreditations continue to leave physical education teachers feeling ill-prepared to provide inclusive strategies for all students (Ayners & Houser, 2008).

The Strada-Gallop education survey (2019) on graduate alum experiences in colleges revealed that graduate students needed help to complete a traditional face-to-face developmental adapted physical education degree based on travel logistics, additional costs, regular teaching contracts, extra-curricular coaching, and family commitments. Online delivery programs, as explored by Heap (2017), provide students with several advantages over traditional face-to-face formats. These benefits include a greater chance for faster career advancement, flexible course schedules, lower educational costs, more choice of course topics, and greater self-discipline and responsibility (Heap, 2017). Murtagh et al. (2023) suggest online instruction may suit particular students in teacher education programs, promote different types of learning, foster more

independence, and can both positively and negatively impact the development of relationships. Additionally, there may be variations in the best format and delivery method for university students to complete a teacher training program in developmental adapted physical education depending on learning styles and class development (Murtagh et al., 2023). There is a need to understand what knowledge content and core skills in developmental adapted physical education teacher preparation programs make teachers feel adequately prepared and confident to teach students with disabilities. Furthermore, there is a need to understand the impact of experiences of an online delivery format for graduate students adding a developmental adapted physical education license.

Research Purpose and Goals

This research aimed to understand the graduate student experience in an online developmental adapted physical education program after exiting the program. The first goal was to examine the core content standards in the program, as defined by the licensing board of the developmental adapted physical education license, on the demands of teaching students with disabilities as a physical education teacher.

The second goal was to inquire into what elements of the online delivery format impacted the graduate students' learning process. The specific objectives of this research were to (a) understand the impact of the individual core components of the developmental adapted physical education license program, (b) understand the impact of the online delivery methods of the developmental adapted physical education license program, and (c) guide future programs when designing frameworks for online developmental adapted physical education programs**.**

Research Questions

The main question guiding the research: What were graduate students' experiences in an online developmental adapted physical education license program?

The sub-questions include:

- How did the license's program content (Appendix A: Standards of Core Skills and Content) contribute to the demands of physical education teachers when working with students with disabilities?
- What elements of the online delivery format (Appendix B: Online Program Components) impacted the physical education teacher's learning process?

Research Site: Bemidji State University, Minnesota

This research was conducted at Bemidji State University in Minnesota, United States. The university is located in north central Minnesota and has an annual enrollment of 4,500-5,000 students. The Bemidji State University Online Developmental Adapted Physical Education Licensure Program is housed between the College of Individual and Community Health and Professional Education. The Office of Graduate Studies and the Center for Extended Learning manage enrollment applications for the program. Bemidji State University is required by law to align with the Minnesota Professional Education Licensing Standards Board, which requires specific Rule 8710.5300 in the teaching requirements for developmental adapted physical education. A Compliance Officer and a Licensing Agent from Bemidji State University work closely with the Professional Education Licensing Standards Board and the Department of Education to review programs and license requests. The Minnesota requirements are more detailed and encompassing than many United States or countries worldwide. These foundational differences in teacher preparation programs are reflected in definitional language, the ages of

students served in classrooms, the content of skills and knowledge required in teacher preparation programs, and the depth and hours of required clinical experiences in the field (Minnesota Developmental Adapted Physical Education, 2023). There are 11 regional areas designated throughout Minnesota with professional teaching representatives to provide leadership to in-service teachers. Bemidji State University falls within Regions 1 and 2 of Minnesota. The university works closely with Minnesota school districts for undergraduate student clinical experience placement and continuing education in the developmental adapted physical education field. The online developmental adapted physical education program served as the foundation for research exploring graduate student experiences for students adding a developmental adapted physical education license.

Developmental Adapted Physical Education as a Direct Service

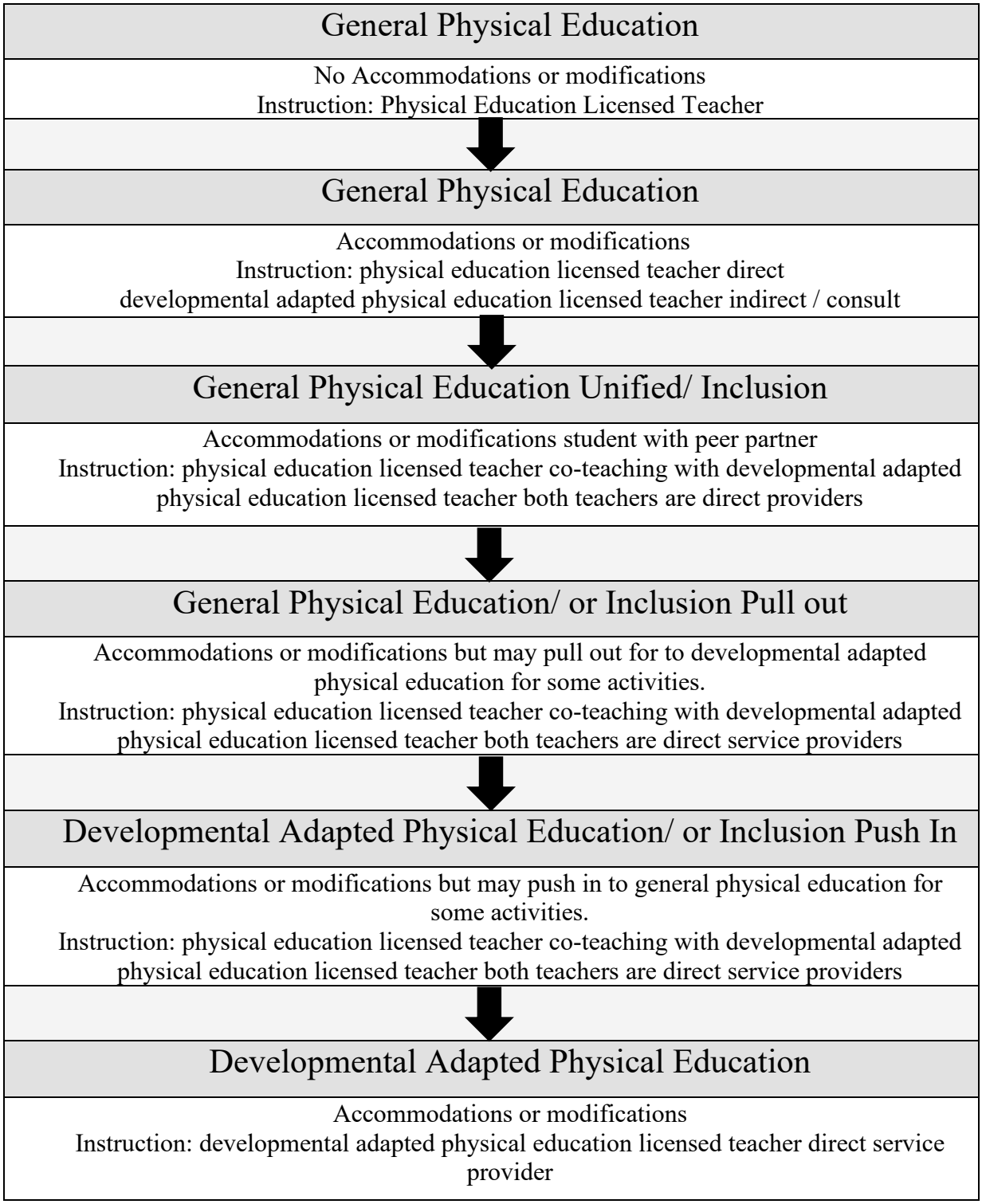
The design of the developmental adapted physical education K-12 classes and student participation in those developmental adapted physical education programs vary depending on the school's location and demographics. Most states require all students with motor needs to be served under the special education umbrella from 3 to 21 years of age under a licensed adapted physical education specialist (United States Department of Education, 2018). The goal of developmental adapted physical education services is to afford all students who meet the assessment criteria by adapting or modifying the regular physical education curriculum to address accommodations while meeting the needs of the student's individualized developmental abilities (Minnesota Developmental Adapted Physical Education, 2022). The number of students identified with psychomotor, cognitive, affective, and behavioural deficits has increased yearly for developmental adapted physical education (Society of Health and Physical Education of America, 2020). Students in developmental adapted physical education are currently served

either by a general physical education teacher under the consultation of a developmental adapted physical education teacher or directly by a developmental adapted physical education teacher, depending on the service model (Minnesota Developmental Adapted Physical Education, 2021). The service models are the specific placement settings where students receiving adapted physical education services may receive instruction. This instruction legally must be in the 'least restrictive environment' as determined by the individualized education plan team. Unique to Minnesota is that developmental adapted physical education is a service and for many students on individualized education plans, the service may take place in a variety of settings to fully meet the needs of each physical education academic standard. For example, a student may receive swimming or aquatic instruction in a 1-to-1 setting with a licensed teacher for goals in standards one and three. Additionally, the student may attend a unified or inclusive physical education for cooperative games and outdoor adventure activities with indirect service for standards four and five.

The least restrictive environment is a philosophy that impacts the service delivery and placement setting provided to the student, allowing participation as fully as possible while experiencing success in all domains (Minnesota Department of Education, 2021). The special education team determines the least restrictive environment based on student needs during the assessment and delivers services through the Individualized Education Plan. Students on a motor plan have programs designed, implemented, and reviewed by a licensed developmental adapted physical education teacher (Minnesota Developmental Adapted Physical Education, 2022). Figure 1 outlines the placement settings from least restrictive at the chart's top to most restrictive at the bottom.

Figure 1

Developmental Adapted Physical Education Service Models



Note. Service models of six settings depicting placement and instruction (Holloway, 2024).

The student can be served in various placement settings ranging from the least restrictive and most inclusive general physical education (GPE) class, with an average physical education classroom ratio of a teacher-to-student of 1:27, through the most restrictive environment with a developmental adapted physical education specialist in a delicate balance of 1:1 (Minnesota Developmental Adapted Physical Education, 2022). The research by Kauffman et al. (2023) on the least restrictive environment suggests that placement and philosophy in educational settings are the hardest decisions regarding what is appropriate for students. Rueda et al. (2020) argue that understanding the least restrictive environment for any individual means that we must understand the ranges and nature of the activity settings needed within each setting. The current study includes reflections on graduate students' experiences in a developmental adapted physical education program to understand, recognize, and advocate for appropriate settings and instruction developed by the individualized education plan team that aligns with Minnesota Law.

Developmentally Adapted Physical Education as a License

A developmentally adapted physical education license, adapted physical education endorsement, or certified adapted physical education certificate is required to serve students in 19 states in the United States (Nichols et al., 2018). Currently, 31 states and territories in the United States have laws defining teacher qualifications to provide individualized services to students with disabilities, 24 states have laws providing for some adapted credentialing with no specified number of credit hours, and 13 states require a credentialed adapted physical educator to teach adapted physical education classes (Perna et al., 2021). In addition, 23 states address physical activity in extracurricular activities available to students who require accommodations (Perna et al., 2021).

In Minnesota, a developmental adapted physical education license falls under the special education umbrella of services qualifying as an add-on license to a K-12 physical education teaching license (Minnesota Department of Education, 2020). An adapted physical education endorsement, area emphasis, or minor does not require a physical education teaching license and can be added to a non-teaching degree, such as kinesiology. Several states allow a certificate of completion from the Certified Adapted Physical Education (CAPE) obtained through national organizations such as the National Consortium on Physical Education for Individuals with Disabilities based on Adapted Physical Education National Standards (National Consortium on Physical Education for Individuals with Disabilities, 2021; Society of Health and Physical Education of America, 2020). Most individual programs require coursework and practical or field experience hours and may include a final examination (Block et al., 2016). According to a National Center on Health, Physical Activity, and Disability (2018) survey, 63% of physical education teachers do not have a state credential in adapted physical education, 78% of physical education teachers are not nationally certified in adapted physical education, and over half of school districts do not have an adapted physical education specialist at the district level. In states that require a license for adapted physical education, many school districts hire a physical education teacher for a one-year contract with the stipulation that they intend to add a developmental adapted physical education license. These teachers work under a provisional out-of-field variance license for a two-year limit. If a licensing program is not completed, the teacher is most likely let go, and a new teacher may be hired (Minnesota Association of School Administrators, 2020). In 2012-2013, 45 counts of variance and limited licenses were granted in Minnesota (Minnesota Department of Education, 2020). In 2015-2016, 38 counts of variance and limited licenses were granted in developmental adapted physical education, while 2017-2018, 51

variance requests were made (Minnesota Department of Education, 2020). This data shows a significant shortage of licensed developmental adapted physical education teachers in Minnesota, making this research study relevant to the professional field.

Developmental Adapted Physical Education Rules in Minnesota

Teachers in Minnesota must complete credentials to acquire licensure in developmental adapted physical education and be hired to teach in a developmental adapted physical education classroom (Minnesota Developmental Adapted Physical Education, 2022). First, the scope of practice is specifically targeted at students three through 21 years of age. Professionals must collaborate with families, classroom teachers, and special education teachers to assess, design, and implement individualized physical education program plans. Next, Minnesota requires teachers to attain a specific and additional license requirement to teach motor skills and fitness to students with disabilities in the physical education domains of physical, cognitive, affective, and social development. Finally, the Minnesota Rule has specific standards for subject matter content to be completed, documented, and assessed for all candidates completing a developmental adapted physical education program. Subject Matter Standards include foundational knowledge, program referral, assessment, evaluation planning, instructional design, teaching strategies, ongoing monitoring and program adjustments, communication and collaboration, and clinical experiences that apply the standards of effective practice focused on students with disabilities for ages 3- 21 years old in a variety of settings. Some examples of these settings may be classrooms, extended school years, adapted sports, workplace, residential, and community involvement. Bemidji State University meets these program rules and was approved by the Minnesota Professional Education Licensing Standards Board in 2017.

In Minnesota, developmental adapted physical education services are guided by two legal revisor statutes outlining qualification criteria for students receiving services and licensing professional educators qualified to provide these services. The first law gives definitions and criteria for students.

Subpart 1.

Minnesota 3525.1352 Developmental Adapted Physical Education: Special Education (2007) provides specially designed physical education instruction and services for pupils with disabilities with a substantial delay or disorder in physical development.

Subpart 2.

Minnesota 3525.1352 Developmental Adapted Physical Education: Special Education (2007): a pupil is eligible for developmental adapted physical education/special education if the team determines the pupil meets the criteria of items A and B.

A: has one of the following disabilities as outlined in 3525.1325, 3525.1341, 3525.1345, & 3525.1354: autism spectrum disorders, deaf-blind, emotional or behavioural disorders, deaf or head of hearing, specific learning disabilities, developmental cognitive disability, severe multiply impaired, other health disability, physically impaired, visually impaired, traumatic brain injury or 3225.1351.

B: determined by the team need specially designed physical education instruction because:

1. The pupil's performance on an appropriately selected, technically adequate, norm-referenced psychomotor or physical fitness instrument is 1.5 standard deviations or more below the mean.

2. The pupil's development of achievement and independence in school, home, or community settings is inadequate to allow the pupil to succeed in the regular physical education program curriculum as supported by two written forms of documentation.

The forms of assessment documentation can be motor skill checklists, informal tests, criterion-referenced tests, or deficits in the general education curriculum as documented by a licensed developmental adapted physical education professional, medical history, or reports by parents and staff. These reports include interviews, systematic observations, and social, emotional, or behavioural assessments (Minnesota Developmental Adapted Physical Education, 2022). Additionally, these assessments and reports must also be completed and presented to the team by a licensed, developmental adapted physical education professional teacher.

Requirements of a Minnesota Developmentally Adapted Physical Education License

Teachers in Minnesota who add a developmental adapted physical education license must;

- Hold a Minnesota Pre-K -12 Physical Education License
- Complete a Professional Education Licensure Standards Board Approved Program
    - Program Details include;
        - Content-specific coursework in Special Education
        - Content-specific coursework in inclusive physical education
        - Practical field experience
        - Pass Minnesota Testing Licensing Exam for Special Education Core Skills – subsections 1 and 2.
        - Apply for the Minnesota License of Developmental Adapted Physical Education

The study included participants who had completed the items required for the licensing process in Minnesota and aimed to gain experience with each of these steps in the online program at Bemidji State University. Discovering their experiences gave the researcher a more informed picture of what graduate students needed to serve students with disabilities with self-confidence.

Developmental Adapted Physical Education Program at Bemidji State University

Minnesota organized a developmental adapted physical education advisory committee shortly after P.L. 94-142 legislation in 1975 (Minnesota Developmental Adapted Physical Education, 2021). This law requires all school districts receiving federal funding to provide for disabled students by accommodating their special needs and providing them with fair and equal access to a free and appropriate education. Since 1997, significant changes have solidified the law's six pillars: individualized education plan programming, free and appropriate education, least restrictive environment, appropriate evaluation, parent and teacher participation, and procedural safeguards. This law is known as the Individuals with Disabilities Act. The last revision was in 2004, regarding implementing and interpreting the Individuals with Disabilities Act (United States Department of Education, 2007). The Minnesota committee comprised volunteers from the 11 special education service regions across the state and included representatives from higher education (Minnesota Developmental Adapted Physical Education, 2021). Bemidji State University added the developmental adapted physical education minor and licensure shortly after the formation of the state committee. This program continued until 2012, when the state licensing board mandated additional criteria for professional credentials. In 2013, the developmental adapted physical education program was discontinued at Bemidji State University due to faculty retirements and a lack of qualified university instructors to teach in the

specific content area. In 2014, I was asked to join a campus committee to revise curriculum guidelines and develop a plan to gain Professional Education License Standards Board approval for a new developmental adapted physical education program. After the State of Minnesota and the High Education Commission approved the project in 2016, the first Minnesota online developmental adapted physical education program took applications, and the first cohort started in January 2017. The online developmental adapted physical education program began the seventh cohort in January 2023.

The developmental adapted physical education program at Bemidji State University has undergone several changes over the last ten years. The Minnesota Department of Education has revised the Professional Education Licensing Standards, the program curricular content has been aligned with state mandates, and the delivery format has changed from face-to-face to entirely online. As the Bemidji State University Developmental Adapted Physical Education Program continues to respond to the possible changes in licensure and produce a team of experts for the field, the voices of graduate students must be included as part of preparing teachers who feel ready and confident to meet the job demands of a student with disabilities.

Significance & Rationale

The research conducted is relevant and timely because many of the states in the U.S. are reviewing and updating requirements regarding the educational service needs of K-12 students with disabilities and the licensures required to serve these individuals under the guidance of the Society of Health and Physical Education of America and The National Consortium for Physical Education for Individuals with Disabilities (Society of Health and Physical Education of America, 2021). The National Consortium for Physical Education for Individuals with Disabilities (2021) has established 15 standards outlining the best practices in teaching adapted

physical education. Most states within America have followed these guidelines over the past few years, with some states starting to investigate inclusive standards and implementation of their own. Post-secondary programs, guided by accreditation agencies, must align teacher education with the core skills and content standards for the learners they serve to prepare developmental adapted physical education instructors to facilitate these programs (Block et al., 2016). In a recent study, Block et al. (2021) posed questions for future research on physical educator training, program curriculum, and training models that align with the exploration of this current study. The authors questioned (a) the degree the teaching standards are being addressed in graduate-level programs, (b) how program content and competencies can be required to prepare adapted physical education teachers to be organized in a series of courses and practicum experiences, (c) the practical experiences and supervision needed at the graduate level and, (d) the education and credentials needed for faculty in adapted physical education. To answer some of the questions posed by Block et al. (2021), the current study gathered data on content in online delivery and competencies from Minnesota Core Skills and Content Standards for Developmental Adapted Physical Education Licensure.

Furthermore, the increasing number of online licensing programs makes this research valuable as universities strive to meet the needs of future post-secondary students (National Center for Education Statistics, 2018). Additionally, there is limited research on current in-service teacher experiences in the developmental adapted physical educational field. This research (a) helps understand the lived experience of in-service graduate students in online developmental adapted physical education programs, (b) contributes to literature focused on the design of authentic developmental adapted physical education programs, (c) provides real-life applications for universities to align online delivery components to reflect the needs of graduate

students, (d) provides in-service graduate students with a voice to support learning and promote self-efficacy in developmental adapted physical education license programs.

Gaining content knowledge of disabilities, practical experience with students under a licensed cooperating specialist, and expertise in completing state-required documentation proves to be a challenge for pre-service teachers. Perna et al. (2021) concluded that provisions for acquiring developmental adapted physical education credentialing are far from universal, and teacher training programs providing developmental adapted physical education are limited. Furthermore, laws addressing specific guidelines for teaching students with disabilities vary widely from state to state in the United States (Perna, 2021). In undergraduate programs, students often do not have access to special education programs through their universities and cannot spend the time or money completing additional degrees in special education (Ayers & Housner, 2008). In-service teachers' challenges differ from those of undergraduates due to the inability to leave their current positions in teaching and attend on-campus face-to-face classes, as well as the time commitment to secure an additional license (Rizzo, 2013).

Choosing a program that meets the state's requirements, which you plan to teach in or currently teach, is another challenge for developmental adapted physical education teachers. The choice of programs, certificates, minors, add-on licensures, master programs, and professional development opportunities vary as to the length of course completion, content, practical experience, and state requirements (Nichols et al., 2018). Several states have professional education licensing standards regarding teaching credentials in adapted physical education (Shape America, 2020). Many of these licensing programs have fallen by the wayside due to a need for qualified instructors at the university level (Minnesota State, 2019). Minnesota is experiencing the same teacher shortages throughout the United States in special education,

specifically developmental adapted physical education (Minnesota Department of Education, 2020). The challenges faced by teaching professionals in choosing a program and adding credentials, specifically a developmental adapted physical education license, gave significance and rationale to the current study.

Chapter 2: Background and Review of Literature

The first section of this chapter addresses professional language differences, the historical background of developmental adapted physical education, and legislation mandating this service. The second section is a literature review of current research in teacher preparation, program curriculum, and online learning in teacher education programs.

Language Differences

As an introduction to the research, it was necessary first to establish reasoning for focusing specifically on developmental adapted physical education as terminology. First, as the researcher, I choose to use person-first language for this study to reflect my teaching experiences, educational training, and alignment with program content standards. I believe it is the right of every individual or community to have their voices heard and gain authentic experiences through engagement, representation, and expression to promote learning (Leiberman & Grenier, 2019; Peers et al., 2014). I also acknowledge that some theorists and cultures may not agree with the person-first language used in this study. Some individuals believe person-first language does not fit all situations and can reflect the negative tone suggested when dividing or separating the person from the disability (National Institute of Health, 2023). The National Institute of Health (2023) suggests that the culture and community of the individual, as well as personal preference, should determine the language and identity.

Depending on your location and discipline, this specialized field of physical education is called developmental or adapted physical education. According to Florian (2018), the main challenge of the term inclusion is that it lacks a clear definition that stems from expectations, approaches, and divergent definitions such as the words developmental adapted physical education and adapted physical education. Sherrill (2007) suggested using the term adapted

physical education as a profession and a science. Minnesota chooses to use the term ‘developemental adapted physical education’ as a way to honour all individuals’ unique differences. These two philosophies provide a separate conceptual framework for research and teaching when examined closer. In research, adapted suggests a change in function, structure, or pathology where an individual may need specialized care or treatment and is deemed to “have” an impairment. This follows more of a medical model (Haegele & Hodge, 2016). For this research, I situate myself within a social model, believing the environment and society must change to meet the needs of individuals (Haegele & Hodge, 2016). In education, specifically Minnesota, developmental is added to the phrase to suggest the focus is on the individual and the outcomes which can be achieved as a result of participation in physical education. Adapting social and physical environments to promote activity follows a social model (Haegele & Hodge, 2016). The social model values a spectrum of abilities (Office of Developmental Primary Care, 2024). Supporting a spectrum of abilities through accommodations and modifications is the main focus of individual education plans while providing physical education. Often, the terms inclusion, adapted physical education, and developmental adapted physical education are used interchangeably, but for this research, the following definitions are used to provide clarity for readers.

Inclusion

Inclusion is defined as a way of thinking or the process of promoting presence, acceptance, and participation through the universal design of learning and is a human right (Balint et al., 2022). Inclusion is about creating a culture or environment where everyone is welcome. Inclusion focuses on all learners, not just students with special needs (Alberta Education, 2023). Inclusive environments can be created for physical education and

developmental adapted physical education classrooms by infusing universal design into the learning and teaching strategies (Leiberman & Grenier, 2017). Inclusion can be a field of study, but it is not a professional licensure area as is developmental adapted physical education.

Developmental Adapted Physical Education vs. Adapted Physical Education

Adapted physical education is defined as physical education that has been changed or modified so it is as appropriate for a person with a disability as it is for a person without a disability (Adapted Physical Education National Standards, 2021). The title adapted physical education as a subfield of physical education is used by several states across the U.S., such as California and Texas, and professional organizations, such as the National Consortium for Physical Education for Individuals with Disabilities in Cortland, New York (Adapted Physical Education National Standards, 2021). Minnesota chooses to go further and use the title developmental adapted physical education, which encompasses the four domains of physical education for individuals. For example, a student could perform high in the area of motor skill acquisition and show no need for developmental adapted physical education services but have unsafe social behaviours for themselves and others, which limits their access to the general education curriculum, demonstrating a need for the specialized service.

The foundation of the term developmental adapted physical education originated in Minnesota and is a team model including the student, parent, general physical education teachers, special education teachers, occupational and physical therapists, speech and communication specialists, and community advocates (Minnesota Developmental Adapted Physical Education, 2021) Developmental adapted physical education, as a professional field of study provides specialized training for physical education teachers in inclusive teaching methods and strategies paired with practical field experience leading to add-on licensure (Minnesota

Developmental Adapted Physical Education, 2021). As a teaching service, developmental adapted physical education provides students who have an individual education plan receive direct services provided by a developmental adapted physical education licensed teacher in various settings with the goal of equitable access to the general education curriculum through inclusive practices (Minnesota Developmental Adapted Physical Education, 2021). These services encompass physical education's psychomotor, cognitive, affective, and social domains, focusing on the five Minnesota Academic Standards of physical literacy (Minnesota Department of Education, 2020). According to the International Physical Literacy Association (2017), each of these domains is interconnected and essential to a child's capability of a healthy life. Westery (2020) stated the four domains to be: (1) Motor Domain, such as physical competency, fundamental motor skills, health, and skill-related fitness, and psychomotor skills; (2) Cognitive Domain, such as knowledge and understanding of healthy and active lifestyles, awareness of game rules, positions and tactics, feedback and reflections, understanding how to perform specific sport skills; (3) Affective Domain (e.g., motivation, confidence, self-esteem, self-management, fair play, and engagement); and (4) Social Domain (e.g., leadership, working with peers, treating others with respect, sportsmanship, and communication). Minnesota Department of Education (2023) lists the five standards of physical education as (1) Demonstrate competency in a variety of motor skills and movement patterns; (2) Apply knowledge of concepts, principles, strategies, and tactics to movement and performance; (3) Demonstrate the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness; (4) Exhibit responsible personal and social behaviour that respects self and others; (5) Recognize the value of physical activity for health, enjoyment, challenge, self-expression, and social interaction. Individual education plan goals are based on Minnesota physical education standards and the

domains of physical education. The current study included reflections by the graduate students on how the core skills and content standards of developmental adapted physical education built on the physical education domains and Minnesota Physical Education Standards strengthen teacher training programs for developmental adapted physical education professionals and expand confidence in serving students with disabilities. The Minnesota Department of Education (2023) describes the language as follows.

> The term "Developmental" focuses on the outcomes to be achieved in an environment that allows for sequential growth through a process of assessment: planning, program implementation, and progress evaluation. Each student's unique physical, social, emotional and intellectual development is considered when determining how the outcomes will be achieved. Appropriate expectations are defined through an individualized approach that recognizes personal interests and abilities. It is through a carefully planned, diversified program of "developmental" activities, games, sports, and rhythms suited to the interests and capabilities of each student that the outcomes could be realized. The term "Adapted" focuses on individualizing the instructional process. Instructional adaptation includes selecting the setting and environment, determining the pace of instruction, providing appropriate teaching strategies and modifying equipment (Minnesota Department of Education, 2023, p. 106).

The philosophy behind using all three definitions to explain services and programs in this research was to account for the distinct differences between each concept and implementation. In summary, inclusion is concerned with a process to access activities. It is a human right, including feelings and belonging. Adapted physical education is focused on the accommodation or modification of skills or activities, and developmental adapted physical education is focused on

the individual student's developmental needs in the motor setting provided by a licensed specialist through inclusion (Adapted Physical Education National Standards, 2021). Adding the concept of development in the title takes into account the question by some social model critiques that it does not account for each person with a disability and the differences between individual differences of disabilities. Much of the recent research conducted in the motor setting has focused on the adapted physical education definition of skill variation and adaptation during movement (Kelly, 2019; Winnick & Porretta, 2021). The current study reflected on the graduate students' learning experiences enrolled in an online developmental adapted physical education program.

Foundations of Developmental Adapted Physical Education

Developmental adapted physical education is a professional field that benefits students, families, and communities (Parent Advocate Coalition for Educational Rights, 2021). It is challenging to present the facets of developmental adapted physical education without examining the development of federal legislation, the history of developmental adapted physical education, and requirements for teachers of developmental adapted physical education. The components leading to the mandates of developmental adapted physical education play a crucial role in ensuring equitable and accessible opportunities for all students. Within this section, literature on the laws and mandates of special education, the foundation for services, and options for teacher credentials outline the foundational literature and frame of the commonalities and differences of developmental adapted physical education or adapted physical education programs. At the same time, the accreditation process, teacher preparation, and program delivery are shown to vary significantly from region to region. The varied context and background of developmental adapted physical education will support the foundation for my research by showing that even

though most states have language addressing the laws, the components of teacher requirements need to be more consistent regarding credentialing and program design. The voice of the graduate student will provide an opportunity to create programs that meet the needs of in-service professionals serving grade levels K-12, inclusive of ages 3-21, who teach students receiving developmental adapted physical education.

History of Developmental Adapted Physical Education

Education Laws and Mandates

Over the last thirty years, there has been a significant shift in inclusion for students in educational systems. People with disabilities comprise about 15% of the world's population (World Health Organization, 2022). According to the World Health Organization (2022), experiencing a disability is part of being human, and almost everyone will temporarily or permanently have this experience in their lifetime. In the early 1970s, over 40 right-to-education lawsuits led to the Rehabilitation Act of 1973, subsection 504, and Public Law 94-142 -The Education for All Handicapped Children Act of 1975 (Minnesota Governor's Council on Developmental Disabilities, The ADA Project, 2013). This law was later replaced with the Individuals with Disabilities Education Act (IDEA) of 1990, 2004, and 2014 (Graham, 2022). Individuals with Disabilities Education Act guarantees all children with disabilities ages 3-21 a free and appropriate education that must include physical education (Winnick & Porretta, 2021). In 1973, Subsection 504 of the Individuals with Disability Education Act was added to require school districts to identify, evaluate, and extend every qualified student with a disability (Minnesota Governor's Council on Developmental Disabilities, The ADA Project, 2013). These progressions of laws and mandates build the foundation for developmental adapted physical education programs, such as Bemidji State University's licensure, to include learning outcomes

for professional educators. The learning outcomes, core skills, and content standards of practice ensure that individuals with disabilities receive direct services in the least restrictive environment under the legal framework of an individual education plan provided by a qualified licensed teacher.

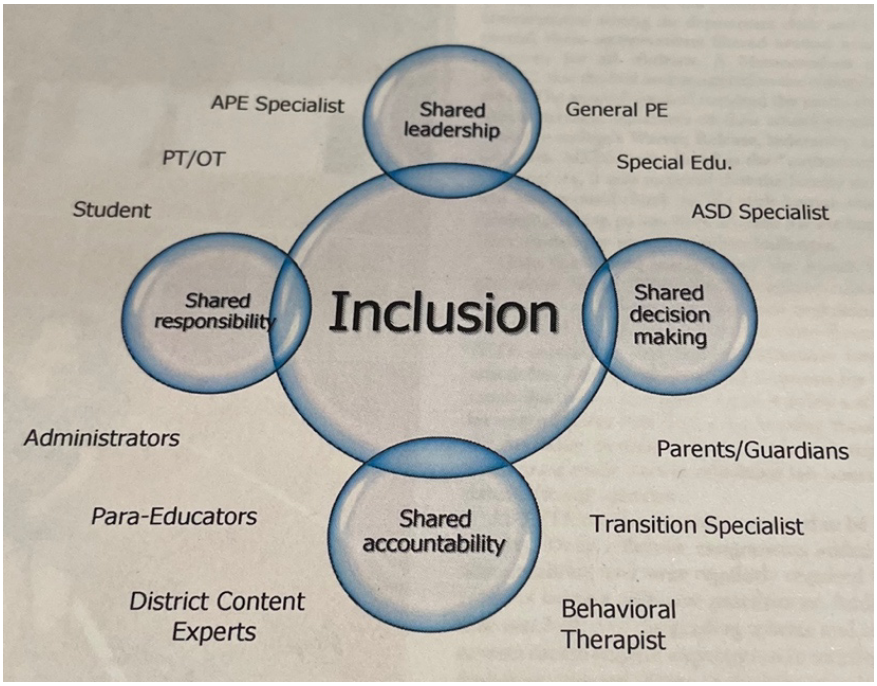
Convention on Human Rights

The Convention on Human Rights (1989) was the first international law focusing on the comprehensive rights of children, notably the inclusion of children with disabilities. All provisions in the convention apply to children and adults; however, specific articles recognize children with disabilities by addressing participation, information, education, and family life free of violence (UNESCO, 2007). The United Nations Convention on Human Rights Article 7 outlines requirements for children's best interest and participation of the child's voice in the decision-making process. Article 24 reflects the further commitment to inclusive education as a goal for students, and the United Nations Convention on Rights of the Child Article 32 identifies expectations for education and disability at the international level with a commitment to future process and development by the division of economic and social affairs (UNESCO, 2007). The move towards more inclusive programs allows students with disabilities to learn alongside peers to practice social skills in an integrated environment when appropriate and safe for all students (Block et al., 2016). The research presented by Block et al. (2016) explores how professional collaboration and practical experience components of inclusive design in developmental adapted physical education programs may prepare in-service teachers to meet the needs of students. Figure 2 places the developmental adapted physical education teacher in the community of professionals needed to support the inclusion process of collaboration. The current study includes reflections of graduate students on the success of collaborative strategies integral to core

skills and content standards designed to strengthen teacher training programs for developmental adapted physical education and increased self-efficacy in serving students with disabilities.

Figure 2

Interdisciplinary Flow Chart of Inclusion in Physical Education



Note: Bruno (2020).

United Nations

In 1994, the United Nations made a consensus on the forward education movement for students with special needs by reaffirming the educational rights of 1948 (UNESCO, 1994). The group began this framework by stating the commitment to education for all students with these proclamations:

- Every child has a fundamental right to education and must be given that opportunity.
- Every child has unique characteristics, interests, abilities, and learning needs.

- Education systems should be designed and implemented to consider the vast diversity of individuals' characteristics and needs.
- Those with special needs must have access to regular schools and should be accommodated within a child-centred pedagogy.
- Regular schools with this inclusive orientation are the most effective in combating discriminatory attitudes.

Specifically, Part B of The Salamanca Statement: Framework for Action, Spain, 1994, addressed school factors of growth as the need for curriculum flexibility, school management, and examples of good practice through information and research leading to inclusive education as the norm (UNESCO, 1994). This research explored how curricular choices and creating accommodations and modifications in inclusive programs in developmental adapted physical education programs may prepare in-service teachers to meet the needs of students.

World Health Organization

World Health Organization (2022) suggests that people with disabilities experience poorer health outcomes, have less access to education, have fewer workplace opportunities, and are significantly more likely to live in or experience poverty. The inequities of persons with disabilities in the healthcare systems show that they are more than twice as likely to struggle to find healthcare providers (World Health Organization, 2022). It is the vision of the World Health Organization that countries set priorities and requirements for persons with disabilities to have equal and equitable access to health, education, employment, and housing (World Health Organization, 2022). Basing the online developmental adapted physical education program learning outcomes for graduate students on the Minnesota Academic Standards for Physical Education focuses on the health and education requirements of the World Health Organization

recommendations. The specific transition component in the Individualized Education Plan targets employment and housing choices. This research investigates graduate students' experiences in assessing, interpreting, designing, and implementing components of the individualized education plan during the developmental adapted physical education license program.

United States Department of Education

Students who qualify for inclusive services are protected by several laws, including The Individuals with Disabilities Act, which ensures free and appropriate education for all students (Individuals with Disabilities Act, 1997). Sections 63 and 612 of the Federal law, initially enacted in 1974, mandate that all schools and school districts that receive federal funding must grant free and appropriate access to the whole curriculum standards to all students in their programs with or without disabilities (United States Federal Code 1402, 1974; United States Department of Education, 2018). In 2017-18, the Every Student Succeeds Act, passed in 2015, began replacing the No Child Left Behind, enacted in 2002, to hold schools accountable for quality education and achievement for all students by empowering individual state governments.

Physical education is considered a subject in the "well-rounded education" language under the Every Student Succeeds Act, and special education is a primary focus area. Under the Every Student Succeeds Act, federal funding has become available to all schools for health and physical education students in the United States (United States Department of Education, 2018). According to a report by the Every Student Succeeds Act (2018), under the direction of the United States Department of Education, the enrollment of children served by federally supported special education programs was 8.3% of the school-aged population in 1976-77, 13.8% in 2004-2005, and 13.0% in data reported in 2014-2015. Currently, 14% or 7.1 million public school

students 3-21 years of age receive special education services under the Individuals with Disabilities Education Act (National Center Education Statistics, 2020). The enactment of the Individuals with Disabilities Education Act in 1975 explains the slight changes in these numbers, a decline in students with specific learning disabilities and an increased number of students identified with Autism (National Center for Educational Statistics, 2018)

United States Department of Education (2018) suggests a growing number of students with disabilities spend more of their day in the regular education classroom with their typical-ability peers than ever before. According to federal statistics (United States Department of Education, 2016), six out of ten children with disabilities spent some part of their day in the regular classroom, with 80% of all students with disabilities spending more than 40% of their day in a general education class. A survey reported by the Active Schools: National Center on Health, Physical Activity, and Disability (2018) found that 80% of all students with disabilities participate in only a general education class, 43% of students with disabilities participate in general physical education and an adapted physical education class, 24% of students with disabilities participate in only an adapted physical education class, and 12% do not participate in any type of physical education class. Students with disabilities participation settings were not broken down by disability category or chronological age. This numerical evidence shows the need for trained developmental adapted physical education professionals to implement quality opportunities for students with disabilities and promote inclusive practices in physical education and developmental adapted physical education.

Challenges in Developmental Adapted Physical Education

Self-efficacy of Pre-Professionals Teaching Students with Disabilities

Perhaps the most critical factor in successful inclusion in general physical education is physical education teachers' attitudes and perceived competence (Block et al., 2016). Block et al. (2016) and Smith (2013) found that pre-service students who completed even one introductory course in adapted physical education improved their self-efficacy when teaching students with disabilities. Teacher training programs for inclusive physical education include, on average, one 3-credit undergraduate course as part of the initial K-12 physical education degree (Ayners & Houser, 2008). Lirgg et al. (2017) found that eight percent of undergraduate teaching programs for licensing of grades K-12 in general physical education receive more than one 3-credit course in adapted techniques, and educators believe this is far from adequate to teach the general population, not to mention the increase in student needs of students with disabilities.

According to undergraduate students, the least adequate preparation area in the teacher training programs was for teaching children with autism (Lirgg et al., 2017). Madden (1992) investigated the link between university pre-service teachers and job requirements when teaching special education. The findings showed that the school's administrators' perceived competencies of teachers were far greater than the adapted physical education teachers reported. The adapted physical education teacher rated the actual job-related competencies to have been only adequately covered in their preparation at best and, in many instances, not covered at all in teaching training programs (Madden, 1992). Twenty-five years later, pre-service teachers are still concerned about their ability to effectively teach diverse populations (Lirgg et al., 2017). Lirgg and colleagues (2017) investigated perceptions of teachers who serve students with disabilities in the physical education setting and their preparation in college programs. Participants rated their undergraduate experiences, difficulties teaching students with disabilities, and barriers to inclusion. The pre-service teachers reported class size, students with autism, and inadequate

coursework and field experiences as their most significant concerns (Lirgg et al., 2017). Jeong (2013) presented research that indicated that pre-service teacher attributes and confidence in teaching students with disabilities increased when students had more previous experiences working with individuals with disabilities and their training included practicum experiences. Jeong (2013) explained that universities are challenged to meet the demands of preparing highly qualified developmental adapted physical education professionals. Piletic and Davis (2010) concluded that future educators must be better prepared to address the demands of teaching students with disabilities, as evidenced by the 20 years of continued gaps in the program development for teacher education.

Sakai (2019), using Knowles' andragogy theory, studied novice adapted physical education teachers and found themes of challenges, teaching adapted physical education, and confidence. The participants experienced many challenges during their first five years, believed knowledge and skills were most important, and identified that lesson planning and mentors benefited their self-efficacy (Sakai, 2019). The similar andragogy lens and novice developmental adapted physical education professionals may lead to beneficial commonalities between studies. Adult learning suggests the key concepts are a maturing self, increasing experience, increasing readiness to learn, shifting application and learning orientations, and moving from external to internal motivation to learn (McGrath, 2009). These outcomes produce an understanding of oneself that demonstrates an acceptance and respect for others through a dynamic attitude toward life that embraces each human experience in learning.

Sato & Haegele (2018) discovered three themes in their research when investigating the experiences of pre-service adapted physical education teachers when working with students with severe to profound disabilities: 1) the ambiguous roles of the adapted physical education

teachers, 2) the need for specialized expertise, and 3) the absolute shock of unpredictable behaviours by students. The recommendations for undergraduate and graduate levels of adapted physical education training included having a cooperating teacher who provides strategies and reassurance for what works in specific settings and additional hours of practical experience (Sato & Haegele, 2018). In summary, the literature indicates undergraduates often do not have enough previous experience, adequate program coursework, and practical experience to feel confident teaching students with disabilities. Professional physical education teachers must make many decisions when continuing their education with additional developmental adapted physical education coursework. Applicants must investigate the requirements for their demographic area and find a program that meets their state's requirements.

In-Service Teacher Concerns

Pre-service teachers report feeling "unprepared" when teaching students with disabilities (Calderon et al., 2020). In-service teachers completing a developmental adapted physical education program also reported similar feelings with program designs containing segmented outcomes instead of instructional continuity, teaching strategies and learning activities needing extensive accommodations and modifications, and administration of unfamiliar assessment tools (Rosenzweig, 2009).

Nearly one-third of new teachers in Minnesota left education within the first five years of the profession (Professional Education Licensure Standards Board, 2022). The literature reveals that more and more general education teachers are expected to accommodate students with various needs (Mader, 2017). Teachers feel they need adequate initial training, consistent and systematic professional in-service training while teaching, and sufficient teaching resources (Hardin, 2005). Hodge and Alkuffo (2007) studied full-time adapted physical education teachers'

concerns working with students with disabilities in urban schools and found seven significant problems: (a) gymnasium use, time, and size; (b) equipment availability, adequacy, and use, (c) caseloads and class size, (d) attitudes and behaviours of teaching assistants, (e) professional development opportunities, (f) travel and transfers of equipment, and (g) developmental adapted physical education teachers disrespect and disregard. The authors suggest these job-related concerns show the need for professional preparation programs to emphasize positive networking, communication, collaboration, and professional support for developmental adapted physical education teachers (Hodge & Alkuffo, 2007). Hodge and Alkuffo (2007) further suggest that in-service teachers benefit from district professional development and targeted workshops and conferences that address new ideas. Teachers are often required to attend workshops focused on curricula for classrooms in place of further educational strategies for developmentally adapted physical education teachers relevant to working with students with disabilities. This research uncovers some content standards that support teachers in meeting the demands of teaching students with disabilities better.

Similarly, a study conducted by Rizzo (2013) listed the top 10 concerns of general physical educators and developmental adapted physical education professionals from an e-survey, including (a) effective teaching behaviours, (b) inclusion, (c) assessment, (d) collaboration, (e) transition, (f) response to intervention (RTI), (g) certification, (h) leadership, (i) behaviour management, and (j) evidence-based teaching. The most relevant topics related to this study are inclusion and certification. Strategies to support the concept of inclusion suggest professionals understand formal placement protocols and gain knowledge on specific disabilities and specialized adapted equipment (Rizzo, 2013). Rizzo (2013) described the importance of state and national certification to improve the chances of better-quality physical education programs

and academic recognition. Therefore, investigating the graduate student experience will help the field to better understand what content standards aid teachers in understanding placement strategies and working with students with specific disabilities and the specialized equipment needed in their learning. This investigation will also benefit professors and universities in providing quality programs built on the understanding of teachers' needs when striving to gain certification.

Another area in which research has shown a deficiency in theory and hands-on praxis is in initial teacher education and continuing professional education concerning inclusion in physical education (Fequiere, 2019; McGrath et al., 2019). Fequiere (2019) prepared a synthesis project of collected materials to answer questions concerning teaching students with disabilities in urban settings and the attitudes of teachers instructing adapted physical education. Two of the questions of direct interest in this study were focused on best practices and preparation for developmental adapted physical education teaching. Fequiere (2019) reported demands on completing required individualized education plans as a top concern among developmental adapted physical education teachers and the need for real-world experience (Fequiere, 2019). Further, Fequiere (2019) addressed the need for professionals to meet the needs of students to possess proper teaching tools and strategies, relevant training from an accredited college or university, hands-on experience with students, the ability to promote a positive learning environment for all students, participate in professional development, and familiarity with unique cultures. In a similar international study out of Ireland, it is suggested that more emphasis on training and preparation has resulted in some negative attitudes and a perceived lack of competency among teachers in inclusive physical education (McGrath et al., 2019). McGrath et al. (2019) implicate the need for adding a comprehensive theoretical focus and meaningful field

experiences to teacher education, which could diminish the lack of perceived competency and help guide future program development.

Special Education Licensure

Developmental adapted physical education falls under the special education umbrella as a direct service, sanctioning identification, assessment, instruction, and yearly review of individual student plans. Licensing or certification to legally provide developmental adapted physical education in schools varies according to state government agencies regulating teaching licensures (APENS, 2021). Perna et al. (2021) examined the components and the prevalence of state laws governing adapted physical education by analyzing state law databases. The conclusion stated, "While the majority of the states have laws addressing adapted physical education, such provisions are far from universal, and requirements for adapted physical education teachers credentialing are limited" (Perna et al., 2021, p 489).

Minnesota requires educators to hold a K-12 physical education undergraduate degree and receive an add-on or additional license to provide direct service to students (Minnesota Department of Education, 2020). Educators must also pass the Minnesota Testing Licensing Exam (MTLE) under Special Education Core Skills, Subsections 1 and 2 (Minnesota Department of Education, 2022). Governing licensing boards, such as the Professional Education Licensing Standards Board and the Higher Learning Commission, approve university accreditation programs and closely oversee the requirements for continuing review processes (Minnesota Department of Education, 2022).

University Instructors

Several universities in the United States have had on-campus developmental adapted physical education programs over the years (Center for Public Education, 2019; United States

Department of Education, 2019). Many of these programs have fallen by the wayside due to a need for qualified instructors (Minnesota State, 2019). The surviving programs have gone through numerous state alignments for continuing accreditation. Block et al. (2016) pointed out that many physical education teacher education programs need more space to facilitate classes in adapted physical education and qualified professors with specialized knowledge to teach these courses. Similarly, Harris and Martin (2012) suggested that increasing budget concerns force universities to choose online education options.

Minnesota teacher training programs require supervision by university instructors while enrolled students complete practical field experiences. According to the Higher Learning Commission (2021), many universities' developmental adapted physical education programs lack teaching professionals with a K -12 physical education degree, developmental adapted physical education license, and a Ph.D. in the specific area of developmental adapted physical education. Minnesota Higher Education Learning Commission requires these credentials to teach a master-level course or higher. Haegele et al. (2020) reported a shortage of qualified doctoral-level personnel within the adapted physical education profession and a critical need for faculty in adapted physical education to contribute to training physical education teachers. Similarly, McCubbin et al. (2011) found that many universities in the United States cannot locate and hire well-prepared professionals with experience and training in developmental adapted physical education.

Furthermore, McVey and Trinidad (2019) conclude that teacher shortages and the hiring of qualified faculty make it difficult for graduate students to find accredited programs. Some universities have developed developmental adapted physical education programs with blended or hybrid delivery models requiring a combination of face-to-face and online formats with

synchronous and asynchronous instruction models (National Consortium of Physical Education for Individuals with Disabilities, 2023). The number of students enrolled in these programs also changes significantly yearly, adding to the problem of retaining qualified instructors (National Center for Educational Statistics, 2019).

Teacher Shortages in Developmental Adapted Physical Education

Teacher shortages continue to increase in special education, specifically developmental adapted physical education (Samuels & Harwin, 2018). Each year, the United States Department of Education's Office of Postsecondary Education determines the specific areas of teacher shortages. The federal office creates a resource document to be used by agencies for three primary purposes: to notify states and schools about hiring issues, to serve as a resource for graduates of education programs, and to assist federal financial aid offices (United States Department of Education, 2018). It is estimated that the needs of the education job sector will increase by 9% over the next five years (United States Department of Education, 2018). Forty-nine states reported a shortage of special education teachers for 2013-2014 in the School Survey Summary Report (2018). The number of special education teachers has dropped by over 17% over the last decade (National Center for Education Statistics, 2019). The number of students with disabilities decreased by only 1%, bringing the average teacher-to-student ratio in special education in the United States to 1:17 (National Center for Education Statistics, 2019). Luft et al. (2022) suggested these shortages are brought on by legislation empowering states to determine the requirements for compliance changes in criteria identifying students, increased student caseloads for services, and a lack of teacher training. Building and school location, teacher-to-student ratios, and the need for multiple special education licenses to cover district needs also

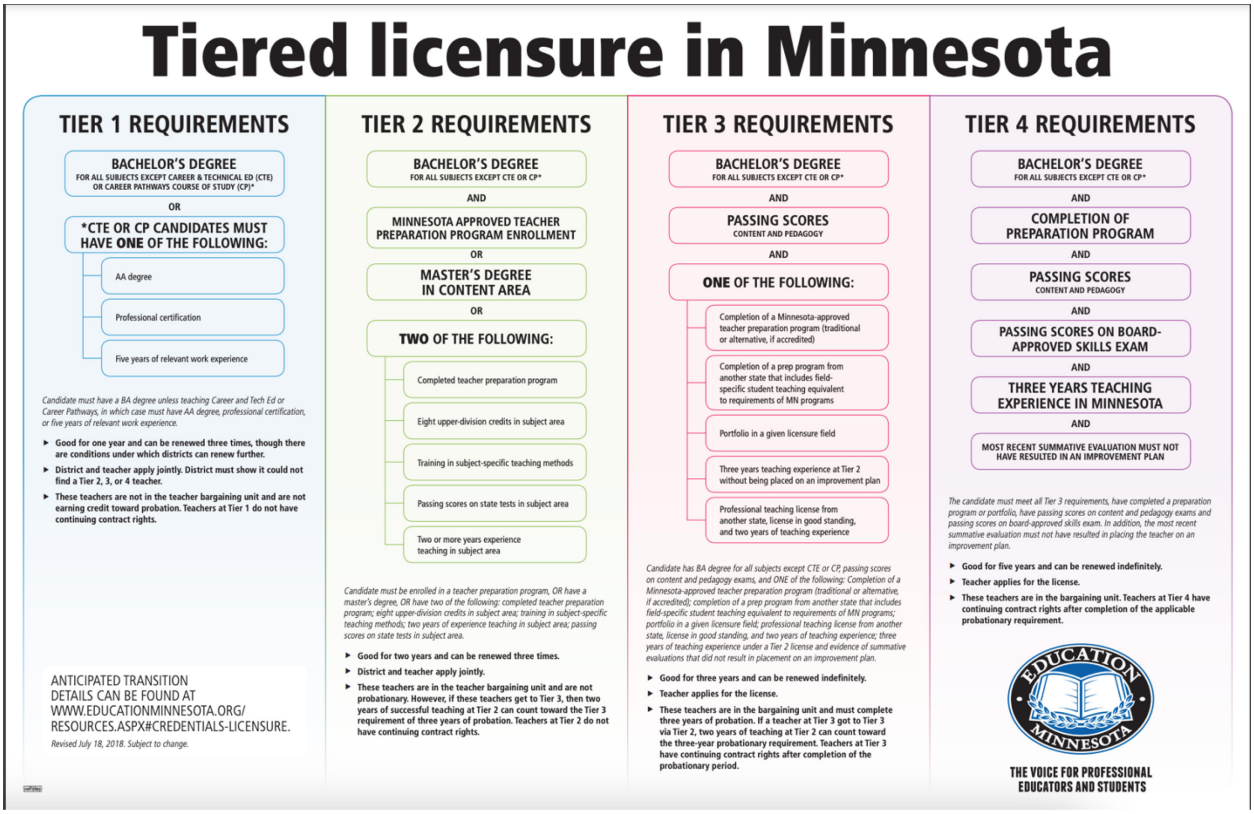
added demands on general physical education teachers (Hodge & Alkuffo, 2007; Rizzo, 2013; Smith, 2013).

Physical education, special education, and specifically developmental adapted physical education report a decline in licensed teachers over the past six years, resulting in teacher shortages in this content area (United States Department of Education, 2019). Within special education, teachers are more likely to leave the profession at twice the rate of general education teachers (National Coalition on Personnel Shortages in Special Education and Related Services, 2017). Developmental adapted physical education is impacted by fewer professionals entering the professional field and fewer qualified individuals staying in positions to serve student models (National Consortium of Physical Education for Individuals with Disabilities, 2023). The teacher shortages and high job demands decreased self-efficacy and increased burnout, leading to teaching professionals not remaining in the developmental adapted physical education classroom (Samuels, 2016). Samuels and Harwin (2018) stated that a fluctuation in teacher positions, specifically a shortage of highly qualified teachers in developmental adapted physical education, is causing significant problems in education.

One strategy to increase the number of professionals entering the teaching field, specifically special education, is the tiered licensing system (Minnesota Department of Education, 2020). Minnesota uses a tiered license system, providing more options for obtaining credentials. The system is ranked by types of education and years of service. Figure 3 shows the four tiers in the Minnesota system of licensure.

Figure 3

Tiered Licensure in Minnesota Document



Note. Minnesota Department of Education progression of license requirements. (Minnesota Department of Education, 2022).

First, as more states turn to the tiered licensing system, fewer special education teachers will meet the tier 4 or highly qualified level of license (Minnesota Department of Education. 2020). Second, fewer university students are interested in entering the teaching field and the area of special education (Partelow, 2019). Lastly, current licensing programs are not meeting students' diverse needs entering the field, and in-service teachers seek meaningful professional development in developmental adapted physical education and additional licensures (Hardin, 2005; Sato & Haegele, 2018; Morrison, 2019). This research investigates graduate students'

experiences adding a specialized license during the developmental adapted physical education license program.

Future Requirements

Many school districts hiring physical education teachers are also seeking educators who are currently licensed or in a teacher education program for developmental adapted physical education (Adapted Physical Education Standards (APENS), 2022). The National Center for Educational Statistics (2019) published online program options for undergraduate degree-seeking and post-baccalaureate professionals as national resources. The ever-changing numbers and locations of educational options in their database show how students strive to attain licensure and how institutions struggle to maintain programs. One program designed to meet the national needs of trained professionals in developmental adapted physical education is the Certified Adapted Physical Education (CAPE) program, built on the Adapted Physical Education Standards. APENS (2022) offers resources for physical educators to complete examinations on 15 content standards to gain certification.

Several teacher preparation programs now include the 15 nationally adapted physical education standards and best practice guidelines (Society of Health and Physical Education of America, 2021). However, some states still need to accept the national certification and require professionals to follow the guidelines of their specific state criteria. Specifically, Minnesota has these guidelines for its state licensing criteria and has yet to adopt the CAPE Certificate Program.

The laws are currently under review in several states, including Minnesota (Professional Educator Licensing Standards Board, 2023). In addition, these state laws and mandates may also require university instructors to possess credentials similar to teacher training in higher education.

It has been suggested in several research studies that students have had limited opportunities to express their learning experiences and approaches to teacher education with online programs, integrated courses, and hybrid formats (Block et al., 2016; Chandler, 2014; Harris & Martin, 2012; Healy et al., 2014; Healy et al., 2017; Lee et al., 2017; National Center for Education Statistics, 2019; Sato et al., 2017; Shape of the Nation, 2018; Zhang et al., 2017). The framework for evaluating programs may need to be revised (Seale, 2016). The design and implementation of these programs may build the students' success to feel confident at the beginning of their teaching career. For example, pre-service teacher programs have been suggested to be designed with more flexible learning schedules, include online formats, and stress best practices in developmentally adapted physical education (Sato et al., 2017). Sato et al. (2017) specifically address the needs of adult learners, including real-life learning experiences that provide immediate application to professional responsibilities.

Once hired, physical education teachers struggle to provide inclusive strategies for students in the general physical education programs and developmental adapted physical education (Rizzo, 2013). Rizzo (2013) suggested that the number of students identified with motor deficits and behaviour intervention plans challenges teaching professionals. Individuals with disabilities have unique demands that are ever-changing depending on the student's specific individualized education plans and service setting. These demands demonstrate teachers' need for content knowledge and expertise in special education (Mader, 2017; Rosenzweig, 2009). Special education, specifically developmental adapted physical education, has struggled to overcome significant and persistent personnel shortages across North America over the last decade (Center for Public Education, 2020; Dewey et al., 2017; National Center for Education Statistics, 2019; National Center for Education Statistics, 2018). Therefore, as university faculty and curriculum

developers expand inclusive practices and teacher training in developmental adapted physical education, it is necessary to gain teacher perspective on competencies needed to effectively address the demands of students who qualify for developmental adapted physical education services through the individualized education plan process. By doing so, teachers could increase self-efficacy in the developmental adapted physical education classroom, and universities may provide more relevant curricula for teacher training programs.

Online Programs in Developmental Adapted Physical Education

Online learning has established a valuable place in education by providing flexible and creative experiences for students (Duncan & Barnett, 2009). Holzweiss et al. (2008) examined the perceptions of master's students regarding their best learning experiences in an online format. This initial study showed that graduate students learn using the same instructional tools as undergraduates but desire a deeper level of learning that requires more instructional planning. The graduate students expressed that their best learning experience occurred when instructional technology was blended to create independent and collaborative knowledge. Benefits were also experienced when faculty were engaged and timely, positive interaction with peers through collaborative assignment design, and students were given personal responsibility through quality communication and clear expectations (Holzweiss et al., 2008). Holzweiss et al. (2008) suggestions for further research indicated a need for effective instructional design, various means of establishing a learning community, and multiple types of reflection for education learning throughout the curriculum. While this research looks primarily at online learning, developmental adapted physical education teacher training and professional development can be learned from this data. However, with the complexity of developemtnal adapted physical education and the

various students that teachers encounter, there are unique challenges when creating an online course curriculum in developemental adapted physical education.

Sato et al. (2017) investigated in-service teachers' experiences while completing adapted physical education online graduate courses. Three themes emerged from the qualitative inquiry narratives in the case study: (a) instructor communication, (b) bulletin board discussion experiences, and (c) assessment experiences. Graduates stated that their experiences improved when they felt the instructor was willing to help and cared about the students through clear assignment instructions and prompt email replies (Sato et al., 2017). Participants in this study also believed discussion boards helped increase social interactions; however, they had concerns with the quality and timeliness of the posts. Finally, Sato et al. (2017) uncovered that many students struggled to complete the assessment portion of the courses, which required evaluation of students with disabilities as part of the state endorsement. Many participants found the online instruction format difficult to understand when analyzing data and reading charts for scoring and interpreting the assessments, which led to frustration and incomplete assignments (Sato et al., 2017). Therefore, this highlights the complex and unique curriculum content necessary for an online developmental adapted physical education program to ensure teachers can demonstrate the skills and knowledge to meet the demands of teaching students with disabilities through assessment, lesson planning and implementation process.

Research in developmental adapted physical education teacher training programs with the online format is not prevalent. This gap in the research demonstrates a need for further investigation into how graduate students learn best, what tools and strategies meet the needs of graduate students, and success that is critical for self-efficacy in teaching all students, specifically students with disabilities. Most of the research up to this point has been based on the

specifics of the online format rather than on the experience of the students enrolled in these programs. The data are essential as they also show the demand for successful programs and the growth of online programs.

The online learning format provides greater availability and variety of classes, access to highly qualified teachers, and addresses limited space or room scheduling conflicts; it also shows students, on average, complete degrees at a lower rate than traditional or blended formats (Lederman, 2018). In a National Online Survey Report (NOSR) by Noel-Levitz (2018), students list a 77% satisfaction rate with online courses. The primary reasons students sought online instruction included additional courses unavailable in their areas, the convenience of flexible programming, and the ability to fit education into their work schedule (Noel-Levitz, 2018). Researchers have examined the mode of delivery for post-secondary programs and reported the benefits of the online format compared to face-to-face delivery (Heap, 2017). Heap (2017) suggests online delivery's benefits include flexibility, choice of the learning environment, lowered costs, being more disciplined, and choosing programs.

Areas of concern for students in online programs were the lack of personal support from instructors and the lack of interaction with peers in the classroom (Noel-Levitz, 2018). Often, the student who enrolls in online classes does so because full-time enrollment in the classroom face-to-face instruction is not possible (National Center for Education Statistics, 2020). Healy et al. (2014) explored teacher perspectives on the perceived benefits of online adapted physical education programs. The teacher-response themes reflected flexibility, increased learning opportunities, and the community of learners as benefits of online developmental adapted physical education courses. The learners reported a lack of a relationship component in the community of learners and a lack of face-to-face sharing of ideas and collaborative work. This

research shows that the primary concern of online students was the limited interactions between instructors and students. The decreased interactions between peers can adversely affect student success in the program (Healy et al., 2017). Given the concern for lack of social interaction, the satisfaction rate with courses continues to draw students to enroll in online classes. The National Center for Educational Research (2020) found that graduate students are more likely to indicate that their online experience was better than face-to-face, and 42% of students preferred online instruction. Students also reported the importance of their voices being heard in an authentic process of the student-first approach in developing programs (Bourke & MacDonald, 2018). These concerns again show the need to construct programs that lead to academic success and assist graduates in building the skills and content characteristic of a successful teacher.

In a descriptive profile, Zhang et al. (2017) found that 31 colleges and universities offer a master's degree or license equivalent for Adapted Physical Education. These schools are in 20 United States, and each program contains specific characteristics for its state or region. Of those programs, only two were exclusive online programs (Zhang et al., 2017). As the demands for online learning continue to increase, Nichols et al. (2018) analyzed graduate programs in developmental adapted physical education and reported that 39 graduate program offerings contained a range of 2-9 courses. These programs were described as face-to-face, online, and blended formats. All 39 programs have practical field experience, but the experience locations take place in various settings, and the required practical experience hours working with individuals with disabilities varied considerably between programs. Two courses listed in the study were reported as fully online programs (Nichols et al., 2018).

Further investigation into fully online programs, along with the findings of this study, may suggest a pathway to developing programs to help in-service teachers feel more confident in

teaching students with disabilities. Table 1 in the first column shows the total number of undergraduate and graduate students enrolled in public universities in the United States in 2012, 2017, 2018, 2020, and 2021. The second column shows the percentage of undergraduate students taking at least one course online, the third column shows the percentage of undergraduate students taking an entire program online, the fourth column shows the percentage of graduate students taking at least one course online, and finally, the fifth column shows the percentage of undergraduate students taking an entire program online.

Table 1

Enrollment Numbers in United States Public Universities

Year	Students enrolled in public universities	Undergraduate	Undergraduate	Graduate	Graduate
		1 online course	all online courses	1 online course	all online courses
2012	21 million	14.2%	11.0%	7.8%	22%
2017	19.7 million	19.5%	13.3%	9.1%	28.9%
2018	22 million	20.0%	14.0%	9.0%	30%
2020	*15.9 million	*75%	*44%	*71%	*52%
2021	4.4 million	61%	28%	56%	40%

Note. The Center for Educational Statistics (2022). *Reported statistics could have errors due to Covid 19 restrictions; data compiled from the National Center for Educational Statistics (2013, 2018, 2019, & 2020, 2021).

The data comparison shows an increase in students enrolling in online classes at the undergraduate and graduate levels. What is interesting is the decrease in the number of overall students reported to be attending universities. The percentage of those students attending universities, at the undergraduate and graduate levels, continues to increase, with the exception of data marked for possible errors due to COVID-19, even though the total number of students

seems to be decreasing. This increase in students and documentation of concerns show a need to determine program planning that meets the needs of online students. Graduate study and additional licensures via online programs have become more common in the university and professional development settings (Lee et al., 2017). Understanding the reason for these increases in the number of students taking courses in the online format for class may lead to better meeting the needs of students as more programs are developed and accredited.

Professional Development in Developmental Adapted Physical Education

Physical educators must have access to practical guidance and professional development when teaching students of all abilities in school-based physical education and adapted physical education classes (Morrison & Gleddie, 2019). Scherff (2018) suggests a distinction between professional development and professional learning. Professional learning encourages participants to take responsibility, actively engage in real-life situations with peers, and align content standards. Demchenko et al. (2021) suggest training physical education teachers in three stages aimed to (a) ensure students have positive attitudes and values towards identification and internalization of inclusion that correspond to their readiness to take on professional activities, (b) help the student acquire scientific and theoretical foundations of inclusivity through inclusive curriculum, projects, reports, meetings, and conferences (c) involve students in real-life situations where they could implement the specific task and display professional teaching methods. The research results proved the effectiveness of the developed model for future training and preparation of physical education teachers by including inclusive pedogeological content, methodology of inclusion, and teaching placements. Demchenko et al. (2021) suggested improving future teacher training by adding a multi-dimensional approach to inclusive physical education teacher training. This study showed that graduates participating in multi-dimensional

training had richer and more meaningful experiences in a developmental adapted physical education program. Armour et al. (2017) argue the core of professional development is the practice itself, which aligns with Deweyan's theory of growth through and from experiences. The practice should be dynamic, active, embedded with context, continuous, and reflective to ensure the contemporary needs of teachers are being met through learning. Analyzing these experiences in professional development could lead to programs that better meet the needs of in-service teachers of developmental adapted physical education.

Student Voice in Higher Education

Most students never get the opportunity to be included in the decision-making process within their universities (Thrill, 2019). Students can take on several roles in higher education, such as stakeholder, consumer, teacher, learner, and facilitator (Seale, 2016). Input and expectations can maximize students' potential to be leaders and experts in their fields of study. Seale (2016) identifies ways of engaging student input by empowering them to influence policies and practices which may benefit existing outcomes for student success. These strategies should include increased student feedback, decision-making, and empowering student agency of shared experiences. Experiences, values, opinions, beliefs, perspectives, and cultural backgrounds add rich content to the programs (Bourke & MacDonald, 2018). Integrating student voices in graduate program development informs policy and acknowledges student contributions that give a deeper understanding of the experiences of the graduate students in the program. There is limited research that directly reflects the voices of graduate students in a developmental adapted physical education program. The current study reflects graduate students' lived experiences during an online program. It aims to add their voices to potentially enhance the developmental adapted physical education license program at Bemidji State University.

Summary Statement

The literature review demonstrates how the history of laws and mandates builds the required foundation for school districts to serve all students with free and equal education, inclusive of all abilities. Under the Every Student Success Act, physical education is considered a subject in the "well-rounded education" language, and special education is a primary focus area for developmental adapted physical education services.

Relevant literature in special education, specifically developmental adapted physical education, has shown teacher storage over the last six reporting cycles. The number of special education professionals has decreased at a rate more significant than that of students identified for specialized motor services. Developmental adapted physical education programs leading to accreditation vary significantly throughout the United States, and the Society of Health and Physical Education of America, as a professional organization, is leading the way to nationalize the standards for effective practice for physical educators in the field of developmental adapted physical education.

Current literature examines evidence that pre-service teachers do not feel adequately trained to serve students with various special needs, and graduate students have many obstacles to acquiring additional accreditations. Online distance learning is rising for undergraduate and graduate programs, and many students prefer the online education format. Including student voices helps empower all stakeholders and inform institutions of more student-involved program development.

This study fills a gap in current research in physical education programs by seeking to understand the experience of graduate students in an online developmental adapted physical education program at Bemidji State University in Minnesota, United States. This work also

determined that the core skills and content standards of the developmental adapted physical education licensing requirements most benefited the participants as they reflected on their work in the classroom.

Chapter 3: Study Foundations and Design

"It is the job of the adult educator to move adult students away from their old learning and into new patterns of learning where they become self-directed, taking responsibility for their own learning and the direction it takes" (Knowles, 1984, p. 66).

Defining Lenses

For this study, Dewey and Knowles' theoretical lenses were selected for their focus on experience in education and adult learning theories. Creswell (2009) suggests that a theoretical lens could provide a more detailed explanation for understanding a phenomenon.

Dewey and Experience

Dewey's (1938) experiential theory of learning has a central theme based on the role of the teacher to craft and facilitate learning experiences to engage the students. The teacher is responsible for understanding the subject matter and having knowledge of the student's individual experiences to create a supportive environment for learning to evolve and grow through exploration and connection. Dewey does not believe that just putting facts into memory determines learning (Dewey, 1938). Secore (2017) summarized graduate student success as dependent on the teacher's ability to create meaningful designs authentic to real-world applications, keeping student-centred learning needs as the focus. Graduate students come to the learning experience with prior knowledge that allows them to scaffold and layer their new knowledge with the experiences they bring from understanding other situations (Monk, 2013). Calderon et al. (2020) suggested introducing a new design to teacher education and reducing students' uncertainty in teaching students with disabilities, proposing a blended learning approach that aligns outcomes, teaching and learning activities, and assessments in an interconnected format. The interconnectedness of the blended design may build on past

experiences, enhancing future practice while encouraging teachers to continue professional growth. The lived experiences in this study were analyzed and interpreted to uncover the interconnectedness of the core skills and content standards, hands-on teaching and learning activities, and the online format of the Bemidji State University's Developmental Adapted Physical Education licensure program.

The belief that genuine education comes about through experience does not mean that all experiences are genuinely or equally educative (Dewey, 1938). Dewey (1938) suggests it is somewhat easy to view learning as either meaningful and fun or what seems to be busy work and drudgery. This further indicates that it is even harder to imagine the engagement of the learning experience and the connectedness to that of future learning. These educative experiences are discussed in terms of the quality of the experience. Ensuring that experiences are included is insufficient to constitute a positive and lasting resource. The quality of the involvement has two aspects, according to Dewey (1938) an immediate element of agreeable or disagreeableness and a later, more reflective perspective understanding. Mis-educative experiences can also occur and potentially inhibit future learning (Mader, 2017). In the current study, graduate students were encouraged to reflect on past and current educational situations as a lens for their experiences in the online Developmental Adapted Physical Education Program at Bemidji State University.

Learning takes place in a social environment, is constructed between people and nature, and depends on the quality of that experience (Dewey, 1938). As Dewey (1938) understood, continuous learning occurs through interactions with teachers, peers, and surroundings. The interactions start with nature and evolve into socially constructed transactions between learners to build foundational intersections of their shared worlds. Dewey (1938) further suggests that as educators, we think about teaching our students to move confidently and comfortably within

their natural, social, and cultural world as intellectual individuals and valued members of the larger whole.

When we look through a Deweyan lens for research, key aspects of education emerge (Williams, 2017). The key elements may include active engagement, where students learn through hands-on projects, peer discussions, and the natural environment to build on existing and future experiences (Williams, 2017). Williams (2017) suggests reflecting on observations, reconstructing understandings, creating a meaningful context for learners, and personal and social growth through collaboration with other learners are found in environments preparing learners for an expanded sense of the world. Dewey (1938) explains that a valuable educational experience is active and derived by the process of interpretation and the development of meaning in the experiences. The nature of the interpretive process allowed the researcher to engage with the participants actively and strive to understand their thoughts and feelings about their lived experiences in the developmental adapted physical education program with their current situations. The interactions allowed the researcher to engage in dialectic connections and reflection while interpreting gatherings. According to Dewey (1938), the educative situation is as meaningful to the researcher as to the participant.

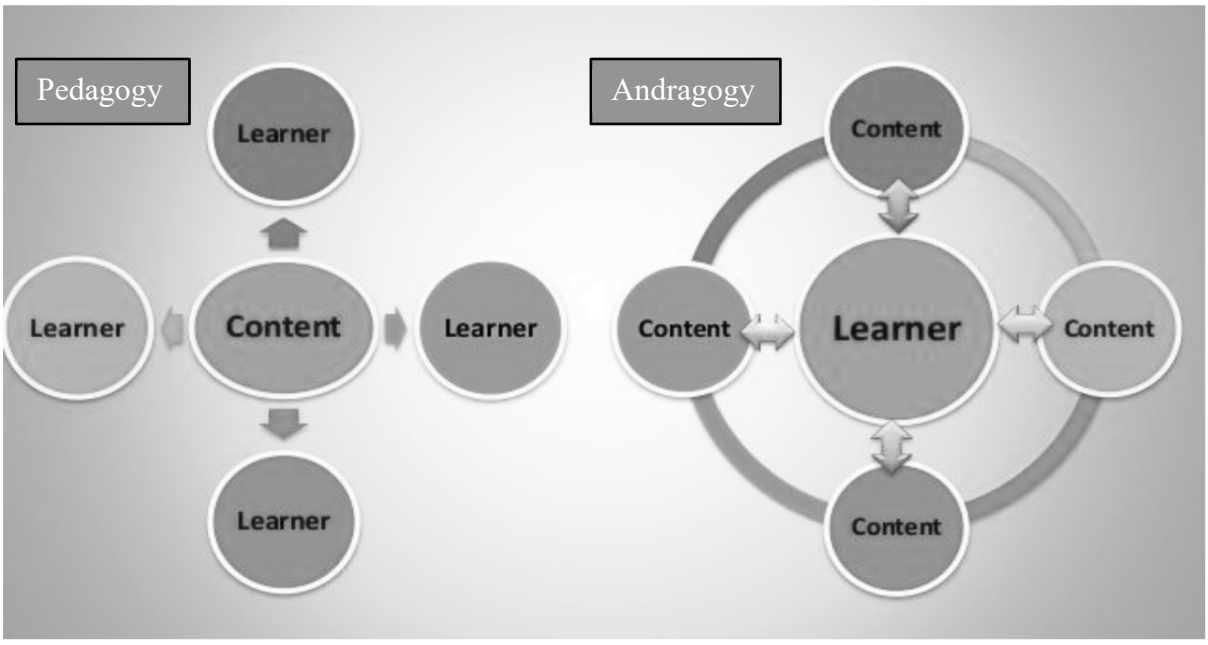
The experiences in the current study were analyzed to understand and interpret how graduate students' past lived teaching experiences in the general physical education setting, along with specific program content and added field experience, contributed to their core competencies of teaching developmental adapted physical education. The second focus of the research lens included Knowles' theory of andragogy and how the notion of adult learning theory intertwines with Dewey's prior educational experience and continual growth theories.

Knowles and Andragogy

The vast educational gap between the adult and the young student does not allow the inexperienced learner to fully participate in learning (Dewey, 1938). Knowles' (1970) theory aligns with Dewey's (1938) philosophy and educational pragmatism in the ideas of prior experience and meaningful connections. Based on his andragogy concept, Knowles' adult learning perspective was used as the researcher's second theoretical framework. Most simply stated, andragogy refers to understanding the science, method, and practice of teaching adult learners and takes up adult learning theory and how adults learn differently from children (Merriam, 1998). This theory is not in contrast to pedagogy, but Knowles (1970) envisioned an educational continuum where the student and the teacher work in relation to empowering the student to participate more in the curriculum and determine learner outcomes. Figure 4 shows the relationships between the learner and the content of the material in pedagogy and andragogy. In pedagogy, the learner is surrounded by the content and acted upon in a one-directional structure (Knowles, 1970). In Andragogy, the learner interacts with the content, possibly choosing when and how to engage with materials (Knowles, 1970). As depicted in Figure 4, learning content is perhaps interrelated and surrounding the learner rather than content independently interacting with each learner. This allows the learner to be much more independent and part of the educative process. The developmental adapted physical education program has been structured with the andragogy model with the intent of graduate students to experience the outcomes in a hands-on practical setting. This research identified how the graduate students experienced this model and if content introduced as part of the Minnesota Standards of Effect Practice met their needs when teaching students with disabilities.

Figure 4

Learning Relationships between Pedagogy and Andragogy



Note. Adapted from *Pillars and Assumptions* (Knowles, 1970).

Knowles (1984) identified the different ways adults learn by outlining five assumptions or pillars of this theory:

- Self-concept moves from being dependent to independent or a more self-directed human being. Adults assume the primary responsibility for their learning.
- Accumulation of a growing body of experiences that becomes a rich resource for learning. The adult's life experiences are an invaluable resource.
- Readiness to learn becomes increasingly orientated towards their social roles' developmental tasks.
- Time perspective changes from one of a postponed application of knowledge to one of immediate application.

- Assumptions are defined by the learner, and respect for the learner is shown as part of the educational process.

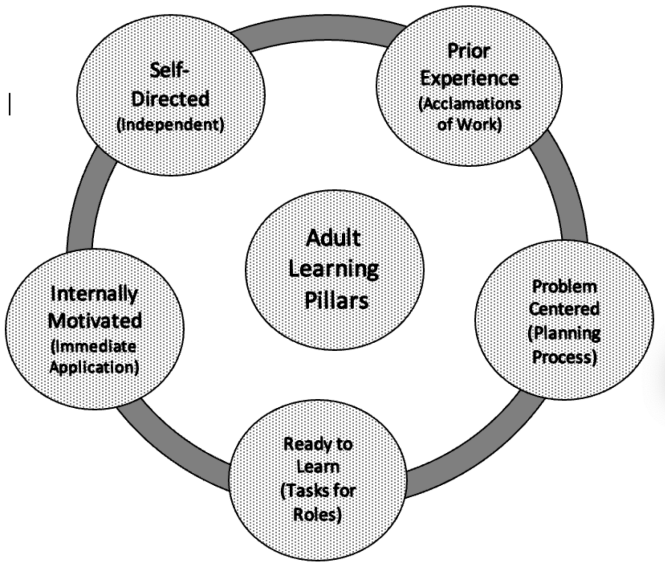
These assumptions suggest that instead of the traditional relationship between student, teacher, and material, adult learners participate fully in their education by influencing curriculum and learning objectives (Bartle, 2014).

Aligning with the assumptions, Knowles (1984) offered four implications for instructional practice when teaching adult learners: (a) engage adults in the planning and evaluation of their instruction, (b) provide adults with practical experiences (including mistakes) as the basis for the learning activities, (c) adults are most interested in learning subjects that have immediate relevance and impact on their jobs or personal lives and, (d) adult learning is problem-centred rather than content-oriented. Figure 5 introduces the implications for learning in the adult learning model. These include (a) prior experience: the graduate students are in-service teachers with prior work experience in physical education and developmental adapted physical education; (b) problem-centred: teaching students with disabilities poses challenges unique to education and the individual; course assignments are centered around understanding and implementing strategies based on the needs of the students in their teaching classrooms; (c) ready to learn: most graduate students have reached a point in their career where either the administration has recommended or they have their desire to add the developmental adapted physical education accreditation to their K-12 license; (d) internally motivated: high numbers of students moving between buildings and districts and more students with special needs in the general education classroom foster immediate action for learning and the graduate student to be much more intrinsically motivated to learn the materials needed to serve the students in their classrooms; (e) Self-directed: as is the nature of teaching physical education and developmental

adapted physical education, teachers tend to work more independently, leading to more self-directed learning.

Figure 5

Knowles Adult Learning Assumptions and Implications for Instruction.



Note: Adapted from (Knowles, 1970)

The developmental adapted physical education program was structured with Knowles learning assumptions, with the intent that graduate students experience the content hands-on in a practical setting under the guidance of a mentor developmental adapted physical education teacher. The current research included reflections on how the graduate students experienced these learning assumptions and which core content standards, introduced as part of the Minnesota Standards of Effect Practice, met their needs when teaching students with disabilities.

Knowles' theory aligns well with the postmodern approach to learning, founded upon the assertion that there is no one kind of learner, one goal for learning, one best way that learning takes place, or one specific environment in which learning occurs (Kilgore, 2001). According to

Chan (2010), adult learners need more than a passive knowledge transfer. Furthermore, students need to be actively involved in the learning process to connect their knowledge, make sense of the learning, and apply it to their real-life situations (Chan, 2010).

According to Smith (2017), online learning can benefit from Knowles' teachings because students often receive less guided instruction and supervision in the online environment. This differentiation of preparation, in turn, orients learning shifts from subject-centred to performance-centred (Leong & Omwami, 2018). It requires teachers to facilitate learner-centred work such as discussions, collaborative activities, and community involvement to increase active engagement and thereby increase the meaningfulness of outcomes to adult learners (Leong & Omwami, 2018). The outcomes of these learning opportunities allow adult students to share their previous knowledge and individual situations (McGrath, 2009). The central concept of andragogy is that the lecturer or teacher does not possess all the knowledge (Knowles, 1984). The students are encouraged to relate content and practical work in their classrooms using lived experiences in a two-way teaching and learning process (Chan, 2010). Knowles's (1998) theory encourages a classroom teaching strategy where the instructor and student share in the creation of content versus a one-way flow of information. This shared knowledge strategy lends to the interpretive inquiry process in research because, in interpretive inquiry, knowledge is co-created between the researcher and the participant to gain new insight into what was previously unknown (Ellis, 2009).

In creating and developing the course content and format for the online developmental adapted physical education program at Bemidji State University, both andragogy and educational experience theories were used as a basis for online instruction and reflections on teaching experience. It was evident to the researcher through professional relationships and networking

with general education teachers throughout Minnesota that they needed an approach to developmental adapted physical education that produced immediate and relevant applications to their day-to-day requirements for their students and the demands of the teaching position. The wide variation in professional experience each physical education teacher had in their background was also noted.

In this study, the researcher acknowledges Knowles' (1984) assumptions of the characteristics between pedagogy and andragogy. These assumptions were implemented when designing course teaching strategies, questioning, discussions, and practical experiences as a tool to provide a framework for the adult learning experience. This study aimed to understand the graduate student experience in an online developmental adapted physical education program after exiting the program.

Researcher's Stance

As a 28-year physical education teacher with a developmental adapted physical education licensure license and a contracted developmental adapted physical education licensure program reviewer for the Professional Education Licensing Standards Board in Minnesota, I acknowledge my privilege as an educated, multiracial female in the research world. I initiated the program research, developed planning tactics, and implemented the standards for effective teachers for the program in special education and developmental adapted physical education licensure for Bemidji State University. I instructed the content-specific courses and advised the graduate students in the developmental adapted physical education licensure program at Bemidji State University; however, I did not pretend to understand the experiences of the graduate students in an online developmental adapted physical education licensure license program or the grade K-12 students and families they serve. Working on research in the field of developmental adapted

physical education and special education and wanting to align my thinking with an individual with disabilities does not mean I can fully comprehend the worldviews of a person with disabilities. Guba and Lincoln (1994) suggest the constructivist paradigm as a set of basic beliefs where multiple, and sometimes conflicting, social realities are ever-changing as knowledge is created through relationships and interactions. My worldview aligns with constructivism, as I see reality constructed through learning and teaching interactions, relationships, and the experience each brings to the research. The *truth* of the study was an agreement between the participant and the researcher, where the researcher works as an instrument to gain newly discovered knowledge. The notion of objectivity is entirely impossible; instead, the research serves as a path for representing multiple voices. Participants and the researcher acted as guardians to newly born questions, nurturing and guiding them to grow and evolve to answer the research questions. Knowledge was gained through the voices of both the participants and the researcher, and the validity of the findings was a consensus of both parties in the research relationship as to what can be known through inquiry (Guba & Lincoln, 1994).

Understanding my perspective as it relates to developmental adapted physical education has been one of this study's most significant learning constructs. Dewey (1938) would agree that bringing personal experience to the study as an educator aligns with a constructivist worldview and interpretivism, deepening passion for this work. Nature shapes our reality through human experience and human nature. There are multiple realities of understanding, and each can bring insight into the matter. The relationships we create foster meaningful interactions between individuals and their shared world. This research takes the human experience of multiple participants and shared meaning by integrating the graduate student's voice into an online developmental adapted physical education online licensure program. Interest in the participant's

experience and sense-making of this experience situates one in the constructivist paradigm with a commitment to hermeneutics rooted in interpretivism as the approach to research (Ellis, 2009). Guba and Lincoln (1994) suggest that the constructivist paradigm works under the assumption that multiple socially constructed realities complete the individual's passion and connection to the world and aim to produce a reconstructed understanding that is considered to be more informed and sophisticated than the previous understanding. Denzin and Lincoln (1994) define paradigms as human constructions, first indicating where the researcher is coming from and then as a construct embedding meaning in the data. Lincoln and Guba (1985) explain that a paradigm comprises four elements: ontology, epistemology, methodology, and axiology. The following sections demonstrate the beginning understanding of the research in conjunction with the paradigm four elements described by Lincoln and Guba (1994).

Ontology

The interpretive paradigm rejects one absolute or single reality and invites individuals to construct multiple realities of understanding (Guba & Lincoln, 1994). Under these multiple realities, the researcher acknowledges an ontological shift from realism to relativism, where *truths* are intangible and mental constructions are held by the persons or group (Guba & Lincoln, 1994). The ontology of interpretivism is concerned with how we make sense of the investigation and the belief system of the research. The individual's reality was essential to the research since participants had various educational backgrounds, teaching experiences, and levels of online course competencies. These differences were scaffolded with the core skills and content standards developed in the Bemidji State Online Developmental Adapted Physical Education Licensure Program, allowing the researcher and the participants to bring their *truths* to the study.

Furthermore, each participant has brought their own *truths* to the research by sharing their experiences of the developmental adapted physical education program.

Epistemology

Kivunja & Kuyini (2017) suggest that epistemology describes how we come to know something in research. The epistemology of constructivism is transactional and subjectivist, where findings are created and constructed by the nature of lived experiences between the researcher and the participant (Guba & Lincoln, 1994). This knowledge is informed through the co-constructed relationship between researcher and participant as they explore a shared understanding of the experience (Hatch, 2002). The understandings are grounded in real-world phenomena that are discovered through interactions between the participants and the researcher. When considering epistemology, questions such as whether knowledge is acquired firsthand or personally experienced must first be addressed. In this study, the participants shared their experiences while learning course contents and practical teaching with the researcher. The discovered knowledge was shared between the knower and would-be-knower in a relationship that fosters knowledge as justifiable and evidence of the nature of knowing (Schwandt, 1997). During the research, the graduate students' realities were gathered through pre-interview activities (PIA) and semi-structured interviews to understand their experience in an online developmental adapted physical education licensure program.

Axiology

Axiology refers to the ethical considerations when conducting qualitative research in the constructivist or interpretive paradigm (Kivunja & Kuyini, 2017). Hermeneutics entails awareness that each person has a standpoint, horizon, perspective, fore-structure, or prejudice and that dialectical engagement is needed to support a "fusion of horizons" with others (Ellis et

al., 2013; Smith, 2010). A fusion of horizons happens through a process as we move from our pre-understandings to a place of shared understanding. In this research, the fusion of horizons was evident as the researcher, developmental adapted physical education teacher, and an instructor in a teaching program, moving from my experiences in a program to an understanding of how the graduate students experienced the current program content and delivery. These shared understandings build a more informed and sophisticated understanding of the developmental adapted physical education program than the previous solo knowledge of the researcher.

Methodology

Constructivism is a philosophical paradigm using hermeneutic inquiry as a methodology as it aims to understand how learners construct knowledge and understanding of their surroundings (Sousa & Bradbury, 2022). Ellis (2013) explained that the key components of the constructivism framework in educational research are hermeneutics and dialectic process. Hermeneutics provides the detailed process of interpreting data and the dialectic conversations that emerge from the learner and researcher (Ellis, 2013). This process involves a consensus on reconstructing data from various experiences that are more informed and sophisticated (Guba & Lincoln, 1994). Qualitative research attempts to study things in their natural setting to make sense of or interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 1994). Merriam (1998) explains "qualitative research as an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomenon with as little disruption of the natural setting as possible" (p.5). Merriam (1998) describes the key philosophical assumption of qualitative research as "interest in making an effort to understand the meaning people have constructed of situations" (p.6). To fully understand these

understandings, a demographic survey, pre-interview activities, semi-structured interviews, and follow-up meetings were utilized in this research as the primary instruments for data collection.

The graduate student experiences in the developmental adapted physical education licensure program added strength and richness to the study's findings by giving them a voice through the interviews used in gathering data. The data was co-constructed between the researcher and graduate students, shaped by lived experience during the program, which promoted the researcher and participants' voices to be equal. This negotiation honoured individual values and previous experience. Each participant in this study brought a prior understanding of their realities from their varied teaching backgrounds and diverse exposure to the world. Personal involvement as the researcher was also an essential component of the research, as my expereinces as a developmental adapted education teacher and evolving existence are part of the relationship informing the findings.

Research Design

Hermeneutics

Hermeneutics as a methodology draws on an interpretative approach as a process of understanding (Smith, 2010). The three central themes in hermeneutics are interpretation, whole-part relationships, and language (Ellis, 1998). Situating the research in hermeneutics begins the interpretation process of uncovering questions in an indirect method. Smith (2010) explained,

> Hermeneutics always stands in tension and often conflicts with the desire to secure and fix meaning. However, the aim of hermeneutics is never to spin one interpretation after another in an endless play of possibilities. Instead, the purpose is to lift the burdensomeness of events, texts, and sayings that pertain to when the original question that called them to be has been forgotten (Smith, 2010, p.177).

This quote expresses the critical understanding that the original question or questions begin an investigation of language, tone, and shared communication, never losing the meaningful intentions of the participant during the interpretation or analysis process. The study used the process outlined by hermeneutics to guide the researcher and provide space for participants to share their experiences and evoke images and memories about the demands of teaching students with disabilities and the contributions of the developmental adapted physical education program. Hermeneutics was employed during the inquiry to uncover the themes through interpretation, whole-part relationships, and language.

Interpretation. Using inductive thinking and inquiry to explore the participant's experience helps the researcher better understand the behaviours and evoke a way of thinking hermeneutically (Ellis, 2009). Determining the participant's experiences of a particular situation through the interpretation of data, which is known as ‘uncovering,’ leads to a new and more informed perspective for the researcher. Hermeneutics requires researchers to work holistically and to interpret the data, not in categories but by elevating each participant's story of language and experience (Ellis, 2018). This interpretation attends to the meanings behind the information of others’ expressions as a creative process (Ellis, 2018). Unlike other theories, hermeneutics provides a method by which interpretation is guided. It acknowledges the possible bias of the researcher and breathes a new understanding of the shared meanings (Ellis, 2018). The graduate students in this study shared their stories, thoughts, and feelings about the developmental adapted physical education program with the researcher through an open and inviting process of data gathering.

Whole-Part Relationships. To understand the parts of the phenomenon, researchers must first look at the whole; in turn, to understand the whole, they must see the parts as

individual pieces (Patterson & Williams, 2002). The whole-part relationship requires a shift from the macro to the micro perspectives in a back-and-forth motion (Ellis, 1998). This shift or movement in questioning aligns with the theory by providing an entry point to the hermeneutic circle (Ellis, 1998). The researcher must understand the entire phenomenon and its parts to interpret the gained new meanings (Ellis, 1998). For example, it is necessary to understand the sport of curling to grasp the experience of a match or game. In turn, you must know the terms of curling and the strategies of situations to interpret the play. The curling terms alone would make no sense. House, hog line, hack, broom, and slider need to have the context of the whole game for deeper understanding. We gain a richer experience of the sport as we learn the whole and add meaning to it through the parts. Interpretive research grounded in hermeneutics follows this process founded in the spirals of the dialectic movement, authentically making sense of what is found in interpretations instead of working toward solving specific problems.

This study employed a holistic examination of the developmental adapted physical education licensure process as an online program and the graduate students' real-life demands before, during, and after the developmental adapted physical education program courses. In this study, the ‘whole’ is the job requirements and teaching demands on the participants after gaining the developmental adapted physical education licensure. The ‘parts’ consist of the course content, practical experiences, and delivery of the materials aligned to attain the licensure.

Language. Language plays a vital role as a central theme and a pivotal point in human understanding of shared meanings for words and concepts. The format can be spoken, written, drawn, or conveyed in other expressive means to gain a more sophisticated understanding (Ellis, 2009). In this study, the researcher examined the language phenomenon to lift the burden between what is said concerning attaining an adapted physical education license and what is

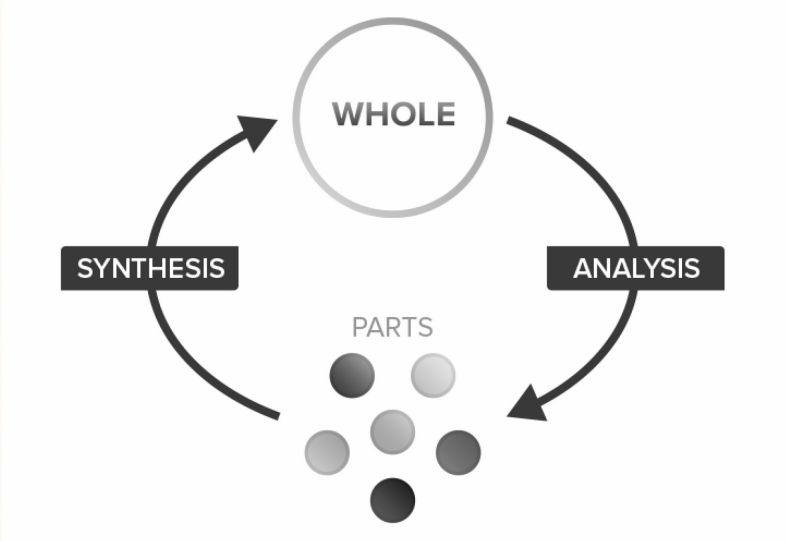
meant regarding the preparedness to use that license in real-life student situations. Even though the participants have spent two years navigating the online developmental adapted physical education program and sharing experiences, Smith (2010) suggests, "There is always something new to be learned, even those with whom we may feel familiar, as we learn to listen to their story, their history" (p. 109). In this hermeneutic framework, students were afforded space and time to share this language exchange during our interviews The researcher revisited the accounts and artifacts gathered through shared discourse after the initial data were transcribed with follow-up meetings, using inductive thinking and inquiry.

The Hermeneutic Circle in Analysis

The hermeneutic circle is a metaphor that describes the interrelationship between the parts and the whole and how the understanding of each relies on the other (Patterson & Williams, 2002). Following hermeneutic principles, the researcher enters the circle with the understanding that there is no natural starting point or endpoint. This entry must start with genuine, honest, and open questions that tend to be simple and do not imply an answer but the complexity of life's wholeness (Ellis, 1989). Figure 6 depicts the circular interpretive process where the whole is analyzed into specific parts, and then the understanding of parts is integrated back into the knowledge of the whole. In the hermeneutic circle, interpretations are continually revised and refined between the dialogue that occurs through data gathering, specifically of the parts and the whole of the research study.

Figure 6

Hermeneutic circle



Note. Adapted from Timmers (2015).

The hermeneutic circle constitutes a cycle or process to help inform the researcher to make sense of the data. The process is dynamic in nature and allows the researcher to continually draw from what they have gleaned along the arc to inform new understandings (Gadamer, 1992). The forward arc or analysis phase is the fore-structure. This phase is where preconceptions, pre-understandings, and prejudices are used to interrupt meaning (Gadamer, 1992). In the backward arc or synthesis of the hermeneutic circle, a re-examination of the data and the gaps, contradictions, and inconsistencies are checked and re-checked, following in the spiral and unfolding of the spiral in a new understanding of the data (Gadamer, 1992). This spiral fosters the creation of a helix that, with this back-and-forth motion, enables the research to be informed by the knowledge gained in previous loops (Ellis, 1998). As Packer and Addison (1992) stated, Heidegger's notion of fore-structure states that we understand without the context background.

In contrast, Gadamer (1992) suggests that "legitimate prejudices" are the presuppositional meanings integral to new questioning, without which we cannot make meanings of new ideas. These two examples of fore-structure do not cause intentionality to do harm or skew meanings by individual construction, as in blind prejudice (Parker & Addison, 1998). The fore-structure considered in this research stems from my experiences obtaining a developmental adapted physical education licensure, many years of teaching developmental adapted physical education licensure, and advocacy in the developmental adapted physical education field.

When entering the hermeneutic circle, the researcher must pose a simple but open question that allows the inquiry process to begin (Ellis, 1998). The questions in this study were constructed for the semi-structured interview based on the core skills and content standards (Appendix A), the components of the online delivery format of the developmental adapted physical education licensure license (Appendix B), and graduate students' demands of teaching students with disabilities. Participants in the study address topics in responses through the researcher asking the right questions with the appropriate language. Ellis (2009) argues that the language used in questions can enhance and limit understanding and interpretation.

Fusion of Horizon and Prejudices. The worldview of a topic establishes a person's fusion of horizons (Gadamer, 1992). The participants in the study constructed their own experiences and understandings of the phenomenon being studied, and the researcher aims to develop a more informed interpretation of the participant's worldview. The fusion of horizon is the scope of what is known by the participant and what is hoped to be known by the researcher. The boundary of where these experiences come together is ever-changing, allowing the uncoverings to be exposed in understanding (Patterson & Williams, 2002). As the dialectic process expanded through the open-ended questions, the understanding of the participants and

the researcher built a new horizon of the job requirements and teaching demands on the participants after gaining the developmental adapted physical education licensure. The space created between the previously known and the newly discovered realities during the process also confronted the researcher's possible prejudices in broadening the horizon parameter.

Interpretive Inquiry

In qualitative research, interpretive inquiry and hermeneutics work in harmony (Magunga, 2015). Hermeneutics informs the process of interpretive inquiry by providing the philosophical foundations, and interpretive inquiry serves as the methodology to build the structure of the study. Throughout the entire process of interpretive inquiry, the researcher used hermeneutic methods, concepts, and strategies (Ellis, 1998). The hermeneutic loop can be used in each stage of the research. As a methodology, interpretive inquiry aims to understand a situation, text, or person in a specific context, acknowledging that findings are informed by language, personal perspective, and shared meanings (Ellis, 1998). Hermeneutics is used to seek the meanings of responses to questions posed in the interview of the interpretive inquiry. The dialectic collaboration of the interview enables the researcher to fulfill the obligations of hermeneutics. When using interpretive inquiry, Ellis (1998) emphasizes that the researcher needs to possess the skills to understand the background and language of the participants that may shape their answers. Drawing on participants' understanding, interpretive inquiry seeks to acknowledge the fore-structure of bias, prejudices, and assumptions while gaining a new sense of their experiences. The interpretive inquiry follows a specific process of a simple, flexible, and practical entry question that sets up the trust and space for elaboration, leading the researcher an opportunity to gain insight into the meanings behind the participant's answers and finally analyzing the findings in comparison with previously known information (Magunga, 2015).

In this study, hermeneutics aided in the research design. The interpretive inquiry process guided the questions and methods by engaging in continued reflections and revisions from knowledge gained in the hermeneutic circle's forward and backward arcs, leading to new uncoverings. The questions centred around the experiences of an online developmental adapted physical education licensure program core skills, content standards, and online delivery format for the graduate student and the contributions and impact related to demands of teaching students with disabilities.

Research Site

The online developmental adapted physical education licensure at Bemidji State University is a one-of-a-kind program in Minnesota and throughout the nation. The program was designed for graduate students with limited access to educational opportunities due to location or inflexible schedules. Following the Professional Education License Standard Board core skills and content standards in special education and developmental adapted physical education during licensure, the program requires graduate students to hold a Minnesota grade K-12 physical education license and uses a rigorously accelerated online format. These students were under the direction of a Minnesota-licensed developmental adapted physical education professional during all coursework and field experience. Courses, assignments, and assessments followed the natural progression of the grade K-12 school year in pre-referral, referral, assessment, individualized education plan development and implementation, teaching strategies and program development, reporting and individual education plan review, and finally, community-inclusive strategies for lifetime recreation and activity. The program prepared the students for the Minnesota Teacher Licensing Examination in Special Education in developmental adapted physical education licensure.

Program Delivery Model

The Plan of Study is outlined in Appendix C. The following section provides a descriptive overview.

The developmental adapted physical education program consisted of 18 credits in special education (3 credits per course), content area reading, and inclusive physical education content. The student registers for one three-credit class per semester with one additional course if they have not completed the content area reading requirement as an undergraduate. The format of online learning was structured in a cohort model. Students started the program as a group and finished five semesters, or 575 days later, with the same cohort group—the cohort model aimed to increase peer interaction and promote professional networking after program completion. Graduate students completed the online program with nine credit hours in special education as a knowledge base for the second nine credits of developmental adapted physical education content and teaching strategies. The courses follow curriculum guidelines included in the Professional Education Licensure Standards Board required key assessments. The key assessments demonstrate core competencies of the core skills and standards for effective teaching in developmental adapted physical education. Students licensed in physical education before 2014 must also take a content area reading course to align with Professional Education Licensing Standards Board requirements in literacy. A Developmental Adapted Physical Education Program kick-off meeting occurs through Bemidji State University to further support and guide students through the program. A second meeting is held after the second semester as an advising session. Students must complete a field experience in each service level, ages 3-5 pre-k, grades k-5, 6-8, 9-12, and ages 18-21. Professional Education License Standards Board requires no specific number of hours in each service level; however, the complete program consists of 115

hours under the supervision of a licensed developmental adapted physical education specialist. A program plan of study, field experience logs, key assessments, and a journal of community engagement and relationships are part of the student's documents to complete the program.

During the program, graduate students are assigned an academic advisor who serves as their university supervisor during practical clinical experiences. The advisor works directly with the graduate student to review admission documents, complete program orientation, guide course registrations, and develop the plan of study. Initial triad meetings are conducted with the graduate student, mentor, and advisor to set goals for them during the program and identify gaps in prior knowledge. The advisor also works closely with the graduate student during special education courses and developmental adapted physical education content instruction. The developmental adapted physical education team comprises people from five departments: (a) The Department of Human Performance, Sport & Health faculty; (b) The Department of Professional Education faculty; (c) The Center for Extended Learning faculty; (d) The Office of Graduate Studies; and (e) Professional Education Licensing faculty. Upon the program completion, the developmental adapted physical education advisor's responsibility is to conduct a second triad meeting between graduate students, mentor/ cooperating teacher, and program coordinator. The triad meeting reviews the goals the graduate student and mentor set and identifies strengths and areas of recommended continued growth. A triad meeting summary letter is created with quotes and stories and then shared with the graduate student and the mentor as the University Supervisor's letter of recommendation for program completion. The final program approval documents are signed by the developmental adapted physical education advisor and are sent to the licensing agent for submission to the Minnesota Department of Education. It should be noted that graduate students invited to the study have fully exited Bemidji State University's system.

Ethical Considerations

The research was aligned with the Alberta Research Information Services (ARISE) system, which monitors and reviews research conducted at the University of Alberta. Creswell (2009) proposed ethical standards for conducting research by outlining a strict process that must be followed before and during the study. The approach considers participant care and ethical considerations of hermeneutics and interpretive inquiry. ARISE guided the process of self-monitoring and self-reflection during the research study. In all stages of qualitative research, it is the researcher's responsibility to create a credible study by employing tools of rigour. The interaction between the participants and the researcher as the instrument followed the interpretive approach, which states that knowledge is the co-constructed truth of experiences. Tracy (2010) presents eight key markers of the quality of qualitative research that may include a worthy topic, rich rigour, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence. Finding gaps in the research addressing student voices in the development of license programs made this a worthy topic and will contribute to the professional field of study. This study employed ethical considerations for participant privacy by using a management tool for data storage called Desire to Learn. The Desire to Learn management tool is secured by a two-factor login, allowing students to work on the site and store created artifacts shared with the researcher while maintaining high data privacy. The researcher used a Macintosh MacBook Air computer assigned by the Minnesota State University System with updated software and security. Access to login information is verified by personal username, password, and technology identity numbers. The computer device was locked in file storage while not in use on campus.

Limitations and Delimitations

Data collection took place over three months at a small university in a northern midwest area of the United States. The research occurred following COVID-19, and all teachers had just finished a year of mixed teaching formats, face-to-face or distance learning, and delivery in their classrooms. Generalization is not the goal of this study. Emphasis was placed on gaining insight from the participants on how they experienced an online developmental adapted physical education licensure program. Delimitations were one online developmental adapted physical education licensure program.

International Research Board Review

Bemidji State University Graduate Office required a review of the documents as part of their International Research Board (IRB) process. The Director of Graduate Studies, Convener of Bemidji State University International Review Board, completed the abbreviated review process. On February 8, 2022, the research received additional approval from the Director, and documents regarding the review were sent to the primary researcher.

Participants

Participant Recruitment

Purposeful participant selection was used in this study. Creswell (2009) suggests using purposeful participant selection in qualitative research when persons with limited relevant data on the subject are few. The decision should be based on the researcher's judgment and follow a purposeful selection process (Patton, 2002) that was used to invite graduate students from the Bemidji State University Developmental Adapted Physical Education Program. The participant pool available for the research study included thirty-five graduate students from developmental adapted physical education online programs offered from 2017 to 2021. Consideration was given

to students receiving the invitation to decline the research request by either not replying to the invitation or selecting decline in a reply. It was beneficial for this research to employ purposeful selection to provide rich information on developmental adapted physical education research topics. The knowledgeable group of developmental adapted physical education professionals aided the researcher in uncovering the experiences of graduate students in an online developmental adapted physical education license program.

Invitation to the Study

The Center for Extended Studies and Online Learning and the Department of Human Performance, Sport and Health housed the online developmental adapted physical education program. The researcher also teaches in both departments as an assistant professor for undergraduates and graduate students in degree programs. To minimize bias, the Center for Extended Studies and Online Learning sent an email (Appendix D) to past program participants through their Bemidji State University email accounts, inviting them to participate in this study. The invitation to the study was received via email from the Center for Extended Studies and Online Learning, which gave the graduate students information on the proposed research. It allowed the students to deny participation by no reply or a reply indicating they were not interested in participating in the study. The informed consent form (Appendix E) was included with the invite, and the timeline research process schedule (Appendix H) was sent. Students maintain their student email accounts through the MinnState.edu site for two years after their program completion, with added extensions upon approval. Bemidji State University granted permission for an extension for email access.

Participating Graduate Students

The participants were six K-12 physical education teachers who had completed an add-on developmental adapted physical education license, at the graduate level, at Bemidji State University, located in Minnesota, United States. Participating graduate students were located throughout Minnesota. Due to the Minnesota school's various COVID-19 pandemic guidelines, all research, including written and verbal communications, was facilitated virtually through Bemidji State University's secure Zoom 2-factor system. The graduate students (a) held a K-12 General Physical Education in Minnesota, (b) completed the developmental adapted physical education online program at Bemidji State University in the last five years, and (c) fulfilled the licensing process to teach students with disabilities, and (d) had 3-21 years of experience in developmental adapted physical education. The invited participants had completed and exited the developmental adapted physical education program at least one year before the study.

Furthermore, it was a requirement for participants in the research to have fully exited the Online Bemidji State University Developmental Adapted Physical Education Program, passed the Minnesota Testing Licensing Board exam, and received their Minnesota credentials to teach ages 3 to 21 years in the developmental adapted physical education field. This strategy was used to minimize possible conflicts of interest between the graduates and the researcher. Table 2 shows the cohort details, program dates by academic years, overall participant information, and identifiers used to document and organize the data systematically. This table was extremely helpful when following the timeline of the research process and for data organization and storage.

Table 2

Cohort	Year	Participants			
		Total	Invited	Accepted	Psuedonyms
1	2017-2018	6	5	2	Mr. Sal Mr. Rudy
2	2018-2019	14	5	2	Ms. Cali Mr. Ren
3	2019-2020	15	5	1	Mr. Wes
4	2020-2021	17	5	1	Mr. Fritz

Gathering the Findings

Qualitative research may be viewed as a bricolage or patchwork of information, and the researcher functions as a bricoleur by discovering and uncovering from a multitude of layers (Merriam, 1998). Interpretive research, informed by hermeneutics, allows numerous inquiry methods to explore and uncover the participants' experiences (Merriam, 1998). This method uses various tools to piece together a set of practices to provide a tapestry of information about a set of situations (Denzin & Lincoln, 1994). It may identify recurrent patterns in the form of themes or categories, allowing the researcher to delineate the interpretations as qualitative research (Merriam, 1998). Such practices within interpretive inquiry may include developing tools such as questionnaires, interview guides, observation guides, and similar tools to suit the situation (Ellis, 1989).

For this research, data were gathered through a demographic survey, pre-interview activities, semi-structured interviews, and a follow-up meeting to ensure participant approval of transcriptions and interpretation of the co-constructed findings. The data collection strategies included descriptions, interpretation, and understanding, providing meaning-making transformational learning (Merriam, 1998). Table 3 provides details of the step-by-step process followed by the researcher in the order presented when completing the study. There were five

steps to gathering the data with participants, each with a separate set of tools. The data gathering is a sequential list of research tools to ensure consistent protocols were adhered. The duration of the sessions and the purpose of each tool were outlined following the interview guides. Each data-gathering strategy will be discussed in the following sections.

Table 3

Overview of Interpretive Tools

Data order	Data gathering	Duration and purpose
1	Demographic Survey	15 minutes Initial inquiry as to education. Initial inquiry as to demographics. Initial inquiry as to teaching experience. Initial inquiry as to knowledge of program components
2	Pre-interview Activities	60 minutes Discuss and share created artifacts. Develop relationship. Open dialogue between researcher and participant. Evoke scenarios about getting to know you. Evoke memories and stories of education. Evoke memories and stories of teacher training. Evoke memories and stories of developmental adapted physical education online program
3	Semi-structured Interviews	90 minutes Guided questions in clusters of topics. Share scenarios about getting to know you. Share memories and stories of education. Share memories and stories of teacher training. Share memories and stories of an online developmental adapted physical education program
4	Follow-up Meeting 1	30-60 minutes Verification of transcription from pre-interview activities. Verification of transcription of a semi-structured interview. Leave space for additional dialogue
5	Follow-up Meeting 2	15-30 minutes Sharing of emerging themes from pre-interview activities. Sharing of emerging themes from semi-structured interviews. Leave space for additional dialogue and final thoughts.

Note. Interpretive tools were approved in accordance with the university's institutional ethics review.

Demographic Survey. A demographic survey (see Appendix I) was administered to gain a perspective on the participants' teaching demographics, educational background, teaching experiences, and program experiences. Hammarberg et al. (2016) suggest demographic surveys can be used for corroboration, elaboration, complimentary, or contradiction alongside qualitative research. In this study, the demographic survey was used as an elaboration further to explain or demonstrate how the findings apply to a particular group or experience. It was beneficial to the researcher to begin to understand the participants' prior educational and teaching experience in the physical education setting to further understand their experiences in the online program (Dewey, 1938). Ellis (2009) suggests questioning helps to know the participants in a more holistic way. The survey was comprised of 10 questions and focused on four areas of participant demographics: (a) information on undergraduate teaching preparation, (b) reasons for choosing an online graduate program, (c) teaching experience and current teaching position details, and (d) plan for further education such as additional graduate courses or master programs. The survey took approximately 15 minutes to complete. The survey was designed on Qualtrics, a management system experience to propel research and deepen your understanding of your focus group. After the design stage, the software generates a link to be shared with participants. An email was sent to participants by the Director of the Center for Extended Learning and Online Learning via Bemidji State University, including a link to the survey, written directions, and a recording of verbal instructions. Aligning with Dewey's (1938) Theory of Experience, the demographic survey asked participants about their teaching and educational experiences to inform the research on developmental adapted physical education teachers completing the online. Even though the researcher had more than five semesters of teaching and advising with the participants, the demographic survey helped identify aspects of educational background and

teaching specifics that may have provided additional understanding about each participant. Through the survey, the researcher gained a more informed view of lived experience through the multiple forms of inquiry. The demographic survey was used as part of the triangulation of data during data analysis to help understand the research questions in a more holistic way (Tracy, 2010).

To thoroughly understand the findings of the demographic survey, the researcher exported the demographic survey results in several report formats created in Qualtrics to organize, analyze, and reflect on the gatherings. First, a composite report showing all participants' general information was exported to the data storage shell housed in the management system Desire to Learn. Second, six single reports displaying individual responses to the survey questions were exported to the data storage shell on Desire to Learn. The reports consist of multiple-choice answers, lists, charts, rating scales, and short answers. The reports were reviewed and organized based on the questions asked in the demographic survey. The survey was reported as individual and group data (Appendix M). Ellis (2009) provided a strategy for creating a narrative portrait from transcripts, notes, and artifacts to give a rich introduction to the participants. The demographic survey aided the researcher in gathering a holistic sense of the participants' prior experiences. The information gathered from the demographic survey concerning information on undergraduate teaching preparation, reasons for choosing an online graduate program, teaching experience and current teaching position details, and plan for further education such as additional graduate courses or master programs were used to help inform the pre-interview activities by providing underpinnings of participants' foundations.

Pre-interview Activities. The pre-interview activities were the most exciting and informative gathering tool for the researcher during the study. Working with the participants in

the online educational setting leads to only getting to know the individuals in a one-dimensional portrait. This study used pre-interview activities to further open dialogue to the research and reconnect with students and their feelings about the online program. Pre-interview activities prepare and enable or encourage participants to recall and reflect on their experiences while identifying meanings or central ideas in their experiences (Ellis, 2009). In creating the various artifacts, the participant connects past, present, and future to memories and feelings to ease the interview process (Ellis, 2009). From a hermeneutic perspective, offering another layer of human interaction provides credibility to the interpretive inquiry process and can lead to richer interpretations during data analysis (Peshkin,1993). Ellis (2009) explains that in producing images, simple or complex, the participant evokes deeper elements of human consciousness.

The researcher learned the thoughts and feelings behind actions and connected past experiences to the present through the activities. Polkinghorne (1995) notes that human action results from interacting with a person's previous learning and experience. Specifically, the pre-interview activities (see Appendix J) were designed to encourage the participants to draw, write, and create artifacts of their lived experiences. In turn, this helped to uncover valuable insight into the two years in an online developmental adapted physical education program while evoking stories and memories from their personal and educational foundations. The pre-interview activities were divided into two sections: Cluster 1, About You, and Cluster 2, About Developmental Adapted Physical Education. Each cluster had six questions or suggestions for activities. Participants were asked to complete at least two items from each cluster. Written and recorded instructions were emailed to the participants two weeks before the interview. Sixty minutes were set aside for sharing these artifacts created by participants.

The researcher defined artifacts as visual images to explain or give details to participants' stories. Douglas et al. (2015) suggested that qualitative studies identified artifacts and visual imagery as helpful in collecting data in qualitative interviews by allowing the interviewer and interviewee to align more directly when speaking about broad and complex topics. The pre-interview activities were designed to engage participants and encourage them to reflect on their experiences before the interview. The pre-interview activities had two clusters of activities: (a) about the person in general and (b) about their experience in the developmental adapted physical education program. Participants were asked to complete two or more items in each category. The transcription process laid the foundation for uncovering themes by (a) watching and listening to recordings to become familiar with participants' language as they explain the pre-interview activities; (b) reviewing Zoom and audio recordings of pre-interview activities; (c) transcribing conversations of pre-interview activities word for word with precision; (d) create a collage of artifacts for each participant. Engaging the hermeneutic process by revisiting and reinterpreting the data encourages themes to emerge from the gatherings rather than simply categorizing or listing the data as one-dimensional. Ellis (1998) suggests researchers draw on the comments, reflections, and actions that revealed what was important or significant to the participant. The pre-interview showed examples of likes, dislikes, and social identities, the role of family, friends and peers, motivations in personal and professional lives, and support at home and work as micro parts in search of the co-constructed whole. The pre-interview activities also helped inform the semi-structured interviews through an iterative pattern of communicating with the researcher in a visual medium, adding to the bricolage of shared information.

The pre-interview activities brought me joy. Each participant created pre-interview activity artifacts to aid the researcher in gaining an in-depth understanding of the participants'

lives before starting the program and some of their reflections during and after the program. The participants shared and discussed these artifacts before the semi-structured interviews. The discussions started a dialogue between the participant and researcher that began the back-and-forth conversation of sharing stories and reflections on the online program. Even though I had been the participant's instructor and had gotten to know them as students over the last year and a half, I learned many personal details and heard many stories that made me understand and respect them even more as individuals. Being a developmental adapted physical education teacher myself, I have a deep shared appreciation for the work they do each day.

Semi-Structured Interviews. Interviewing participants is the most common form of data collection in interpretive inquiry (Merriam & Tisdale, 2014). The goal of the interview is to begin a conversation to gather a richer understanding of the evolving dialogue. Foremost in the interview process, Ellis (2009) reminds us that "the researcher's open-ended questions should give the participant space to express meaning in their words" (p. 357). The interview also seeks to have the participant talk longer than the interviewer, diffuse the power in the relationship, and understand the vocabulary and the meaning of the participant's language. Weber (1986) describes the nature of interviewing through the risks and trust a participant offers to the researcher when granted access to experiences, reactions, feelings, and thoughts. By designing open-ended questions focused on the participants' practical fieldwork, course content components, Minnesota core skills and content standards, and course delivery format, the researcher uncovered personal experiences during the developmental adapted physical education online program. As part of the hermeneutic process, questions were designed in a semi-structured format (see Appendix K) as prompts to help participants uncover feelings and thoughts while co-constructing a shared meaning as an active part of the exchange of dialogue. The semi-structured

interview followed a guide with four sections: (a) getting to know the graduate student, (b) experience as an undergraduate, (c) experience as a graduate student, (d) experience of the developmental adapted physical education online program. Participants were asked questions from each group, and follow-up questions were limited so as not to lead the participants during the interview (Ellis, 2018). This exchange develops in a back-and-forth movement that resembles a conversation more than a question and answer (Ellis, 2006). Patterson & Williams (2002) suggest that a delicate balance between structured and unstructured interviews develops content that is focused enough to cover relevant to the participant's experience while ensuring data for information in the emerging process. Agrey (2014) shared that it is the researcher's responsibility to be genuinely and fully present in the research and employ a hermeneutic conversation. Mishler (1986) stressed that one should allow the participants to continue until they indicate they have finished their answer. In this study, ample time was scheduled so participants did not feel rushed by the process or the researcher when sharing the pre-interview activities and conducting the interviews. The hermeneutic method of interviewing means coming to a knowing or an understanding to make sense of the participant's experience. Heidegger (1971) explains the importance of being open to the "other," allowing the dialogue to be fluid and dynamic. Individuals were given between 60 and 90 minutes to complete the interviews. During the interview, the participants were encouraged to share stories of their experiences throughout the program about the online delivery of the developmental adapted physical education format, content courses, core skills, content standards, and field experience.

This study used semi-structured interviews to create space for participants to share their experience of the developmental adapted physical education program and to provide a roadmap for the journey of discovery. The pre-interview activities started the back-and-forth relationship,

where the researcher created space needed by the participants to provide time and acknowledgment for memories of recollections and reflections. By creating this relationship of trust during the pre-interview activities, the researcher was then allowed to enter the other person's perspective in the continuation of the interview. Lincoln and Guba (1985) suggest immediate transcription and analysis to ensure gatherings are available in subsequent stages of the interpretation. Two follow-up meetings were scheduled after the semi-structured interviews for the researcher and participant to ensure the transcripts were credible and multi-vocal when moving forward to analysis and interpretation in answering the research questions.

Follow-up Meetings. Follow-up meetings aid the researcher in ensuring they, as an instrument in the process, have received and transcribed the shared artifacts and experiences (Ellis, 2009). For participants, follow-up meetings served to double-check that the research was analyzed and interpreted and that their experiences in the developmental adapted physical education program were represented as they intended during the study. The first meeting focused on the transcription of the interview. The themes uncovered as part of the interpretive inquiry were shared with the participants in two follow-up meetings. First, the transcriptions were shared with the participants to allow them time and space to correct inaccurate wording or provide additional information, as suggested by Creswell (2009). The second meeting looked at the analysis of the gatherings to offer a discussion of the interpretive findings of themes and left space for the participants to add additional insights. This meeting allowed the participants to engage in the keywords and themes the researcher had mined from the interview transcripts, again providing time and space for graduate students to clear any misinformation. The themes were examined and overlayed with the theories of Dewey (1938) and Knowles (1970 & 1984) to

understand further the participant experience gained in an online developmental adapted physical education license program.

Organization of the Findings

Engaging in hermeneutic philosophy by employing interpretive inquiry methodology requires organizing the initial data in a way that leads the researcher to a meaningful understanding of gatherings (Ellis, 2018). The data were organized chronologically using the specific interpretative tool as each portion of the study was completed. First, the demographic survey reports were generated for each participant, and then additional reports were generated for the research group and reviewed for accuracy. Digital files with 2-factor authenticator security were created to store each participant's artifacts. Next, as the pre-interview activities and semi-structured Zoom sessions began, each participant's artifacts, recordings, and researcher notes were added to the files. Finally, recordings and notes from follow-up meetings 1 and 2 were filed for each participant. Revisiting the collections by the participant and specific inquiry tools provided an inductive approach for transcription, analysis, and interpretation of the artifacts.

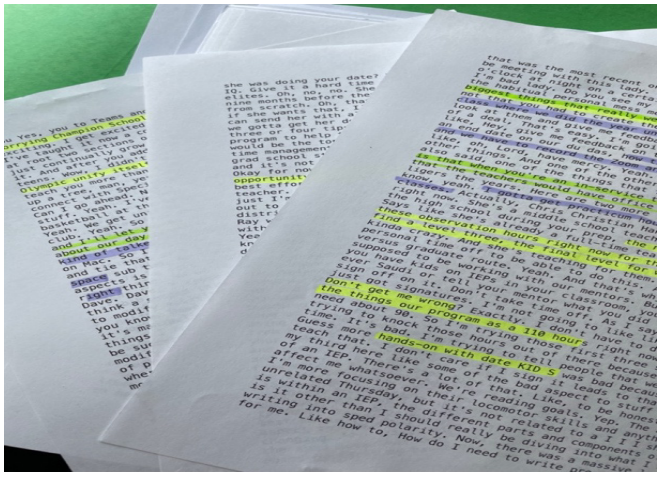
Transcription

The transcription and analysis process followed suggestions outlined by Ellis (2010) by watching and listening to recordings to become familiar with participants' Zoom and audio of semi-structured interviews in the forward arc of the spiral, transcribing conversations of the semi-structured interviews, and then checking details for confirmations, contradictions, or gaps during the backward arc of analysis. Ellis (2016) demonstrated creating a table or a chart to begin making meaning of the stories, values, interests, and beliefs of participants that started in the pre-interview and continued in the semi-structured interviews. The next step was identifying keywords within the question clusters as the smaller parts, then following the threads created to

explore the possible themes emerging from the tables and collages in the whole of the analysis to inform the writing of findings. Finally, Ellis (2016) emphasized writing the uncovering in a manner that honours the participants and acknowledges the bias in the interpretation of observations. The act of transcription in the interpretive inquiry process gives a deeper and more detailed understanding of the participant's experiences through moving from one medium of communication to another. Ellis (2018) explained there is no single agreed-upon method of appropriate transcription; try as we might, we will never get the full oral experience expressed in the written word. As the researcher, we must pay close attention to language, pauses, body language, and repetitions. When using video interviews and artifacts together, this process provides a more holistic transcription from which to draw analysis. Figure 7 shows an example of the typed transcripts with notes and highlights as a step in the preparation for analysis. This step aided the researcher in identifying keywords in the data to facilitate the creation of charts as part of the analysis and in preparation for the interpretation of the gatherings.

Figure 7

Transcript Examples from Participant Interviews.



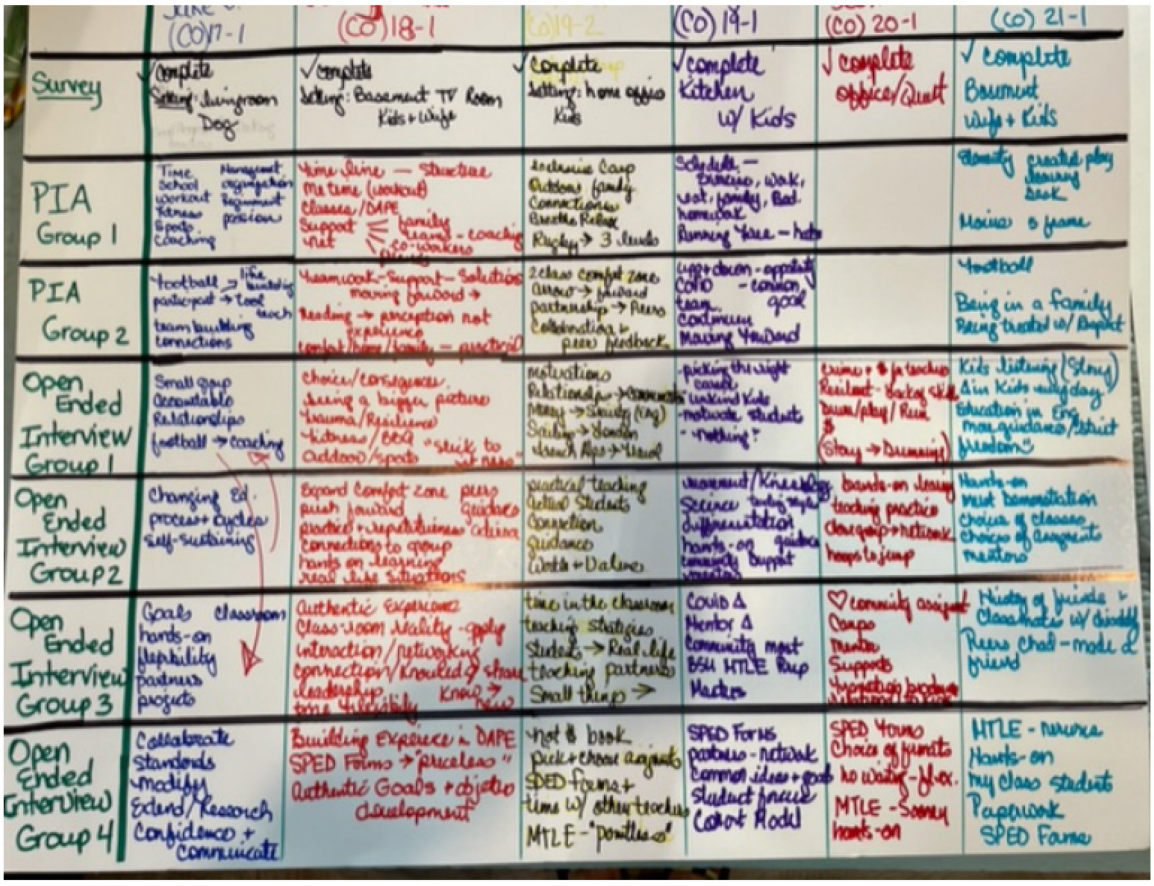
Note. Keywords are colour-coded, and sections are arranged according to the clusters and questions from Ms. Cali's transcription.

Analysis

One of the most common areas for improvement in organizing and analyzing the data are merely listing a summary of what was said instead of interpreting and providing insight into what is being studied (Patterson & Williams, 2002). Patterson and Williams (2002) express that a deeper and richer understanding of a study continually reoccurs during the hermeneutic data analysis and interpretation of the participant's experiences. According to Weber (1986), the interpretation will include listening and relistening to recordings to capture the tone of voice, expression, and emotion truly gained in the lived experience. Ellis (1998) explains that each loop on the interpretive spirals are separate pieces of data leading to the analysis of the data. Ellis (2016) suggested that researchers follow Polkinghorne's narrative analysis by transforming data gathered from interpretive inquiry, such as artifacts and interviews, into an understanding of the participants. The researcher then completes tables with headings, rows and columns, then grouped them according to threads or topics that may be emerging themes of the narrative portrait (Ellis, 2006). From the colour-coded transcripts, the researcher created a colour-coded chart organized by interview, question clusters, and participants.

Figure 8

Chart of Keywords from Transcriptions of Pre-Interview Activities and Semi-structured Interviews



The keywords from the analysis of the colour-coded chart led to a more informed process of interpretation to answer the research questions. Finally, overlaying the participant portraits with the pre-interview artifacts helped begin the discovery of the keywords, threads, and thematic charts in the forward arc of the spiral, allowing for further investigation of interpretations.

Interpretation

The study's analysis followed Ellis' (1998) suggestion of interpretive inquiry as a formal research process. Ellis (1998) encourages researchers to visualize the analysis and interpretation themes of inquiry within three areas in the hermeneutic process. First, this process is a holistic

interpretation. The interpreter works creatively to ensure the gatherings are expressed in a way that honours the participants and the researcher as an instrument of the process. Second, there is a back-and-forth play of specific and general information that aids the researcher in determining the macro and micro dimensions of the data gathered (refer to Figure 6, p. 59). Moving from the parts in the analysis to the whole of the interpretation works helps to visualize the movement of the process with no beginning, starting point, or endpoint, which lends to the hermeneutic circle. Ellis (2006) explains there is no meaning until it is constructed by the one hearing or perceiving the quotes. Language is the third facet of the hermeneutic process. The process of unearthing shared meanings and beginning to understand the themes does not require the researcher to bracket out their knowledge and understanding but becomes part of the interpretation (Patterson & Williams, 2002).

Gadamer (1989) describes the space where the researcher's and the participant's meanings of the subjects come together as the fusion of horizons. The movement of the horizon during interpretation helps develop a new and more informed understanding. Sharing stories helped inform the research about the participant's learning experiences and the demands of teaching students with disabilities. The prior knowledge of the researcher and the experiences of the participants with the core skills and content standards and online format of an online developmental adapted physical education program created a new fusion of horizons for answering the research questions. Tables 4 & 5 begin to demonstrate the researcher's process for interpreting keywords, looking for threads woven through conversations, and finally exposing the shared construction of emerging themes.

Table 4

Pre-Interview Activities Threads and Emerging Themes Creations

Participants	**Mr. Sal**	**Mr. Rudy**	**Ms. Cali**	**Mr. Ren**	**Mr. Wes**	**Mr. Fritz**
Date	March 22, 2022 1:00pm	March 22, 2022 6:00pm	March 18, 2022 3:00pm	March 20, 2022 3:30 pm	March 25, 2022 6:00 pm	March 23, 2020 6:00 pm
Choice Questions	2 & 3	2 & 6	2 & 4	1 & 5	2 & 4	1 & 2
			PIA: Cluster 1 About you			
Keywords or Phases	Time/ Schedule Fitness/ workout Sports/ Coaching Management Organization Regiment Passion	Timeline/ Structure Me time-workout Classes/ DAPE/ Coach Support/ NetworkFamily Team/ Coaching Co-workers Family/ friends	Schedule Exercise Work Eat/ meal Family Homework Bed Running-free-time	Inclusive Camp Outdoors/ Family Connections Breathe/ relax Rugby 3 levels	Running Family Drumming	Elementary English school Creative play Football Movie
Stories			Running-time to think and process-then work.	Family at Camp		Picture of Pitch and words.
Choice Questions	3 & 6	5 & 6	1 & 2	5 & 6		4 & 6
			PIA: Cluster 2 About DAPE			
Keywords or Phases	Football Life building.Teaching Tool Unified Teambuilding Connections	Teamwork/ Support Solutions Moving forward Reading-perception- no experience Comfort/ home/ family	Up & down of teaching Covid-common goal .Team Continue moving forward Network	2 classes comfort zone Arrow forward teaching Partnership/ peers Collaboration / peer feedback	Peers Teamwork SPED forms	Educational Struggle Active life Travel EuropeUniversity Fatherhood Family town visitProfessional/ commitment
Stories	Football as a lifelong learning tool	DAPE strategies as intervention for all students			Cardio Drumming-costumes and video	

Table 5

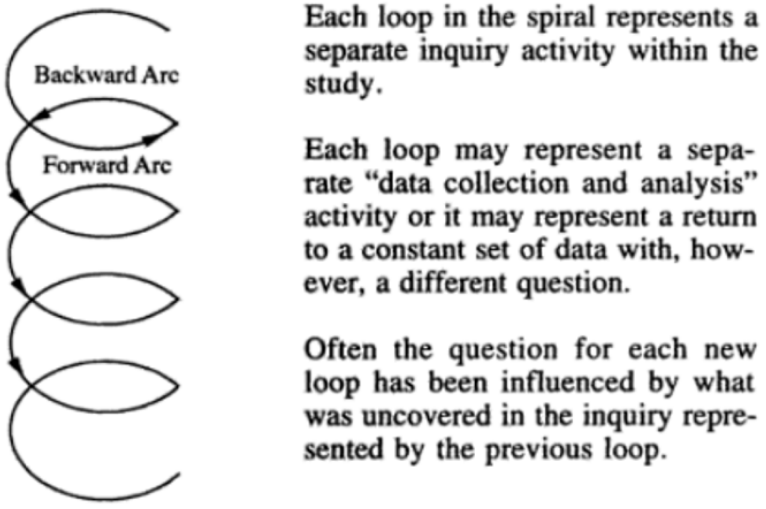
Semi-Structured Interview Threads and Emerging Theme Creations

Participant	**Mr. Sal**	**Mr. Rudy**	**Ms. Cali**	**Mr. Ren**	**Mr. Wes**	**Mr. Fritz**
Dates	March 22, 2022 2:00pm	March 22, 2022 7:00pm	March 18, 2022 4:00pm	March 20, 2022 4:30 pm	March 25, 2022 7:00 pm	March 23, 2022 7:00 pm
			SSI: Cluster 1 Getting to know you			
Keywords or Phases	Changing education- are they ready for this world? Cycles of life Self-sustaining Outdoors Money Student taught in Alaska	Making bad choice Treating people Choices & consequences Trauma/ resilience BBQ king/ cross fit. Health/ money Every month new activity. Finished UG G DAPE	Picking the right career. Mass com-pool happyAlways Back-Teaching swim lessons How people can be so unkind -Ukraine Paying bills & student loans. Just my own kids	Motivation of people. Ability to bounce back. Relationship/connections. Sailing with my boys London-Barcelona Work in theFrench Alps	Crime and money for educators Lack of parent skills & Resilient kids Play drums, run, hike, family.	Father -Kids listening Changes in kids everyday Education in England verses USA More Freedom USA
Stories		Resilient kids Thru hell and still show up ready… others don't			Drumming story….	Health store on kids in the hallway talking about lunch
			SSI: Cluster 2 Questions about your experiences as an undergraduate student			
Keywords or Phases	Enjoyed the small classes.Accountable for learning Building relationships Football- coaches -1 yr.	Out of my comfort zone.Small town-big. People relationships Hand-on/ real life Authentic/ connected	Picking the right career. Kinesiology had you hooked kept returning to movement. Science Guidance / hands-on Support/ community	Practical Actual teaching Connections to the instructors Felt worth and value. Appreciated the frank feedback & guidance	Hands-on learning Student teaching – practice.Networking with others Hoops to jumps to get done	Hands-on Demonstration of skills Choices of classes. Choices of assignments
Stories	Football only 1 yr.		Working in the pool			
			SSI: Cluster 3 Questions about your experience as a graduate student			
Keywords or Phases	<u>After DAPE</u> Focused & determined. Not flexible- slow paced Too heavy in SPED not relating to his needs as a student.	Interacting with people who knew more. More paperwork Leadership / connection Repetition of skills Picking up steam and moving forward	Being creative during covid Community importance Learning the process Mentor support	Concerned about time. Covid- all online Actual DAPE – teaching strategies student- real life teaching partners Small thingswe do every day that effect the students in a big way.	Happy with the fast pace Learning about transition Supports & process. Getting done and how it relates to actual teaching	Comfort of having history of friends and family with disabilities Classroom/ peers. Support/ friendship
			SSI: Cluster 4 Questions about your experiences in an Online DAPE Program			
Keywords or Phases	Clear instructions Rubrics for all assignments Time management Reach out to others/ peer. Goal writing & standards Need more modification ideas for unique students. Hands-on opportunities	SPED Forms Everything had a purpose. Goal writing Keep working and don't fall behind. Building on my experiences. Realistic to what I was doing.	Partners/ networking Same place as others- working together. Using students in assignments. Cohort model and flexible schedules SPED Forms	Pick and Choose assignments based on student needs. SPED forms Time with mentor teacher. MTLE- pointless	SPED forms Choice of formats No waiting or wondering about what is due-flexible and comfortable. Hands-on learning through moving. MTLE sooner as SPED work.	MTLE- useless Hands-on learning Use my class as student work. Learning paperwork SPED Forms
Stories				Mat- camp more inclusive		

In this study, the spirals (see Figure 9) represent demographic surveys, pre-interview activities, semi-structured interviews, and follow-up meetings. Each spiral in the diagram represents a separate strand of core skills and content standards investigated during the research. The researcher entered the forward arc of the spiral with each inquiry tool and used the inquiry to gain insight into the participant's lived experiences. Then, richer and more meaningful details of experiences are uncovered in the analysis of backward movement. As each loop unfolded in analysis, the information gained from the backward movement was synthesized in the forward movement.

Figure 9

Interpretive Inquiry Spiral



Note. (Ellis, 1998).

Writing the Narrative of Analysis

The interpretive inquiry aims not to write the end of an existing story but to write a more helpful beginning for new stories (Ellis, 1998). Weber (1986) reminds us of our commitment and "responsibility as humans when we engage, analyze, and write our findings, not to forget the sense of how and what was said during the conversation" (p. 70). The participant's experience should be our primary interest, and we should never lose sight of our participants as humans. If we revisit the foundations of qualitative research and the constructivist paradigm informed by hermeneutics, we will again engage in interpretation, whole-part relationships, and language.

Patterson and Williams (2002) describe the hermeneutic methodology as a "discussion of fundamental tensions requiring difficult trade-offs when considering a methodological approach" (p. 45). However, the data analysis decisions within this methodology have been predetermined as an organized system and should be a consistent process. This organizing system allows the research to identify predominant themes and strand topics (Patterson & Williams, 2002). These themes will likely be ideas, values, or preoccupations expressed in stories. Like a web of experiences, the researcher carefully interacts with strands to show relationships in a holistic understanding rather than categorizing and possibly losing some of the richness of the data. In developing this data organization, the researcher attends to language and context when transcribing the detailed dialogue (Kim, 2016). Listening to the data recording can be a much different process than reviewing written documents. As is the nature of hermeneutics, rewatching and rereading the dialogue shared in the interviews allowed the researcher to analyze my personal horizon of prior knowledge and set the stage for the creation of a new and co-constructed fusion of horizons. Finally, the use of language in the writing of the interpretations

can establish a strong or heightened sensitivity to the experiences of the participants. These strategies will be explained in the next sections.

Evaluating the Goodness of a Study

In all stages of the qualitative study, it is the researcher's responsibility to create a credible study by employing the tools of rigour (Kim, 2016). These tools are the postmodern assumptions of ethics through respect, compassion, and commitment to do "good" research (Denzin & Lincoln, 2006). Guba and Lincoln (1994) describe the goodness of a study by evaluating its trustworthiness. Trustworthiness extends from the data collected through the analysis process and substantiates the study's findings (Guba & Lincoln, 1994). The trustworthiness criteria include credibility, transferability, and dependability, which shines a light on subjective and sensitive rigour to the strategies of interpretative research (Guba & Lincoln, 1994). Tracy (2010) presents eight key markers of the quality of qualitative research that may include a worthy topic, rich rigour, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence. The markers are another way of viewing the postmodern paradigm as context-dependent and less tied to specific theories. These criteria may be a more flexible way to view qualitative quality and demonstrate a softer grip on a predetermined set of standards (Tracy, 2010).

Depending on the approach to the qualitative research, certain criteria may need to be extended for judging such studies (Hammarberg et al., 2016.) When data are gathered, we must capture real-life experiences, which cannot be the same for all individuals. Hammarberg et al. (2016) note that cultural or community meanings for identifying the goodness of a study may vary from one research project to another. This variation or evolutionary change does not make the research less but offers a component of meaningful insight and diversity as a contribution.

Denzin & Lincoln (1994) remind us that in qualitative research, we are not objective when the researcher acts as the instrument and the participants, along with their experiences, are the data. The following paragraphs will discuss the goodness of the study based on Tracy (2010) and provide insight into these key markers under traditional postmodern assumptions.

Worthy Topic

Tracy (2010) suggests that one criterion for qualitative research is that the topic is relevant, timely, significant, and interesting, encompassing a worthy topic. Researching an online developmental adapted physical education program provided an opportunity to prioritize advancing teacher education program planning at a time when the discipline is changing. The focus on developing online teacher training programs and the growing population of students identified with disabilities makes this research timely and relevant.

Rigour

This study has used sufficient, abundant, and appropriate rigour by building on a robust philosophical foundation of hermeneutics with an interpretive inquiry research methodology. Tracy (2010) outlines theoretical constructs, data and time, and the data gathering and analysis process as elements that create rigour. The time to complete the research has been more than significant. The data gathering used a bricolage of tools to gather shared knowledge of the experience of an online developmental adapted physical education program, and the analysis emphasized unveiling thick, rich meanings that capture the complexity of the participants and program. A high-quality study should also show the marks of a significant amount of data, enough time spent gathering and examining the data, the study's goal aligns with the context and theory, and appropriate practices and procedures used during the study (Tracey, 2010). Significant time and space were designed for the participants and the researcher to complete the

study. For example, participants were given three date options with several two-hour time blocks for ample space for in-depth interviews. The follow-up meetings used confirmability by verifying that the participants' information was accurately included and discussed. The themes and patterns extracted through the analysis were shared with the participants. Then, participants were given time and space to affirm the inferences the researcher had garnished in the forward loop of the analyzing process during the follow-up meetings. Revisiting the data after this follow-up in the backward loop of the hermeneutic circle provided confirmability through rich, thick, multivocal writings.

Sincerity

The study employed transparent and sincere methods by being honest and open about the researcher's possible bias, goals, and possible mistakes. Tracy (2010) includes self-reflexivity as one of the practices to be considered to add authenticity to the research study. The researcher examined their impact on the gatherings by acknowledging their role and possible influence in the gathering as the program coordinator and instructor of the program as the object of the study by sharing and illuminating to the reader this possible bias.

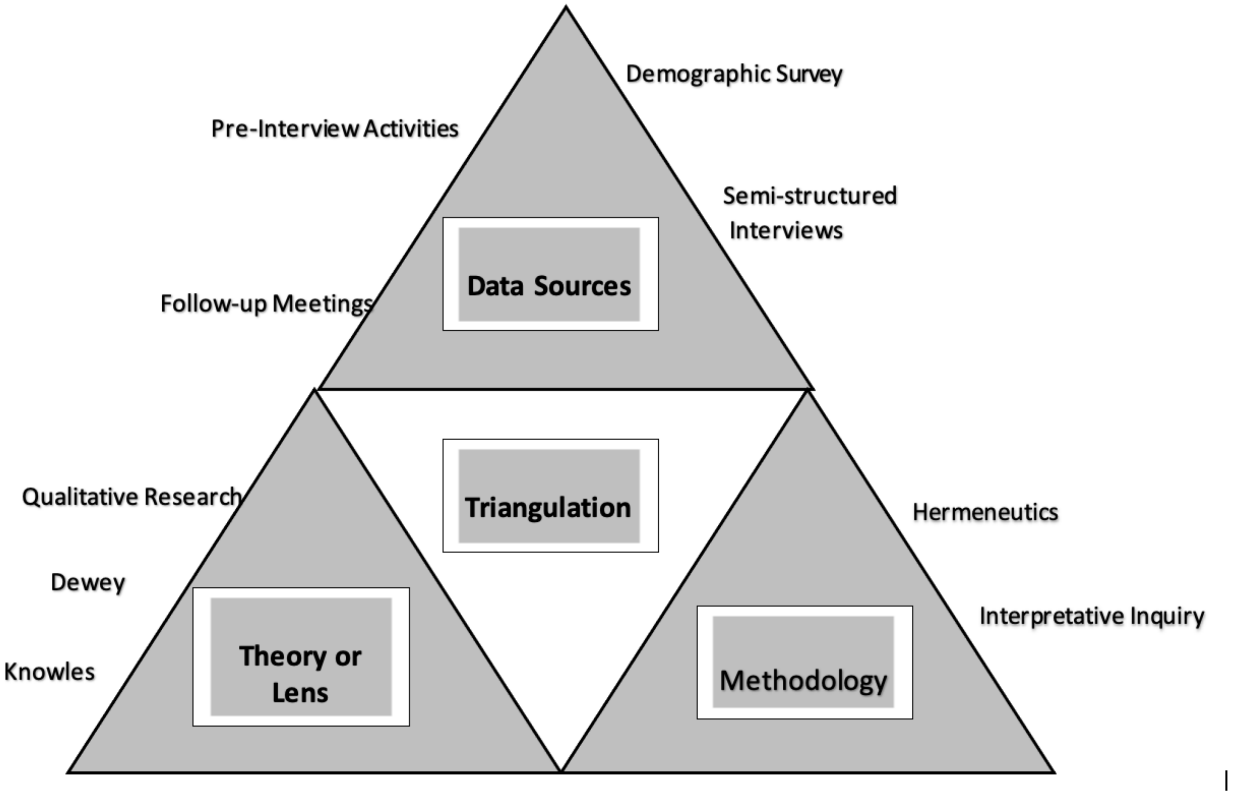
Credibility

The triangulation of data also falls under the creditability criterion. It is accomplished by collecting multiple forms of data and the researcher's commitment to extended engagement with the data in the analyzing phase of interpretation (Tracy, 2010). Tracy (2010) suggests triangulation, multiple data or theoretical frameworks that reach the same conclusions, and crystallization, a multi-dimensional triangle that allows for exploring fractured or multifaceted social realities. This study employed triangulation using a demographic survey, pre-interview

activities, interviews, and participant follow-up meetings as multiple forms of data to present the participant's information accurately (see Figure 10).

Figure 10

Triangulation of Findings



Tracy (2010) adds that credibility is a showing rather than a telling, with thick, rich descriptions of details. The research is multivocal in that both the researcher's and participant's voices can be heard in interpreting findings. Before this study, the graduate students had spent 1.5 years in the Developmental Adapted Physical Education program, working closely with the researcher, building relationships, and contributing to the rapport of the research process.

Resonance

When findings are applicable outside the study and professionals within the field find meaning in the results, the findings are transferable (Tracy, 2010). Providing rich, detailed descriptions of the research allows the reader to discover the extent to which the findings can be applied elsewhere and adds to how the findings were shaped (Tracy, 2010). In qualitative research and interpretive inquiry, the focus is on understanding the meanings and experiences of individuals in a specific context. The implications for online learning found in the study may transfer to other online programs outside the specific field of developmental adapted physical education.

Significant Contribution

Significance can be shown in the answers to questions described in the results and discussion section. Therefore, the research can contribute to a deeper understanding of the graduate students' real-life situations to improve programs. The significance may also lead to others having a curiosity to further research or explore the topic of study (Tracy, 2010). As each state continues to expand and develop their developmental adapted physical education programs, the study may lead to a greater understanding for future researchers.

Ethical

Tracy (2010) states that procedural, situational, relational, and existing ethics contribute to a shared universal goal of quality qualitative research. The multiple pathways considered the International Board of Ethics, unpredictable moments that may arise in the field, mutual respect and dignity between research and participant, and presenting appropriate findings from the study.

Meaningful Coherence

According to Tracy (2010), coherent studies accomplish what they set out to accomplish. The researcher's approach should ensure that literature, language, implications, and findings interconnect with the intended audience with a clear and meaningful purpose. This study set out to share graduate students' experiences in an online program and potentially add their voices to improve the program's planning, implementation, and growth.

Summary

Using the criteria of evaluating the goodness of a study based on Tracy (2010), the researcher aimed to honour the participants and the interpretive interview methodology. For example, the Qualtrics link to the demographic survey was shared with the committee members for review. The questions were designed to not lead or suggest participants in their responses. The researcher kept a calendar of specific dates and times for each data collection session. The data collection employed multiple methods to align with the research questions to gain a more in-depth insight into the participants' perspectives and experiences in the developmental adapted physical education program. The researcher created specific opportunities to analyze and critique the decisions and strategies of the study while having continued communication with the review committee. The most meaningful takeaway from Tracy (2010) is that even though we aim to employ these best practices, we will fall short and may have to acknowledge these shortcomings by being truthful and honest with ourselves and our readers.

The findings are organized into the next two chapters. Chapter 4 introduces you to the participants in the study through rich and descriptive narrative portraits, as outlined by Ellis (2009), to begin to get to know the physical education teachers who entered the online program as graduate students. Chapter 5 is organized by five themes that emerged in the research:

Resilience in Teaching and Life, Making Good Choices for Everyone's Education, Building Relationships, Moving Forward, and Learning Through Movement.

Chapter 4: Participant Portraits

Mr. Sal, the Athlete

"What is important in life is fitness, health, and sport," Mr. Sal said as he started the pre-interview activities. "I get up, I work out, I teach all day, I go, coach, I eat dinner, and I go to bed. That is pretty much it. He says you can always teach life lessons from sports and the outdoors". Mr. Sal describes himself in this quote: "I am a no-nonsense sort of person. Tell it to me like it is, and it will go a long way." He enjoys being outdoors in nature, with hunting and shooting sports significant aspects of his life. Being outdoors and active connects him to his friends and family. He coaches varsity football at his school. He calls his passion for coaching "a life-building teaching tool" (Pre-interview activity).

Mr. Sal teaches physical education and health in Minnesota Region 5, which placed his school in the center of the state. He had taught for eight years in a high school with around 1340 students serving grades 9-12. He did not teach DAPE before starting the online program. Mr. Sal took over ten credits for inclusive physical education content courses in his undergraduate program and earned his undergraduate degree in Minnesota. At the time of the study, he did not have plans to complete a master's degree in either special education or administration.

The small class sizes at the university and learning the characteristic of accountability helped Mr. Sal be more successful in his undergraduate programs. He played football for one year in college and decided that academic achievements were more important to his future. Mr. Sal recalled, "I was regimented and organized with my classes, but playing a college sport took up most of my time, and I just wanted to finish my degree and start teaching as soon as possible" (Semi-structured interview).

Learning to write goals and objectives from the standards and learning how to continue modifying student activities were most helpful during the online program while teaching students with disabilities in physical education. Mr. Sal appreciated the flexible schedule of an online program and the hands-on practical work in the classroom. He found his greatest joy through active learning. Working with his peers on assignments and collaborating with his mentor were very rewarding and "…helped me build confidence to teach students with disabilities and expand my professional communication with peers" (Semi-structured interview).

Mr. Rudy, the BBQ King

Mr. Rudy has a strong support network. His family, athletic teams, co-workers, and friends play a key role in his teaching success. He describes himself as "looking for solutions, not problems, and always moving forward to get the job done"(Pre-interview activity). When it comes to trying new ideas, Mr. Rudy likes to see the bigger picture in life and not get hung up on details. He teaches by example, which allows his students to understand that he follows through and keeps his word in daily interactions. When asked in the pre-interview activities at what he would choose to be “the best in the world,” he stated, "Fitness, like the CrossFit champion of the world, and the king of BBQ…. Umm, but I guess those two really don't complement each other." Then he laughed.

Mr. Rudy has a big laugh to go along with a robust personality. He is known in the community as a sports announcer at many student events. I have heard him give statistics at basketball games and give accurate details about the different aspects of hip-hop, jazz, and kick at high school invitational dance competitions. Mr. Rudy always includes the crowd in his announcing antics and entertains the fans with his humour. He played football in college and continues applying, as he described, “lessons learned for life” in his everyday teaching (Semi-

structured interview). When asked in a follow-up about the “life lessons,” he explained respecting others and following the rules.

Mr. Rudy teaches at the northernmost boundary line of Minnesota Region 5. Prior to the study, he taught physical education, including weight training, for five years in a small school. Now, he teaches developmental adapted physical education in a grade 9-12 high school situated on Indigenous reservation lands with a total population of 300 students. This is a difficult teaching assignment with many cultural and economic challenges. This was Mr. Rudy’s first teaching job; he had not taught developmental adapted physical education before beginning the online licensure; however, he had student-taught in a setting that included students with disabilities. Mr. Rudy took three credits of inclusive content courses in his undergraduate program, which occurred in Minnesota. He completed a master's in educational administration before pursuing the online add-on license at Bemidji State University.

Mr. Rudy expanded his comfort zone of teaching by having peers and advisors help him practice real-life situations and by including actual students and situations in assignments. An active learning style with hands-on experience was the type of program Mr. Rudy was looking for to further his education. He said learning more about physical education benchmarks has helped him learn to address Standard 4, building relationships and peer interactions, and Standard 5, expressions and enjoyment of activity, in the Minnesota Standards when working with students with behaviour needs in the gymnasium.

"Learning to navigate the data management program, SPED Forms, was priceless, man; that made my life so much easier. Getting to use the students in my classes as subjects for my assignments and gaining authentic experiences in the reality of the classroom also was important” (Semi-structured interview).

Ms. Cali, the Juggler

A mother of three, a physical education and health teacher, a swim coach, the school pool director, and a graduate student, is how the juggler explained herself, “I wear a lot of hats at school and at home, and sometimes I forget which one I have on. Either I am running for the kids, or I am running for school. That’s when I notice I need to run for me, for exercise,” she exclaimed in the pre-interview activities. Ms. Cali loves to move, and this is evident in the way she lives her life in constant action.

Ms. Cali teaches in Minnesota regions 1 and 2, which situates her in the northcentral area of the state. She taught in a K-12 building with around 1,000 students during the study. Ms. Cali had been teaching for four years and had taught on a developmental adapted physical education license variance or out-of-field permission for grades K-12 before the study. She earned her undergraduate degree at a university in Minnesota, where she took three credits of inclusive physical education content courses in a teacher preparation program. Ms. Cali has not completed a master's and has no plans to pursue another licensure. "I started college as a business major, took one kinesiology class, and I was hooked on movement. I have always wondered if I picked the right career, then I go back to the gym or the pool, and I know I made the right choice," she shared in the semi-structured interviews.

Ms. Cali stated in the semi-structured interviews, “The biggest takeaway during a pandemic was being in an online cohort that understood what you were trying to do every day while teaching online.” Ms. Cali summarized that the hands-on program allowed her to continue teaching physical education and learning while being active. "I could have never done a traditional college program with three kids," she stated during the semi-structured interview. She

said she had common goals with the others in the program, which kept her focused on completing her goals. Ms. Cali shared, “It was a considerable challenge to start an online program, but we had been teaching online, so I took much of what we did in the online program and tried to figure out what it would look like for my students” (semi-structured interviews). Her favourite program components were SPED Forms, the data management computer program for creating individual education plans, the student-focused structure and flexibility in assignments, and partner projects as part of the course requirements.

Mr. Ren, the Camper Director

Mr. Ren began by sharing about his summer workplace, he said,

> This is where we spend our summers. Out East. I have worked at this camp for 16 years. I met my wife here; our children were born here. My nephew with ASD is a camper here. It is where I breathe and relax. I completed, you know, a Master of Teaching, on inclusive camps or not inclusive camps, he smiled. It is family and outdoors that matter here (Pre-interview activities).

Mr. Ren has done many different things in his life. He sailed a boat from London to Barcelona, worked in the French Alps, and started his education in England. "But really, everything is learning, right? I am a pretty practical person who likes to make meaningful connections with people,” he shared in the semi-structured interview. Relationships were the center-point for Mr. Ren sharing about family and teaching.

Mr. Ren teaches in Minnesota Region 11, which situates him in the metro area of Minneapolis and St. Paul, the Capital city. Mr. Ren has been teaching for 15 years in various schools that were public and private programs. During the study, he was in the 3rd year of his tenure at a non-public school. He did not disclose the nature of the non-public setting. He was

concerned about the possible cut of his position at the school due to budget cuts. He felt better about the possibility of keeping his position since he had earned his developmental adapted physical education license and thought the addition might help him keep the job. Mr. Ren served several students with disabilities at the school, and he was concerned about who would take his place with the students and less about losing the position. Mr. Ren started his education abroad but earned an undergraduate degree in physical education in Minnesota. He took four credits of inclusive content courses in his undergraduate teacher preparation program. He did not believe this was enough information to work in any classroom. Mr. Ren had not taught developmental adapted physical education but had extensive experience caring for his nephew, who was diagnosed with autism at an early age. He completed his master's degree in special education at Bemidji State University after completing the online program and is currently teaching developmental adapted physical education.

Mr. Ren's journey through the developmental adapted physical education program and into the Master of Special Education program was a twisting, turning pathway full of questions and doubts, but it ended in success and confidence. Some of the program's benefits for Mr. Ren were online classes, learning to use a variety of assessment tools, learning the SPED Forms data management program, and meeting new peers in the program. "We teach on an island, right?" He shared, "The busy work in some courses and the Minnesota Teaching Licensing Examination was pointless in my opinion" (Semi-structured interview).

Mr. Wes, the Drummer

Drumming is Mr. Wes's life, along with his wife, children, and running. "Teaching just makes all of that even better" (Semi-structured interview). He added, "Running is the way I

organize my thoughts and create my lessons. It might not work for everyone, but it does for me." Mr. Wes was a prop performer and played drums in a rock band. These two things make you a great teacher in a "think on your feet" moment in the gym (Semi-structured interview).

Mr. Wes teaches in Minnesota Region 11, which situates him in the metro area of Minneapolis and St. Paul, the Capital city. At the time of the study, he was an itinerant teacher serving two elementary schools, 6 miles apart, with a total of over 1000 students. This means he travels between two schools each day to teach in two different gymnasiums. Mr. Wes also had two different peer teachers who supported him in his schools during the program. He earned his undergraduate degree in Minnesota, taking six credits of inclusive physical education content courses in an undergraduate teacher preparation program. Mr. Wes had been teaching for 12 years and had taught on a developmental adapted physical education license variance for several years. During COVID-19, the variance process was extended to many teachers and school districts that were struggling to serve students in an online format. He has not completed a master's degree and has no plans to complete an additional licensure in the future.

Mr. Wes was concerned about school discipline, crime, and how students and teachers can be resilient enough to return to their buildings daily after traumatic events occur in some buildings. When we met for the second follow-up meeting, this topic weighed heavily on his heart, and the emotion in his voice was evident when speaking of recent school shootings. His favourite part of his undergraduate program was the practical teaching in classrooms. He also wishes he had experienced more actual teaching earlier in his education. He thought he would be further ahead in the "game." One of his mentor teachers had completed the online program two years prior to his completion. Mr. Wes' other mentor was the Minnesota and Central District

Developmental Adapted Physical Education Teacher of the Year for 2023. “I saw a lot of good teaching and classroom management,” he shared during the semi-structured interviews.

The graduate students were asked to find transition programs in four educational settings: extended school year (ESY), fitness programs for residential homes, adapted sports, and inclusive recreation camps. They created a brochure or presentation to share with students and parents during the transition section of the IEP meetings. Mr. W explained that the community project in our final program course was his most engaging experience. He stated in the semi-structured interview, "This was the most eye-opening project. I got to know my community and all it has to offer”. The graduate students’s choice of assignments and flexible schedules of online classes were also important to Mr. Wes because they allowed him time to train for races and spend time with his family.

Mr. Fritz, the New Father

Mr. Fritz is a new father. He is now seeing all the motor development he has studied over the years firsthand. He grew up in England playing “football,” which shaped much of his life. He said football taught him about hard work, respect, and teamwork. Mr. Fritz created a placement in the pre-interview activities that connected the positions on the pitch to characteristics he found essential to teaching and life.

Mr. Fritz teaches in Minnesota Region 10, in the southcentral area near the Iowa border. He is in a K-8 school and taught physical education and developmental adapted physical education in all K-8 grades with over 550 students. He did not earn his undergraduate degree in Minnesota. Mr. Fritz took 0 credits of inclusive content courses in his undergraduate teacher preparation program. He had been teaching for 11 years and had previously taught on a developmental adapted physical education out-of-field variance before starting the online

program and shared during the semi-structured interviews, “This program was a big eye-opener” for all that is required in special education. He did not serve students with disabilities in the 2021-22 school year because of scheduling difficulties within the school setting. Mr. Fritz did not plan to complete a master's degree in the future.

Mr. Fritz thought education in England was much more managed than students in the United States have experienced. They have more freedom and choice of programs and classes here. He remembers elementary school as creative play, desks, and field games. He didn't remember learning any specific subjects. One thing that does intrigue him is the student’s listening skills. According to Mr. Fritz in the semi-structured interview,

> I had been teaching a lesson in health and nutrition. When we were in the classroom, sometimes I sensed the kids were not listening or engaged in learning. They all filed out when the class was over, and that was that! The next day in the café, I overheard two students talking about what choices they should make when selecting the luncheon. They proceeded to start to tell others in the café' line what they should be eating! I couldn't reprimand them for being pushy. They were using my terms from the lesson. Now that is amazing!

The most rewarding piece of the online developmental adapted physical education program for Mr. Fritz was meeting a peer in the cohort and staying in touch after the program. In the semi-structured interview, he shared, "I don't make friends that easily because I am a bit shy; I appreciate the feedback and sharing we have done together, and I hope it continues." The hands-on assignments in his classes with his students and learning more about SPED Forms and the assessment process.

Summary

The researcher gathered the data in one-on-one Zoom recordings for the pre-interview activities and semi-structured interviews to create the participant portraits. Weber (1986) discusses the risks of interviewing and the critical nature of the experience in the data gathering process. Weber (1986) continued writing about the trusting relationships needed during the interviewing process and the listening that must take place to accurately present the data. The researcher had only met two of the six participants face-to-face before the study because of COVID-19. Creating the participant portraits by engaging with the demographic survey, pre-interview activities and semi-structured interviews, along with the prior knowledge gained during the online program, gave the researcher a more well-rounded perspective of the participants. The researcher was initially concerned with the possibility of conflict or misrepresentations of participants since there was a professional relationship between the instructor and students prior to the study. Using these portraits to gain a broader understanding of each participant allowed for a new perspective that was not previously known about the participants. Prior to the demographic survey, pre-interview activities and semi-structured interviews, the researcher had a professional connection to the participants through assignments, discussions, and presentations that were one-dimensional and educationally focused. Engaging with the participant portraits provided details as to the whole person, making their shared stories and experiences integral to the whole-part relationship in hermeneutics (Ellis, 2009).

Chapter 5: Research Findings

Education is not an affair of "telling" and being told but an active and constructive process.

–John Dewey (1938, p.46)

Through interpretive inquiry, this research explored the experiences of graduate students in an online developmental adapted physical education program designed to lead to license certification in Minnesota. The main question guiding the research: What were graduate students' experiences in an online developmental adapted physical education license program?
The sub-questions include: How did the license's program content (Appendix A: Standards of Core Skills and Content) contribute to the demands of physical education teachers when working with students with disabilities? What components of the online delivery format (Appendix B: Online Program Components) impacted the physical education teacher's learning process?
To achieve the research aim, the study utilized a demographic survey, pre-interview activities, semi-structured interview questions, and two follow-up meetings. The findings of this research have been presented into five themes. Themes are the interpretations co-created by the participants and researcher in a fusion of horizons of what is known and what has been discovered to answer the research questions. These themes came together by looking at keywords, which are single or multiple words that were heard and felt repeatedly through the interviews. Additionally, threads, ideas or concepts that were woven throughout the artifacts and interviews were clustered together to make sense of all data and create the five themes.

Theme One: Resilience in Teaching and Life

Teaching in isolation and in a shortage area requires professionals to be resilient.

The demographic survey indicated the regions of Minnesota where participants were currently teaching. The 11 regions determined by the Minnesota Department of Education are graphically depicted in (Appendix M) Minnesota Teaching Regions. Four of the participants teach in regions 1-10, which are listed as rural, and two teach in region 11, which is designated as urban. Teaching in rural and urban settings can present challenges for teachers, such as teacher shortages, leadership differences, and funding for schools. Minnesota is experiencing the same teacher shortages and lack of support in special education as is seen throughout the United States. Specifically, there is a deficiency of qualified developmental adapted physical education teachers (Minnesota Department of Education, 2020). Many times, this means teachers are the only developmental adapted physical education teachers in their building or the only physical education teacher in the district. Therefore, it is common to work alone within their department and travel to multiple buildings throughout the day. The following study determined that developemental adapted physical education teachers need to be resilient to care for themselves and the students they serve within this particular context *and* that resiliency is an important skill for success in the developmental adapted physical education license program.

Ms. Cali created Figure 11 as an artifact in the pre-interview activities. In it, she showed herself running over meaningful words and covering smooth ground as a strategy for self-care. She shared her drawing in these words,

> I am a teacher, mom of 3, wife, coach, and I run the pool. I run to get away. Let me tell you about my drawing. I run because it gives me freedom. Everything I do is scheduled and fast-paced. I don't mind fast, but I need time for myself. I am free, I think, and sort. It was when I did a lot of my thinking for classes and

teaching. As I run, I can feel the hats falling off. Then I am done. I am sad to be done. I pick up all the hats.

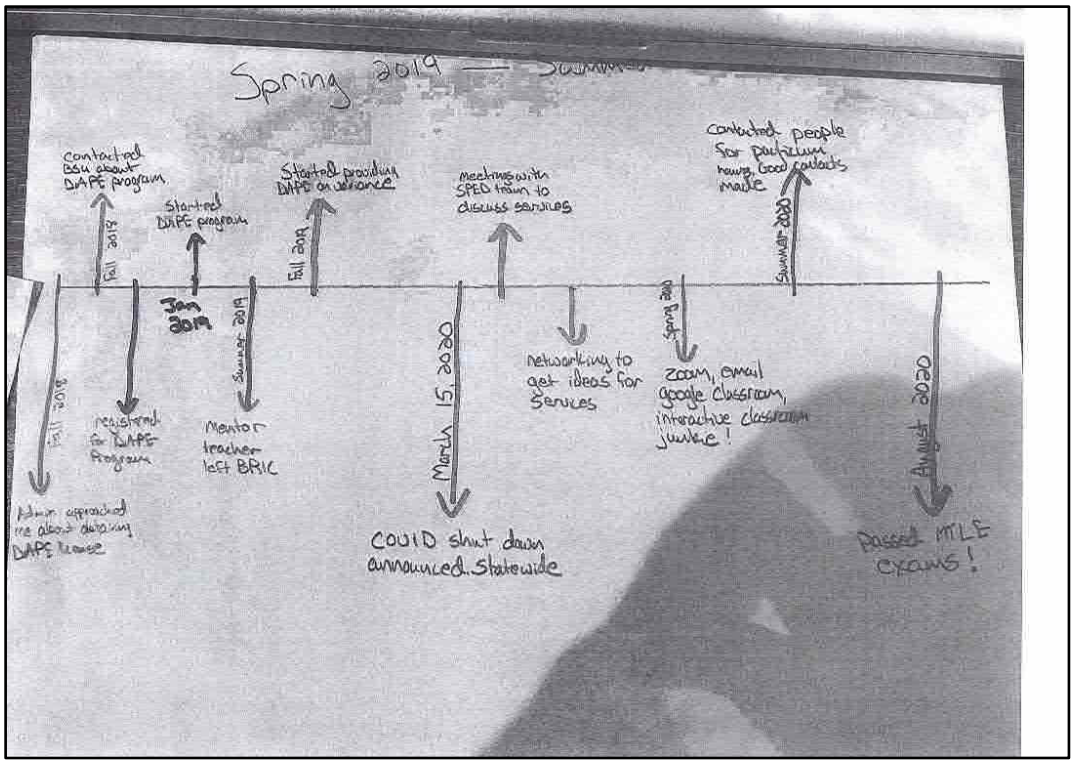
Figure 11

Artifacts About Me: Ms. Cali Running Free

Ms. Cali also explained in Figure 12 that it was a step-by-step process for staying focused and completing the online program. “This is how I got it done: set a goal and check it off,” she shared. Ms. Cali menitoned in the pre-interview activities that she set goals during individual classes to be able to check off little successes. The strategy helped her keep moving forward with the overall program. She explained she now looks back on the positives and the struggle to finish and get her license.

Figure 12

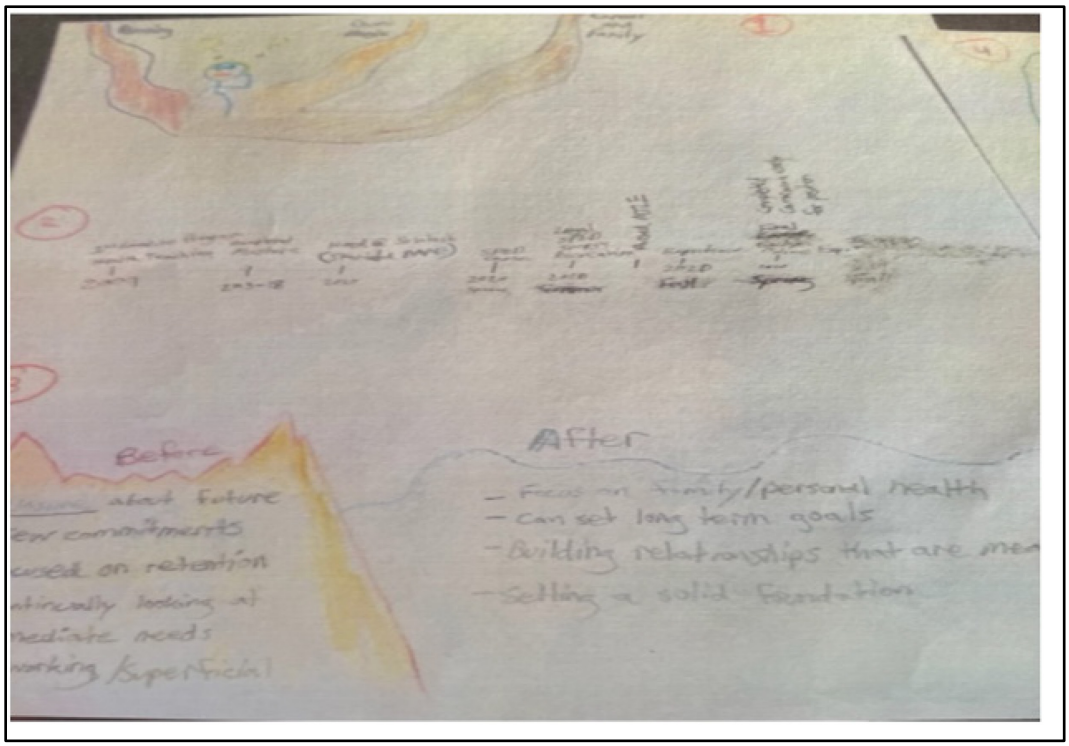
Artifacts About the Online Program: Ms. Cali's Timeline During the Program



Mr. Sal compared teaching before the developmental adapted physical education program to climbing uncharted mountains with peaks and ridges (Pre-interview activity). The terrain was difficult before he learned what he needed to do while teaching students with special needs. He was focused on job retention, immediate assessment needs, superficial networking with special education teachers, and unsure about the success of students. Figure 13 showed that after completing the online program, the ground was gentler, with rolling hills: "I felt like I had set a solid foundation, had built some relationships that were meaningful and positive, and I could focus a little more time on personal health without guilt" (Pre-interview activity).

Figure 13

Artifacts About the Online Program: Mr. Sal Moving Mountains



In the center of Figure 13, Mr. Sal displayed a timeline, "I was working day to day, with no time to breathe and no clue what I was doing. After the program, I still had very little time, but I was more focused… I did better for kids, too." The theme of resilience emerged because the participants dedicated their time to teaching and learning during the online program, which put added pressure and stress on them and impacted their health and families.

During interviews, participants shared stories of resilience from teaching students with disabilities in schools and districts providing little or no support and through tremendous teacher shortages. Their resilience persevered as they found an online program to meet the demands of teaching, coaching, and their busy personal lives. All of this was to obtain an additional license to possibly keep their teaching positions for another year. Reviewing historical enrollment data showed that only 13 out of 107 graduate students accepted to the program failed to complete the

entire program (Bemidji State University, 2023). The participants' stories contained examples of late nights and early mornings to complete assignments and be prepared to serve their students in the classroom. Mr. Sal shared in the semi-structured interview, "I am a very scheduled person; I keep the same routine almost every day." The participants also shared their humility for the students they work with daily: "They tried all the adventures at camp… even some things I was a little afraid to try." (Mr. Ren, Semi-structured interview). Mr. Rudy shared, "These kids and teachers go through hell and still show up every day when others just don't" (Semi-structured interview).

It was clear from the interviews that the needs of the students they taught were a priority for the participants. Even under the high demands of their personal lives and teaching situations, resilience was a necessary characteristic and a quality needed to be successful during the program. As a twenty-plus-year veteran of teaching developmental adapted physical education in numerous school settings, the experiences and stories of these professionals while reading and listening, were felt in my heart. Being resilient is a quality that will take educators a long way in a demanding career. Resiliency is not a core skill in the curriculum standards, however, being able to teach students to develop their own sense of resilience when they face a lifetime of physical, cognitive, and social challenges is necessary.

Theme Two: Making Good Choices for Everyone's Education

Making good choices for themselves as well as the students they were serving was discovered as a strong theme when participants confided their fears of teaching during the interviews. "Am I doing the right thing for students? What are the most valid and reliable assessments for a specific disability?" (Mr. Wes, Semi-structured interview). "Did I choose the best program?" (Mr. Fritz, Semi-structured interview). "How do I know if I will be ready to take

on every disability I might encounter in my gym?" (Ms. Cali, Semi-structured interview). These are a few of the questions that were shared in the interviews and follow-up meetings. The participants were highly concerned about "doing the right thing" and not letting parents and students down because of a lack of knowledge or skills. They had concerns about being strong members of their motor teams during planning meetings. Personal fitness and health were also key words when making good choices. The participants discussed having the physical and mental strength and flexibility to do the job physically while remaining focused, relaxed, and calm in stressful situations. Interviews included the threads outdoors and family time as stress management techniques when coping with the demands of teaching students with disabilities. The connection with nature and relying on their support networks gave participants the mindset to make good decisions. One participant shared coping skills for the hectic school year, including working at a camp. "Spending this time at the summer camp helps us connect… it is where we breathe deep" (Mr. Ren, Pre-interview activities). When Mr. Ren was sharing in the pre-interview activities about his summer workplace, he said,

> This is where we spend our summers. Out East. I have worked at this camp for 16 years. I met my wife here; our children were born here. My nephew with Autism Spectrum Disorder is a camper here. It is where I breathe and relax. I completed, you know, a Master of Teaching on inclusive camps or not inclusive camps. It is family and outdoors.

The coping skills that participants used, along with the personal time for respite, put them in a more favourable position to make informed decisions for themselves and their students.

Figure 14

Artifacts About Me: Mr. Ren's Summer Camp View

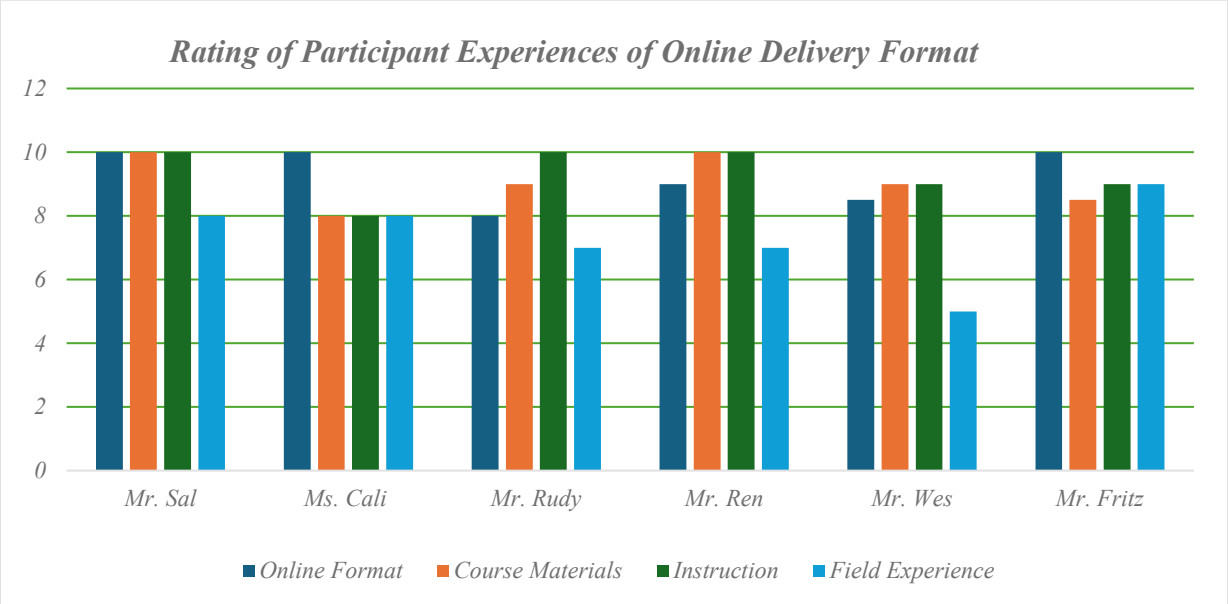
Mr. Ren created Figure 14, a colourful camp landscape where he had worked as a counsellor for many years. "The camp, he explained, is located in the eastern United States, and my family and I have lived there for many summers. Jen and I met and married there. The boys have grown up on the water. It is the constant place of happiness for us." He shared, "This is where we breathe deep, relax, and recharge." Mr. Ren showed the green-shaded mountains and blue water and said, "The purple is the peace I feel when I am there." As the boat and waterfront director, Mr. Ren shared his new thoughts about how the camp could be more inclusive and how he could add equipment and training to expand the opportunities for campers. Mr. Ren went on to finish a master's capstone project, assisting camps in becoming accredited as inclusive camps in the State of New York. He created a website where camp directors can review the national criteria checklist of the national guidelines and develop an action plan to achieve

accreditation. Participants spoke about how time for rest and connection of places that allowed them to think and process were essential to making good choices in their teaching.

One survey question gave further insight into how making good choices for everyone's education is also required for program decisions and how the graduate students experienced being in the online developmental adapted physical education program. Participants were asked to rate each of the program formats and the content deliveries on a scale from 1 to 10 points as it contributed to their overall learning and program completion. The four components of inquiry were the online format, course materials, instruction, and field experience. The results in Figure 15 were organized by individual participant responses. Ten points was the highest rating, and 0 was the lowest rating.

Figure 15

Demographic Survey Rating Scale of Participant Experiences of Online Delivery Format and Content Deliveries- Individual Participants



Mr. Sal, Ms. Cali, and Mr. Fritz rated the online format as 10 out of 10 as a component for choosing the online program and the success of completion. Mr. Sal, Mr. Rudy, and Mr. Ren also ranked instruction as 10 out of 10. Mr. Sal and Mr. Ren also rated course materials as 10 out of 10. The participants were then asked to rank the same components from 1 to 4 in the order in which they best contributed to their overall learning and program completion. Data from the demographic survey indicated the following rankings: (1) the online format, (2) asynchronous instruction (3) course materials, and (4) field experience. Participants reported field experiences outside the gymnasium, in a special education classroom setting, were less meaningful to them than those with a developmental adapted physical education mentor. Participants also expressed that field experiences and course materials with no hands-on learning component were the least beneficial. These data show that participants were more concerned about the current students they were working with and the materials they needed each day to help support them in making informed choices about their student programming and their personal education. This aligns with the pillars of adult education as to immediate results and student-focused (Knowles, 1989). Table 6 shows a ranking of participant group scores on program format and delivery that benefited the graduate student's overall learning and program completion.

Table 6

Demographic Survey Ranking Scale of Components of Program of Online Delivery Format-Composite of Group

Components of Format and Delivery	Ranking Format and Delivery Components
Course Materials	**3**
Field Experience	**4**
Instruction (Asynchronous)	**2**
Online Format	**1**

Along with the experiences described when discussing the participants' artifacts, the theme of making good choices emerged again during the questions related to the online instruction format and which components contributed most to the learning process for participants. The participants felt they needed additional training to meet the needs of the students they served, which would enhance their skills to help them make good choices for their students. The online programs and material resources gave them access to the format they needed to gain the knowledge that would also meet their needs as a graduate student. Being able to complete an additional license bolstered their confidence to make good choices for students. Freeing up time not having to travel and be away from work and family lightened the time schedule burden which let them be more self-directed in making good educational choices. Many of the program's assignments and projects were created to encourage participants to observe or assess their students in a hands-on format in hopes of a richer transfer of learning. This fostered self-directed learning and efficacy while being supported by a mentor and a university supervisor. The increased self-efficacy allowed participants to feel confident in making good choices for themselves and for the students with disabilities they serve.

Theme Three: Building Relationships

The graduate students discussed connecting with school families in team meetings, classrooms, and sports. Some reoccurring keywords that evolved into this theme were team, co-workers, collaboration, connections, families, friends, peers, teambuilding, and organizations. Mr. Sal shared in the semi-structured interviews, "I use football as a teaching tool, football as life-long learning. We start talking teams and games and move to social skills and life lessons." Trying to collaborate with peers and coworkers to accomplish tasks was an objective for most of the participants, even though they discussed the lack of time and resources to sometimes reach

the team goals. “I had a hard time when I first started discussions, like getting out of my comfort zone to connect with others in the class,” Mr. Rudy stated in cluster 4 of the semi-structured interview; “by the end, I was feeling better.” Learning through discussion gave the participants peer interactions that helped them build relationships with others in their field of study.

Professional organizations, conferences and networking in physical education and developmental adapted physical education settings were considered beneficial for skills and knowledge but primarily for connecting with other teachers in similar situations. Building relationships with families outside the school setting in adapted sports or community events seemed to be a priority. “I liked the conference at Camp Courage and getting to see people’s faces. Networking with others was cool,” explained Mr. Fritz in the semi-structured interview. Building relationships was also one of the teaching strategies the instructor used when creating discussion posts for asynchronous instruction. The purposeful peer groupings, intertwined with instructional strategies, were rated as an impactful element in the participants’ learning process in the demographic survey.

The researcher also connected the participants’ number of years of teaching asked in the survey to benefit from building relationships with coworkers, students, and parents. The participants’ years of teaching physical education ranged from 2 to 15, with an average of 9.3 years of service. Relationships and school support came up frequently in discussions. Participants who had been teaching longer seemed to discuss the relationships with parents and students as making the demands of teaching seem easier. The participants who had taught for fewer years seemed to have more concern about needing to build relationships. The number of years teaching continuously at one school was not asked of the participants but may have proved beneficial to the findings of building relationships.

When identifying which core content and skills were most beneficial to the demands of teaching students with disabilities, the survey results indicated building relationships was critical in course content and for skill development. Table 8 lists the ranking of each core component and the specific skills included in the program content (assignments and assessments). The scope of practice in developmental adapted physical education serves students from 3 to 21 years of age; this was ranked second as a beneficial component to meet the demands of teaching students with disabilities. Within the scope of practice component are field experience and community transition, which are practical experiences. Participants expressed positive experiences working with students who varied in age, and they felt more confident in making relationship connections with students from having these experiences in their program.

Table 8

Demographic Survey Ranking of Core Content Standards and Skills – Composition of Group Rankings

MN Core Content Standards and Skills for DAPE	Most Beneficial Components
Scope of Practice: Pre-k -21 Field Experience Community Transition	**2**
License Requirement: SPED Minnesota Testing & Licensing Exam/National Education	**4**
Subject Matter: Content Knowledge Due Process Motor Assessment Motor Evaluation Evaluations Reports Special Education Form Computer Program Individual Education Plan Creation Conducting Meetings Universal Design Lesson Planning Teaching Strategies	**1**
Continuing Education: Professional Professional Development	**3**

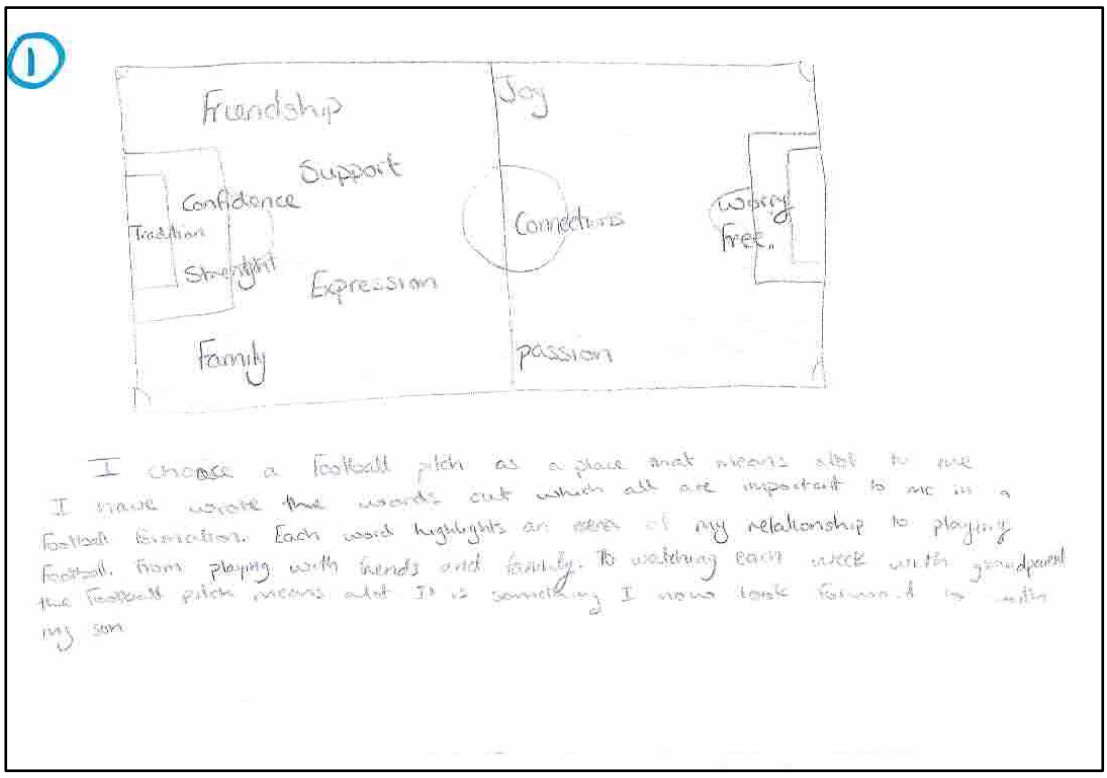
Note. A comprehensive rating of each core skill within each component can be found in Appendix N.

Mr. Wes shared, “I was happy with the fast pace of the course and learning about transition; yeah, transition, that is an area I didn’t know much about before our graduate project in the summer.” Transition in Minnesota is required to start at grade 9 or 15 years of age. The individualized education plan has a specific section on motor services and developmental adapted physical education focused on lifetime leisure activities. Teachers are required to implement a transition plan with input from the student and family to teach skills and knowledge, build relationships, and connect to the community during the final years of high school. In their final semester, participants explore their school’s community and develop a transition survey tool and presentation to share with students, families, and peers in their school setting. The graduate students are asked to find transition programs in four categories: extended school year (ESY), fitness programs for residential or homes, adapted sports and inclusive recreation camps. They create a brochure or presentation to share with students and parents during the transition section of the IEP meetings. Mr. Wes explained, “The community project in our final DAPE course was my most engaging experience.” He stated, “This was the most eye-opening project. I got to know my community and all it has to offer."

During the pre-interview activities, Mr. Fritz created a placemat with meaningful words designed as a football pitch. He explained, “Each word highlights my relationship with playing football and the connection to family and friends. The pitch is something I look forward to sharing with my son.” This participant was excited to share movement education and character building of sports in the relationships with his son.

Figure 16

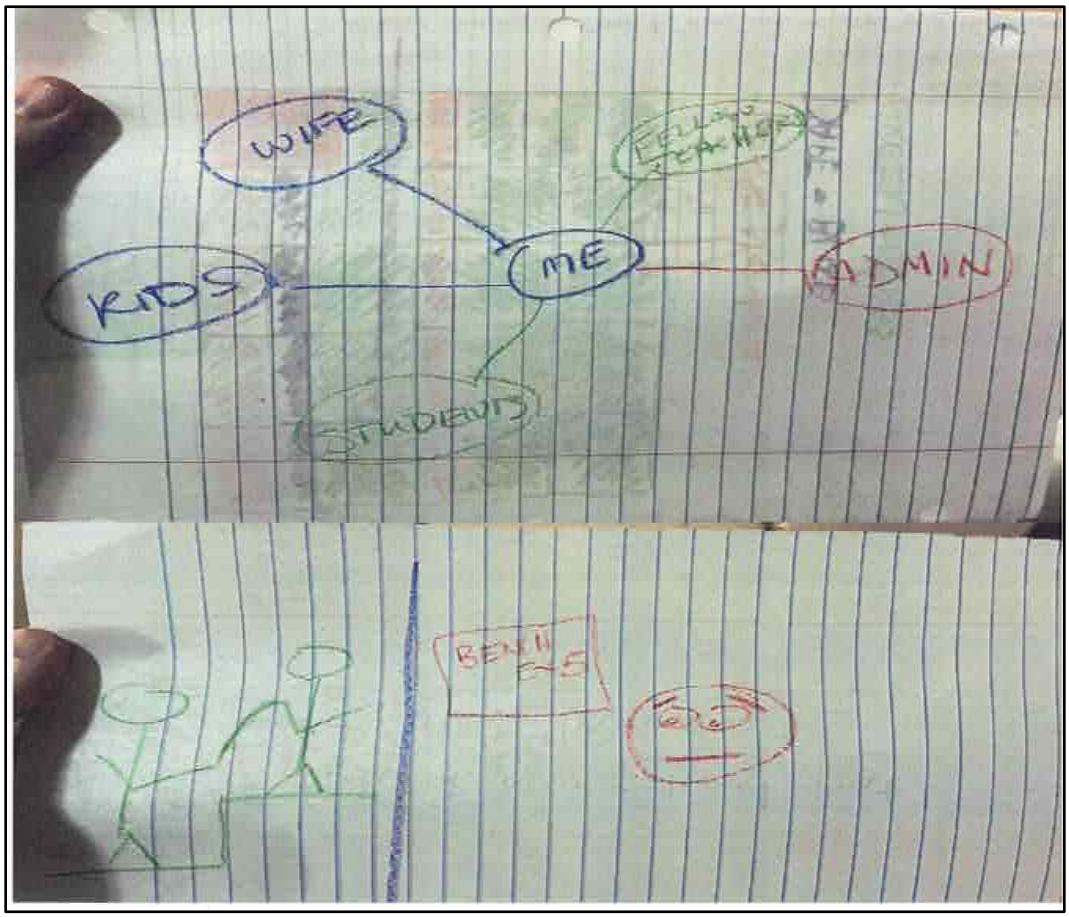
Artifacts About Me: Mr. Fritz's Important Topics About Life.



Mr. Rudy was apprehensive about drawing and creating the artifacts. When we did the interview, he said it was much more fun than he had thought, and he wished he had spent a bit more time on it. "My support network comes from all angles, school and work (Pre-interview Activities)." Mr. Rudy feels very supported in all he does in life. The question about being in school was more difficult for Mr. Rudy to recall in Figure 17. He said he always had friends, but sometimes, the expectations of academics were confusing or complicated to understand.

Figure 17

Artifacts About Me: Mr. Rudy's Support Network and Experiences



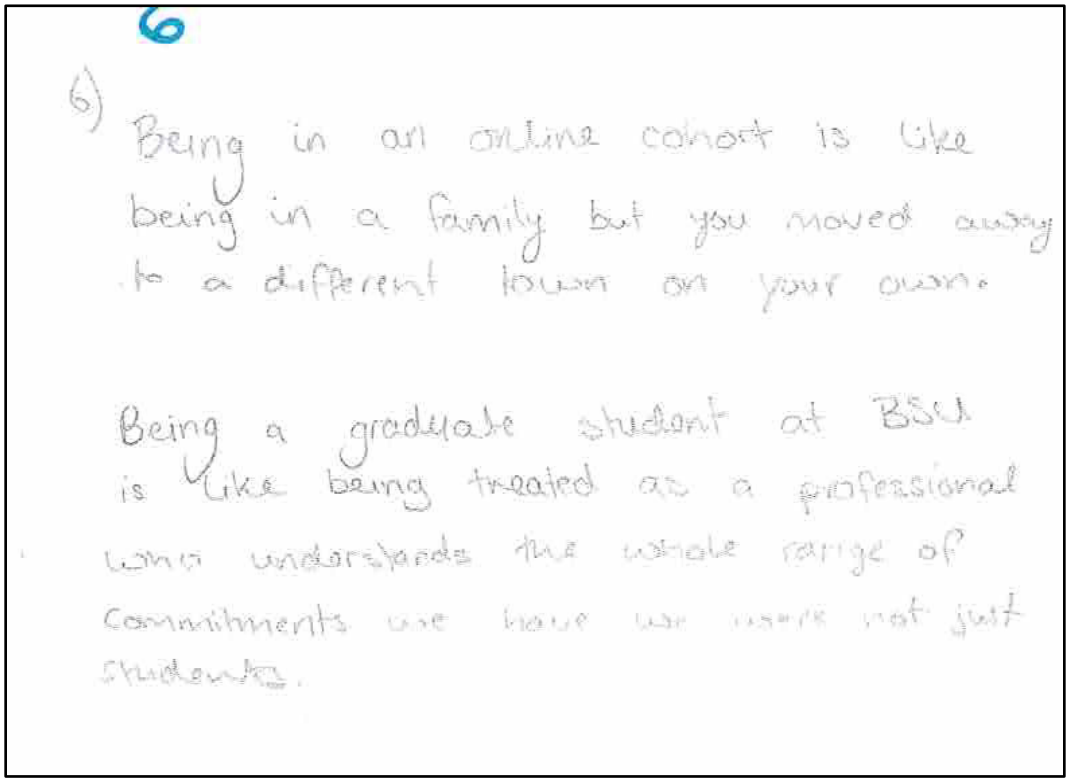
When discussing Figure 17, I asked about the online cohort and being a graduate student. Mr. Rudy stated, "At first, online felt like the first day of school. I had no friends and wandered around because I hadn't done online work before. Then, getting further into the graduate program was like coming home. I had friends and liked the content." It is necessary for instructors to recognize the need for graduate students to build relationships during online programs, and fostering the development of these relationships should be part of the program design.

Ms. Cali wrote two statements about her experiences in the graduate program. The questions asked were, what is it like being in the cohort model and what is it like being in a graduate program? “Being in an online cohort is like being in a network of people with a common goal. Being in graduate school at BSU is like being part of making my school gain an opportunity for students” (Ms. Cali, Pre-interview activities).

In Figure 18, Mr. Fritz shares his experience in the online program: " It's like being in a family, but you moved far away to a different town. Being a graduate at BSU is like being treated as a professional who understands the whole commitment and is not just a student.”

Figure 18

Artifacts About the Online Program: Mr. Frtiz’s Online Graduate Educational Experience



Running and drumming are passions in life for Mr. Wes. He brings those two activities into his teaching and family, which help him build relationships and share that passion with

others. For example, during the pandemic, Mr. Wes created a set of drumming videos to share with his students. He dressed up as different characters in each video. He said, "It was the most fun I had teaching, and it took a pandemic. I'll be doing things a little differently from now on. I learned during COVID". Figure 19 is an artifact he shared of his wedding day. His wife is dancing with her dad, and he and his dad are playing the drums for their first dance. He explained, "It was the best day of my life, except for my kids, of course; I got to play drums with my dad; he taught me how, and my wife was so happy dancing with her dad." Personal relationships were very meaningful to Mr. Wes and this highlights how the graduate students bring who they are into their teaching to form those powerful relationships with students and colleagues.

Figure 19

Artifacts About Me: Mr. Wes's Wedding Performance

Mr. Wes believes wholeheartedly that we need to be role models for the students we teach.

> We should be kind, passionate, and caring individuals that live a healthy and active lifestyle," he shares. "I tell my students what races I run, my times, and my training plans. They need to know they, too, can do anything they choose to do!

Mr. Wes is exceptionally proud of his running accomplishments and adds his love for physical education as a bonus to his running. Therefore, in his explanation of how he interacts with students, Mr. Wes demonstrates the importance of building relationships with those around you in this profession.

Building relationships is a key benchmark in standard 4 of the Minnesota Physical Education academic outcomes. Physical education teachers build physical relationships in movement education and social relationships in their community of learners. It makes sense that a strong theme of building relationships would emerge in the research with participants.

Theme Four: Moving Forward

There were times during the program when the participants thought they might quit or felt like they couldn't keep up with the demands of family, work, and school. Ms. Cali claimed, "Taking classes, being a parent, and still having a little life was the most difficult, but having others in the same situation helped." Mr. Wes shared his experiences with the program's core content and skills, "was like the icing on a cupcake" Another participant added, "We learned about motor skill development in undergrad, but what if there is a delay in development how do we accommodate or modify for that? That is what I needed most" (Mr. Rudy, Semi-structured interview). Mr. Fritz shared during semi-structured interviews that he couldn't believe "the continued growth of his students from the time he started teaching developmental adapted physical education in size and maturity and the need always to be challenging ourselves as teachers to find new and innovative activities."

The theme of moving forward emerged from listening to participants share their needs to keep up with new teaching strategies and the demands of teaching students with disabilities. The participants indicated that teaching strategies, including inclusive activities, class management, and equipment, are significant elements contributing to the demands of teaching students with disabilities. By continuously moving forward with new forms of technology for instruction, even some of the resources they used during distance learning, like podcasts and YouTube channels, they felt more informed about new strategies, activities, and innovative ideas that reduce the demands of teaching students with disabilities.

Teachers working under an out-of-field permission variance for developmental adapted physical education have no training focused specifically on instructing students with disabilities. School districts may offer teachers the option to work on a variance license before completing a licensure program. Two out of the six participants had worked under the variance but chose to continue in their educational journey to complete their license. The decision to add a developmental adapted license shows the participants' drive to keep moving forward in their careers and their knowledge of inclusion.

Three of the six participants had completed a master's degree before completing the online developmental adapted physical education program at Bemidji State University. It was shared during the interviews that participants did not have the opportunity, when earning their undergraduate degrees, to complete a developemental adapted physical education license at their universities because the program was not offered. The researcher believes the success of participants in master's programs may have added to the decision to complete a developmental adapted physical education program. It is also thought the additional prior experiences in a master's program may have added to the success of the online program.

As part of the process of moving forward in their education, participants shared artifacts of detailed schedules that aided them in staying on track and organized with jobs, schoolwork, and personal lives. In Figure 20, Mr. Rudy explained in the pre-interview activities, “Red is my time, blue is developmentally adapted physical education, and green is general physical education. We have a 2-hour late start every Monday for planning.”

Figure 20

Artifacts About Me: Mr. Rudy’s Schedule

Figure 21 shows the schedule for running, family, and teaching organized by weekday and weekend created by Mr. Wes in the pre-interview activities. He expressed that he had to be highly organized to complete everything in his life.

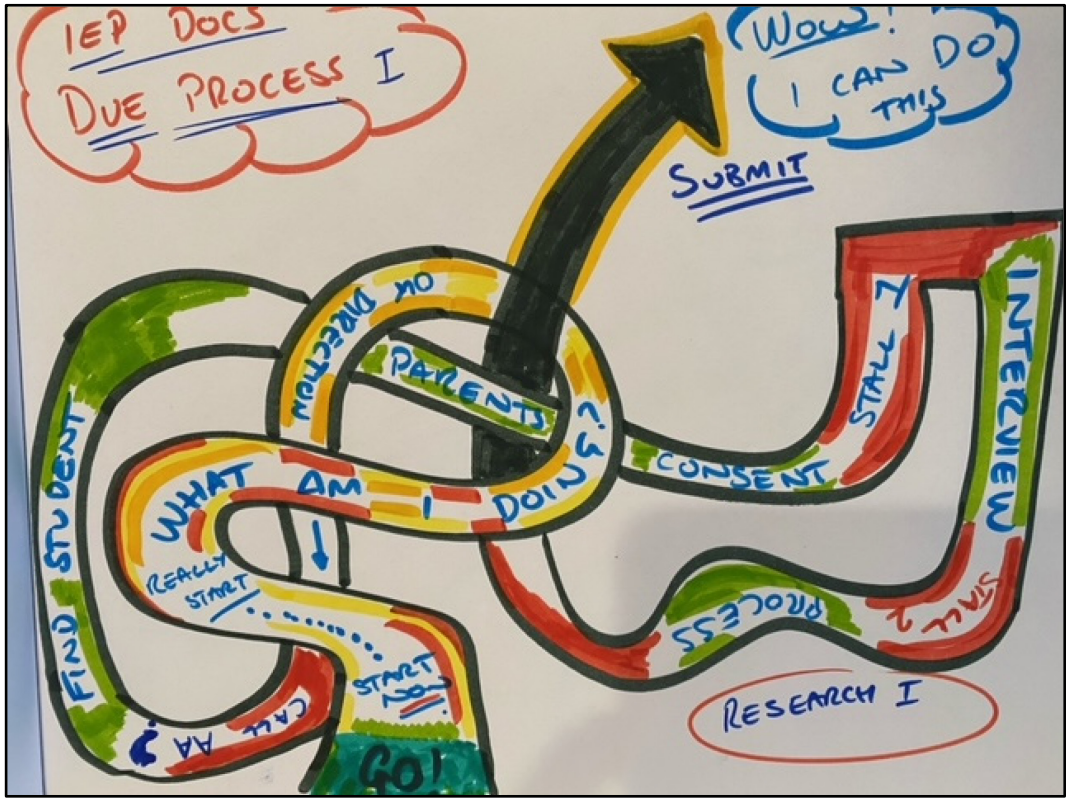
Figure 21

Artifacts About Me: Mr. Wes's Schedule

Figure 22 is a pre-interview activity that uniquely depicts Mr. Ren's journey through the developemental adapted physical education program and into the Master of Special Education program as a twisting, turning pathway full of questions and doubts, ending in success and confidence.

Figure 22

Artifacts About the Online Program: Mr. Ren's Pathway to Learning



This is how I felt when I started the program and moved on to the Master in the Art of Teaching. I was going to start, but some programs were not what I needed. Then, I started again. I didn't know what I was doing. The colours show when sometimes I went faster or slower. And then, WOW, I can do this.

"The Minnesota Teacher License Examination was pointless, and I didn't know more after I took that exam." Mr. Ren appreciated that our classes focused on time in the classroom, teaching strategies, and real-life situations. He enjoyed working with his peer partners, and the small things he learned stuck with him the

most. Moving forward for the participants meant continuing their education in an online program, learning the skills they needed for the added role they would have teaching students with disabilities, and organizing their daily schedules so they could make progress and feel they had accomplished their goals.

Theme Five: Learning Through Movement

The participants talked extensively about students who needed more motivation to learn in the classroom but would come to the gymnasium and be successful. They expressed how movement and activity were vital to student success no matter what that movement resembled through modified equipment or accommodation of rules and strategies. Likewise, the hands-on learning experiences in the developmental adapted physical education program coursework rank high on the list of content and skills. “If I can use it in the gym while learning it, I feel more successful” (Mr. Sal). Mr. Wes shared, “I was happy with the fast pace of the course and learning about transition; yeah, transition, that is an area I didn’t know much about before our graduate project in the summer.” This theme aligns with the ranking of the scope of practice as a significant element contributing to the demands of teaching students with disabilities and gaining experience with students ages 3-21 years.

Choosing an undergraduate teaching degree in physical education means you like to move and teach movement. To get a broader understanding of the participants' movement experiences, the researcher investigated where undergraduate work was completed, if they were currently teaching developemental adapted physical education, and the number of credits of inclusive coursework they had completed in their undergraduate degree. Having insight into prior experience with movement and knowledge of movement made a connection with how the participants like to learn.

Two of the six participants had an undergraduate physical education degree outside Minnesota. Four participants attended Minnesota's colleges or universities and obtained a K-12 physical education undergraduate degree leading to a teaching license. Five participants taught developmental adapted physical education in their school or district at the time of the research. The sixth teacher had been moved to a new position during the research year. Mr. Fritz would return to a developmental adapted physical education program in the 2022-23 school year to teach students with disabilities. The range of inclusive, adapted, or developmental-adapted physical education credits completed as undergraduates by participants ranged from zero to more than 10, with an average of 5.6 credits. Three of the six participants had three or more credits during their undergraduate programs.

Figure 23 was created by Mr. Ren when he shared his experiences as a competitive rugby player growing up in England. The spiral depicts the path he followed during his social-emotional learning as his level of skills increased from a 10-year-old to a 42-year-old teacher who still plays and coaches. Following the colour changes as his skill levels progressed, he explained, “I started red; my anger while playing decreased as my skills and knowledge grew.” Mr. Ren showed his middle and high school grades when he learned that “rugby could be calming mixed with fun, and he formed relationships.” In his later years of professional play and coaching, he is “rarely angry” and teaches the fun and “brotherships’ of the game. Mr. Ren: “I played rugby in high school, then professionally, and now as a coach. I have mellowed in a sense.” Mr. Ren’s comments, *“*I used colours to make three drawings that symbolize how my experience as a student has changed over time.”

Figure 23

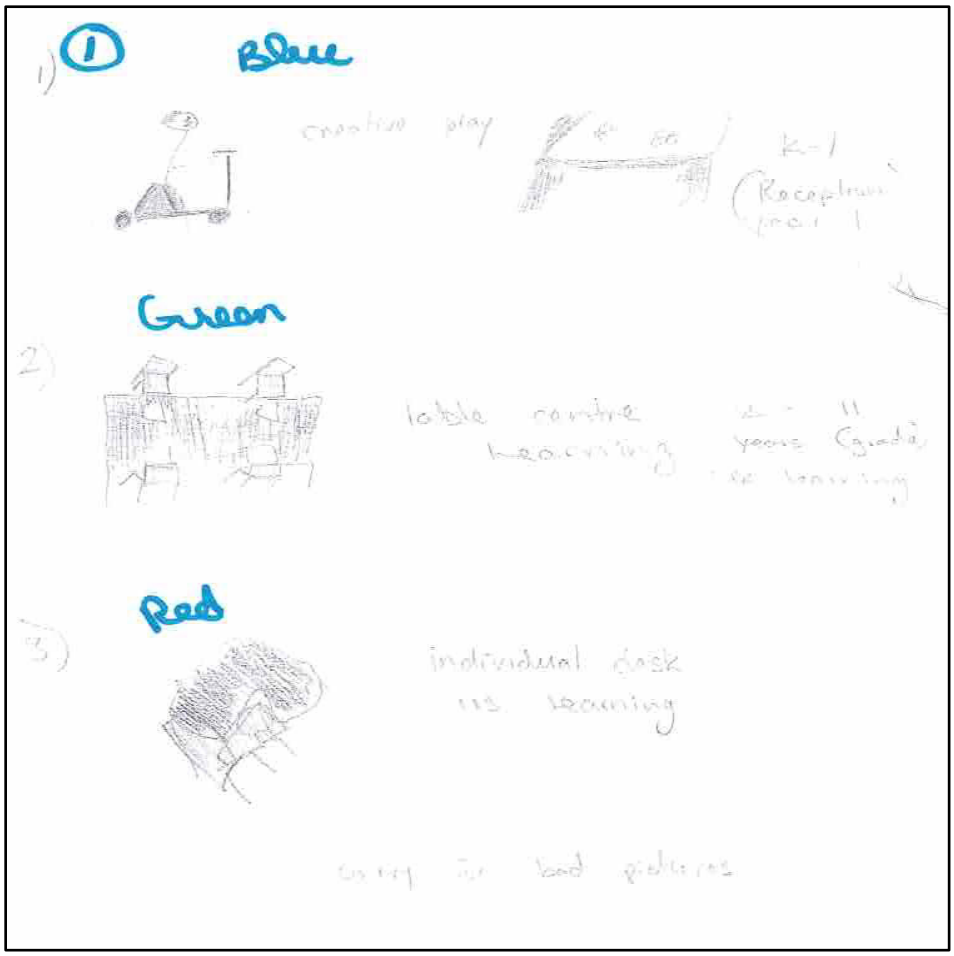
Artifacts About the Online Program: Mr. Wen's Learning Experiences

Mr. Fritz confessed, "Getting to practice different motor assessments with my students with my mentor's help made me feel more confident that I was going to do it correctly on my own." Assessments can be lengthy to administer and complex to score. The graduate students had the opportunity to explore a variety of assessment tools for students ages 3-21 years of age.

In Figure 24, Mr. Fritz reflects on his educational beginnings in England: " We had lots of creative play when we were very young, like grades K and 1. Then I remember tables where we learned, little centers. Then, later, individual desks. It was very disciplined and strict, not like the USA. I think that is why I like physical education so much, learning through play and exploration in elementary school."

Figure 24

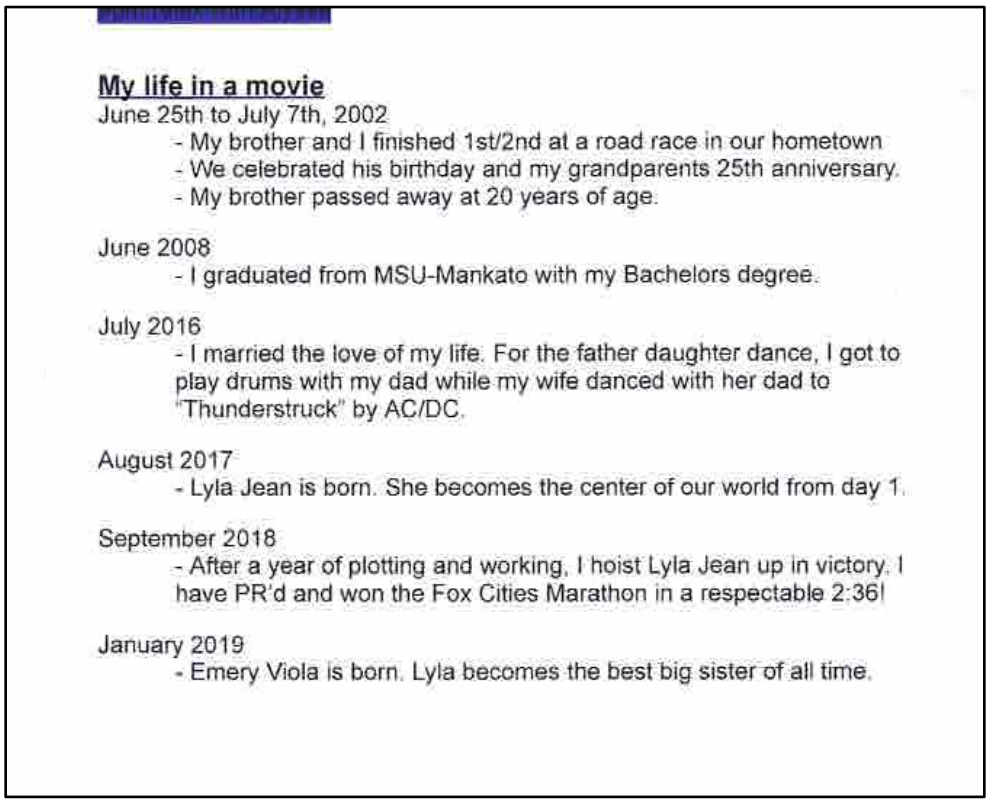
Artifacts About Me: Mr. Fritz's Educational Journey



The researcher was not surprised two participants chose to create a movie script. Physical education teachers are always on stage when teaching in the gym. "Since I was a performer on stage and in a band, a movie would be pretty cool," Mr. Wes shared. In Figure 25, he listed the scenes he would like to see in a movie about his life. "There would be one sad scene—I lost my bother… and the rest would be happy and exciting," he expressed.

Figure 25

Artifacts About the Online Program: Mr. Wes Movie Scenes



My life in a movie

June 25th to July 7th, 2002
- My brother and I finished 1st/2nd at a road race in our hometown
- We celebrated his birthday and my grandparents 25th anniversary.
- My brother passed away at 20 years of age.

June 2008
- I graduated from MSU-Mankato with my Bachelors degree.

July 2016
- I married the love of my life. For the father daughter dance, I got to play drums with my dad while my wife danced with her dad to "Thunderstruck" by AC/DC.

August 2017
- Lyla Jean is born. She becomes the center of our world from day 1.

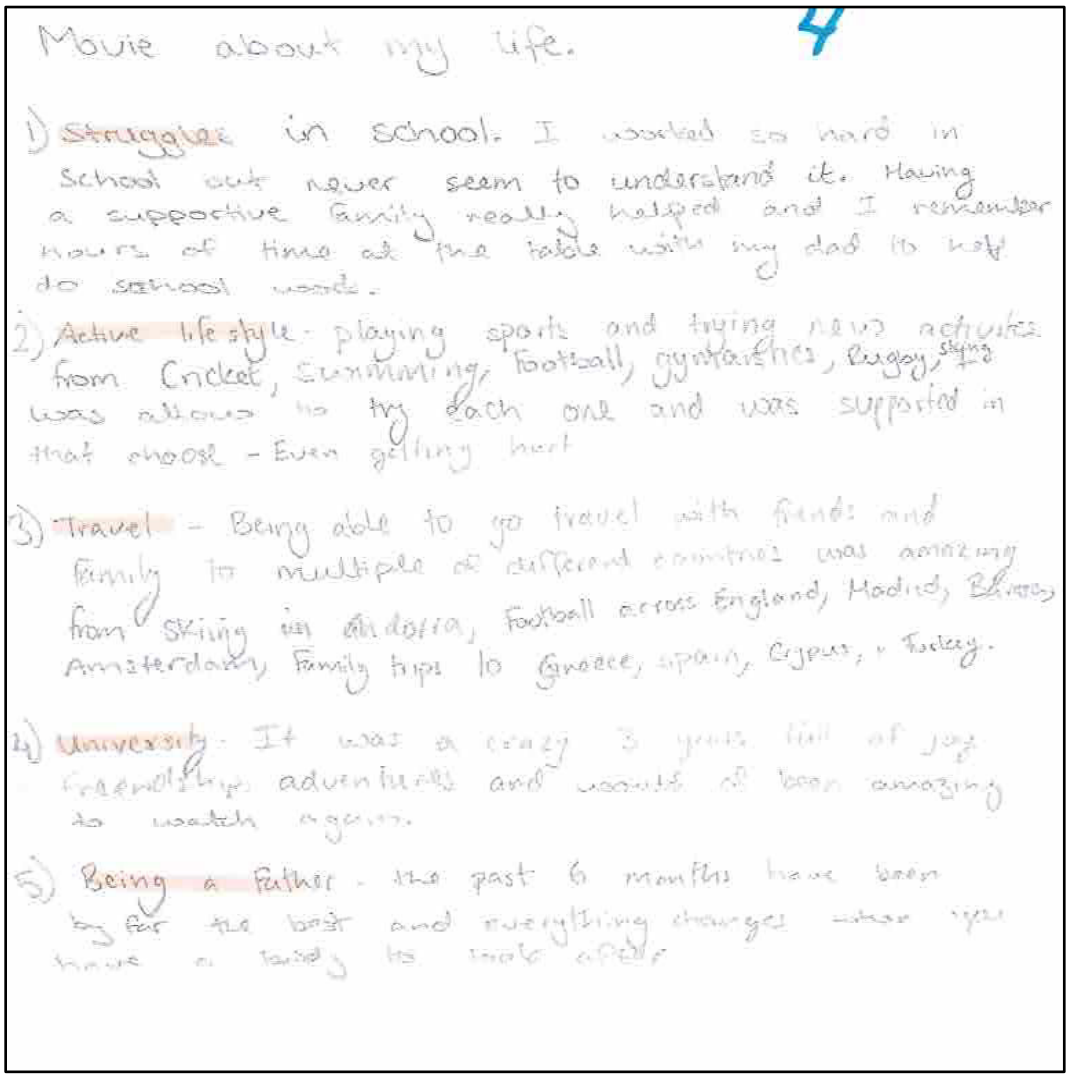
September 2018
- After a year of plotting and working, I hoist Lyla Jean up in victory. I have PR'd and won the Fox Cities Marathon in a respectable 2:36!

January 2019
- Emery Viola is born. Lyla becomes the best big sister of all time.

The first scene in Mr. Fritz's movie is about his struggle in school. He shared, "I worked so hard but never seemed to understand. I remember hours of time with my dad to help with schoolwork." The additional movie clips in Figure 26 are sprinkled with sports, travel, and university experiences and wrap up with his new changes with being a father. The artifact depicting movement through life and movie scenes shows the participants' realization of their love for movement and the way they learn best. The action words, along with life lessons and accomplishments, seem to give them a purpose and comfort to be who they truly are in life. This active lifestyle and vision of themselves as movers make sense since they chose the field of physical education.

Figure 26

Artifacts About the Online Program: Mr. Fritz's Movie Scenes



Chapter 6: Discussions

"Research is seeing what everybody else has seen and thinking what nobody else has thought."

- Albert Szent-Györgyi

This research aimed to understand the graduate student experience in an online developmental adapted physical education program after exiting the program. The specific objectives of this research were to (a) understand the impact of the individual core components of the developmental adapted physical education license program, (b) understand the impact of the online delivery methods of the developmental adapted physical education license program, and (c) guide future programs when designing frameworks for online developmental adapted physical education programs. The main question guiding the research was: What were graduate students' experiences in an online developmental adapted physical education license program? Specifically, how did the license's program content contribute to the demands of physical education teachers when working with students with disabilities? And, what elements of the online delivery format impacted the physical education teacher's learning process?

The research findings illustrate that graduate students had educative experiences, those that are positive and contribute to the continued desire for learning (Dewey, 1938), in the online program. Specifically, the online/asynchronous delivery methods were positive contributions to their success because it was a flexible online program for their diverse and complex lives as teachers, family members, and individuals who passionately strive to create positive developmental adapted physical education experiences for students with disabilities. In the findings, it was also discovered the core content standards, content knowledge, and scope of practice help teachers meet the demands of teaching students with disabilities in an adapted

physical education classroom. In the following sections, the five fundamental takeaways from this research run parallel to the theoretical lenses of Dewey's theory of experience (1938) and Knowles's theory of andragogy (1989). The takeaways include (a) providing online learning opportunities for graduate students, (b) building on prior educational experience as a foundation for future learning, (c) delivering quality content knowledge and skills, (d) increasing practical hands-on learning through active learning, (e) include positive examples of collaboration across multiple settings. The takeaways further explain the graduate student experience in the developmental adapted physical education online program. Additionally, the findings are supported and compared to literature in the field to help better understand how these experiences can contribute to the literature on teaching graduate students online and program development for developmental adapted physical education licensure.

Provide Online Asynchronous Learning Opportunities for Graduate Students

Findings in this study from the demographic survey showed that the online format is the number one reason for a participant's success in completing the program. The second most beneficial component of online program completion by graduate students was asynchronous instructional strategies. Participants reported that locating a fully online program in developmental adapted physical education is challenging. Searching for a program format that fits their schedule and budget while meeting the educational goals of licensure means researching and applying to programs in which they might not be accepted. Through asynchronous instruction, they were able to engage with program contents. Yet, it provided the learners with the flexibility and free time to also focus on personal fitness and wellness, which was reported to be a way to deal with the added stress and demands they felt from teaching. Students were able to access the course materials, discussion posts, peer projects, and

instructional recordings in their own timeframe. The online format supported the participants to choose how and when they want to engage with course content and skills and to apply practical instruction immediately in their classrooms to help meet the demands of teaching students with disabilities. Knowles (1970) presents these strategies as assumptions of adult learning, taking responsibility for their learning and immediate application of skills. The online asynchronous format of the Bemidji State University program contributed to the graduate student experience by providing the opportunity to add an additional license to their existing credentials while working as an in-service teacher.

Healy et al. (2014) reported that few universities or colleges offer online adapted physical education courses. Some programs included a hybrid model format that had additional face-to-face course requirements that would not allow students to continue working in a school setting while making progress toward an additional license. There were three such programs in Minnesota (MNDAPE, 2023).

Block et al. (2016) suggest that many physical education teacher education training programs would need more physical space on campuses to add developmental adapted physical education program courses; thus, they have turned to online programs as a solution. Bemidji State University is an example of such a school. There was one gymnasium on campus that was used for men's and women's athletics as well as methods classes for physical education and health. Furthermore, there is a decline in the number of qualified faculty members because of the gradual reduction in doctoral training programs, leaving many universities in need of professors with specialized knowledge to teach these courses (Block et al., 2016). The researcher was the only physical education and developmental education licensed teacher at Bemidji State University. The literature showed there was a continued shortage of developmental adapted

physical education teachers in Minnesota and throughout the United States (Minnesota Department of Education,2020; United States Department of Education, 2021).

Healy et al. (2014) discovered the benefits of online education courses in developmental adapted physical education, including flexibility in program and coursework, increased learning opportunities, and an expanded community of learners on which to build and share experiences. The findings from this study align with the findings of Healy et al. (2014) in that participants reported flexibility in the program and coursework to be a benefit to their ability to complete the program. Harris and Martin (2012) found that even though students access online programs for convenience, flexibility of programming, and fitting schedules, the key to growing programs is to retain students during the program by meeting their educational goals. Students in this study voiced several comments as the reasons they continued to the completion of the program at Bemidji State University. For example, participants stated that online office hours and scheduled advising sessions helped them to stay on track and guided during the program. Harris and Martin (2012) found that students often chose online programs for logistical reasons, but the motivation to stay on track and finish the program was their personal persistence in completing an online program. Moving beyond developmental adapted physical education programs, it may be beneficial to provide online asynchronous for other higher education programs to provide flexibility, reduce costs, increase program varieties, build self-paced course materials, and help students complete programs with less stress.

Building on Prior Educational Experience as a Foundation for Future Learning

Participants in the research brought their prior movement experiences as physical education students in elementary, middle, and high school to the study. Most participants shared that they had also been involved in organized sports in school or community settings. Several

participants had backgrounds in or were coaching in one or more athletic settings. All participants had completed a teacher preparation program in physical education as part of the undergraduate experience, which included numerous field experiences, practical experiences, and student teaching under the supervision of a licensed teacher. Dewey (1938) believed that students enter the classroom with experiences from life lessons and their past educational experiences. These past educational experiences influence or impact the learners' current experiences by connecting past information to content and skills. The graduate students entered the program with movement experiences that supported their foundation on which to build the needed content knowledge and skills to teach students with disabilities.

All the participants taught online during the COVID-19 epidemic, which may have led to more self-efficacy in completing an online program as they gained experience with technology and teaching in an online format. Blain et al. (2022) proposed that many physical education teachers expanded their technological knowledge base during COVID-19 through the programs and strategies that were required by schools to provide distance learning for students. The authors suggested that the acquired knowledge should persist after the return to face-to-face classes, with teachers continuing to develop online skills to support young people to develop healthier and more active lifestyles in the future (Blain et al., 2022). Participants discussed the link between the technology teachers were required to use when serving students and the platforms they used when completing their online program was shared as complementary to their learning. The participants reported that due to their teaching during COVID-19, they had familiarity and competency with online platforms (e.g., Desire to Learn, MediaSpace recording system, Student Learning and Licensing reporting site, Zoom class meetings and instructor office

hours) The past experiences helped participants feel more comfortable and self-confident when learning new materials and skills that required additional technology skills.

Professional development was not considered a significant factor in this study. Building on prior education experiences for teacher training educational programs outside the developmental adapted physical educational programs may allow adult learners and instructors to detect gaps in learning and make connections to future program developmental. This is likely because the participants were newly licensed and would not require additional continuing education units until their next five-year license renewal process. Participants completed 8 hours of conference or professional networking as part of the graduate program. The participants reported the networking experience to be of value to build relationships and connect with other professionals. Even though this program would be considered a professional career advancement with the intent to gain knowledge and practical experience with the addition of a license, the participants were more focused on what they needed to complete the licensure and were less worried about future professional development opportunities. The participants did not consider professional development to be a significant factor in the licensing process.

Deliver Quality Content Knowledge and Skills Through Active Learning

In the literature, it is apparent that physical education teachers do not feel adequately prepared to teach in an inclusive setting due to the large class sizes, more students being identified with disabilities, and insufficient undergraduate experiences in both content and practical (Lirgg, 2017). Lirgg (2017) suggests that teacher training programs should include knowledge and experiences to better prepare professionals to serve students with disabilities. The participants in this study concur with Lirgg's findings and believe that they needed more content knowledge and skills specific to (a) motor assessment, (b) motor evaluations, and (c) teaching

strategies that included accommodations and modifications of lessons for students with disabilities. Adding to the literature on specific program details, it was found that administering numerous assessment tools for specific abilities, writing detailed evaluation plans, and providing individual daily lesson plans for inclusive skills required teachers to have meticulous organizational skills and stick to a daily schedule. The participants from this study showed these associations through the shared artifacts in the pre-interview activities that demonstrated detailed schedules and strategies for self-care that aided them in being resilient in their day-to-day teaching. Knowles (1989) asserts that adults learn best when they create a climate that is meaningful and minimizes anxiety while striving to create a sequential design for activities. The gatherings from Tables 6 and 7 (p 124 and 125) align with the assumption of Knowles's (1970) learning theory that adult learners are self-directed, independent, and resilient learners who are internally motivated and apply new knowledge immediately in their practice. In a broader sense, the findings explain how adults learn best and the topics needed for expanding their expertise in developmental adapted physical education. Participants indicated they wanted to be confident and knowledgeable in motor assessment, motor evaluations, and inclusive teaching strategies as engaged members of their motor team.

Understanding individual differences in the developmental adapted physical education setting can require teachers to make many decisions that impact students, teachers, families, and school districts. Lytle et al. (2010) suggest that adapted physical education preparation programs include four criteria to ensure they are highly qualified teachers and meet the competencies to teach students with disabilities: (a) a bachelor's degree in physical education and a state license to teach physical education, (b) twelve semester hours specifically addressing the educational needs of students with disabilities, nine of which are adapted physical education specific, (c) 150

hours of practicum experience, (d) and the professional preparation must be based on the standards for adapted physical education. The questions remain: are these criteria still relevant today, and how is it best for teachers to attain this preparation while continuing to work in the field of physical education? Participants shared that identifying students with motor needs, providing pre-referral services, and choosing appropriate assessment tools sometimes leave teachers wondering if the motor assessment, motor evaluations, and due process were ranked most beneficial to the demands of teaching students with disabilities. To add to the literature, these skills and knowledge contents are necessary to make the decisions in classrooms for planning and implementation of developmentally adapted physical education programs and should be aligned with the particular state in which the program resides. Nichols et al. (2018) presented suggestions for a nationalized standardization of adapted physical education programs after analyzing graduate programs in the United States and comparing similarities and differences in programs. The vast variance in materials, hours of practical work, qualifications of instructors, and the declining number of graduate programs available nationally set the rationale for Nichols' (2018) suggestions. This study explored Minnesota's core content standards and skills and suggested it would be difficult to understand the experiences of graduate students from other states due to the state requirements and levels of teacher training programs.

CAST (2024) explains the guidelines for universal design for learning (UDL) as a framework on which to build almost any program to optimize teaching and learning. The research in the study did not include UDL as a framework but chose to look at the current core content standards and delivery methods of an online program. In the future, the Bemidji State University online developemental adapted physical education program may implement the set of guidelines as a tool to ensure all learners can access and participate in meaningful learning. The

three pillars of the framework are engagement, representation, and action and expression. Engagement, representation, and action & expression provide multiple ways for individuals to understand the 'why, what, and how' of learning. Lieberman et al. (2020) shared, that UDL is more of a framework for program design than it is a teaching tool. This program design will be further explored as the online program at Bemidji State is revised in the next year when implementing the new Minnesota core standards of developmental adapted physical education.

Course materials were defined in this study as textbooks and research articles provided by the instructor as part of the sequence of courses to complete the online program. Participants rated course materials as not important to the online format and delivery. The researcher believes this is due to the number of texts that focus specifically on national standards and adapted physical education rules. Many of the resources used in the program are directly from the Minnesota Department of Education and the Minnesota developemental adapted physical education professional organization website. To follow the adult learning theory of Knowles (1989) during the program, participants were encouraged to research course topics as supplemental materials of their choice from multiple sources and cite their sources in assignments. In Andragogy, the learner interacts with the content, choosing when and how to engage with materials (Knowles, 1970). The course materials seemed to be of little concern to the participants. For the program, this requires the instructor to use materials current with laws and standards, providing multiple examples in various formats, and allowing the graduate students to engage with the materials they feel they need to meet the teaching demands of students with disabilities.

Employing UDL as the framework for future program development as well as professional development in future learning environments will serve as an instructional method

for teaching graduate students and demonstrate an example of an inclusive approach to all student learning. The framework guided professionals to use multiple means of representation when engaging students in content and skills, allowing students to access the materials based on their strengths. Professional practitioners have experienced multiple means of action and expression by having had the opportunity to choose individual assignments and present the outcomes in formats that supported social-emotional learning. Multiple means of engagement for graduates has meant graduates have been presented with several formats for learning and timelines that benefited the teachers be successful in the program and also provided examples for further knowledge of the accommodation and modification process for their individual students. Participants reported developmental adapted physical education content standards and skills, hands-on practical learning, and online asynchronous formats as components that benefited teachers in meeting the demands of students with disabilities and supported their learning and program success. Universal design for learning can further guide personal learning for teachers through professional development when aligned with Knowles's (1983) pillars of adult learning by providing more independent real-life situations that can be used immediately as problem-solving strategies in their classrooms. Active learning in higher education may provide more engagement and promote participation in collaboration skills. In physical education, active learning is a common strategy. In other programs, active learning may look like small groups, pair/share, jigsaw learning, discussion round tables, or case studies. These strategies employed in higher education may also provide examples for the in-service teachers to try these techniques in their classrooms.

Hands-On Practical Learning Opportunities

All participants in this study were in-service teachers at the time of the research. Field experience as part of the course meant working in their classrooms and interacting with the students they taught every day under the direct supervision of a licensed mentor. Additionally, having the prior lived experience of an undergraduate degree in physical education allowed the students to bring in the foundational knowledge and skills to build upon the new content and skills. The participants had numerous hours of field experience and practical experience, as well as daily interaction with their physical education students. Hence, their interest in additional hours teaching students in the special education setting was of little concern to their success. Field experience was defined as hours within the special education setting, but not specifically in the gymnasium. Direct hands-on work in the developmental adapted physical education setting or with students in similar settings on an IEP is considered practical experience (Minnesota Department of Education, 2023). The findings showed the program does not need to increase the number of hours of field experience for graduate students since they work in their gymnasiums and engage in hands-on experience daily. This information could be used for other education content areas as a strategy to create meaningful practical experiences for students to support authentic teaching situations for graduate students. These experiences aligned with graduate assignments further self-efficacy within their fields, **h**owever, it was found that participants preferred assignments that required interaction and engagement during practical experiences with their students to reinforce their active learning.

The hands-on learning offered by the online developmental adapted physical education program allowed the participants to experience the scope of practice with students from ages 3 to -21 years old. The impact of the scope of practice was also prominent as participants reflected on teaching students and observing the progression of motor skills and motor behaviours as the

students mature. This information may be useful for licensing policies as evidence of the need to have multiple field experiences with all ages of students included in the range of services of the license. Several of the participants had not had the opportunity to work with early childhood students before the online program. Transition services with students 18 to 21 were also an unfamiliar experience for several participants. The graduate students, through hands-on experiences, are learning about each student through developmental movement progressions and skill performances. The shared learning between the teacher and the student creates a new understanding of learning through movement. The teachers can witness the changes in movement patterns and embed them in their teaching skills, which links acquired experience to prior knowledge of that student. For example, if a teacher has been working with a student since the age of three and now the student is eight, that teacher and student have an educated connection through movement. The connection could be evident through a range of motion, the force of push and pull, or the gait of a walk. Developemental adapted physical education programs promote a continuum of learning for not only the students but also the teachers by being able to practice hands-on movement strategies while you are in a classroom setting. The benefits, as described by the participants, are the relationships you have established with the students you work with and the comfort of being in your own gymnasium setting. Both of these strategies lessen the demands of working with students with disabilities. It would be recommended for program design to maintain or increase the hands-on learning in the practical setting for developmental adapted physical education programs.

In addition to hands-on learning, participants shared their experiences as individuals who learn most effectively and directly through movement. For participants, being in the gymnasium and the outdoors while tackling new content was more beneficial than sitting in a classroom. The

concept of learning through movement may also have helped the graduate students feel more successful and self-confident in the coursework and lessened the demands of teaching students with disabilities through a movement connection. A movement relationship is built, and people who learn best through movement feel this connection. Knowles's (1989) second principle says adults have extensive experience to draw from their learning; they should be focused on adding to what they already have learned in their past. This is true of physical educators with fundamental movement themes and concepts possibly related to leading sports. The role transformation, as explained by Sato and Haegele (2017), demonstrates that learners make connections from physical education to developmental adapted physical education as they begin to focus on their new roles. What if this happens for teachers who are active learners much earlier, during their acquisition of motor learning and development? Participants reported they had been learning through movement as long as they could remember in physical education, sports, and the outdoors. People who enter the field of physical education love to move; they talk about moving, and they thrive on doing work in a setting that allows them to move and learn simultaneously. This could have a broader impact on professional teacher education programs by encouraging program designers to add more movement skill courses and use active teaching strategies in their courses. Attending physical education conferences is an excellent example of this love of movement when observing a session where people are active and learning. There is action, laughter, smiles, and connection. Learning is happening in all domains. What if program designers focused the majority of the content of core skills and delivery of the program in an active and hands-on learning environment that was an authentic experience for learners? It is evident from listening to the participants that learning through movement was important in their teaching and their personal lives. For the online program, this means fostering and expanding the

core content and skills that build on movement and the past movement experiences of the learners. Professional development and continuing education courses may want to schedule more movement sessions and fewer sitting sessions when planning professional workshops, conferences, and additional courses.

Participants also talked about choosing a program that allowed them to move when deciding to work in a developmental adapted physical education setting. Working in this setting can take a physical and mental toll on educators if they do not care for their well-being. The added stress on the mind and body can make it difficult for educators to make good decisions, and it was found to be a concern with participants. If teachers don't have the energy or clarity to focus on the choice of assessments, evaluation reports, and innovative teaching strategies, their judgement could be lacking. Hodge and Akuffo (2007) suggest that professional preparedness should emphasize team relationships, communication, and collaboration to deal with job-related concerns and the demands of teaching students with disabilities. Knowles (1984) suggests adult learners are more self-directed and prefer to be involved in the planning and evaluation of their instruction. The theory aligns with findings shared by participants as strategies they want to learn and use to make good choices for themselves and the students they serve while completing assessments and lesson planning. The online program content lends to graduate students' choices about the assignments and classroom activities with the students they work with daily. The learning through movement theme was shown to be a vital component of the delivery and should be continued and expanded in future program designs.

The standardized testing required as a licensing component does not equate to hands-on learning. The Pearson Assessment administered the examinations required at the time of the study under the category of Special Education, Subsections I &II as one of the steps in

completing the licensure process. These assessments were based on the special education core content standards and skills and developmental adapted physical education core standards content and skills as defined by the Department of Education. The participants reported that the examinations did not adequately assess the skills they needed to successfully teach or lessen the demands of teaching students with disabilities. As of August 1, 2023, the examination is no longer required to obtain a developmental adapted physical education license in Minnesota. The program plan of study and the course materials will be revised in the summer of 2024 to reflect the change in licensing requirements. This may lessen the added stress to program participants who had difficulties with examinations required in their undergraduate programs.

Include Positive Examples of Collaboration

Graduate students reported that the learning they received from their mentors and the other professionals on their teaching teams helped them get practical experience and made them feel more confident working with students with disabilities. This finding aligns with previous research conducted by Sato and Haegele (2017) showing that in-service teachers improve their effectiveness in teaching students with disabilities through (a) role transformation as the physical education role is expanded to the adapted physical education role, (b) professional community development through mentorship, and (c) understanding the current status of physical education by making connections with professionals in other districts and states. Sato and Haegele (2017) share the need to build connections through relationships, mentorship, and communities of practice that support the work teachers do and the demands of teaching students with disabilities. Rizzo (2013) also noted the importance of mentors in collaboration of learning and the connections with other professional leaders in the field. These findings are important and relevant when listening to participants discuss the relationships they built with their mentors and

peers in the cohort. Building relationships was a takeaway that should be implemented into the design of online developmental adapted physical education programs. However, because of the individual nature of online programs' relationships between peers, collaboration needs to be further expanded in program design to meet the needs of physical educators and lessen the demands of teaching students with disabilities. Following Rizzo (2013), using positive collaboration in higher education can promote learning across disciplines and set the foundation for teachers to expand the practice within their classrooms.

The findings from this study expand on the work of Sato and Haegele (2017) and Rizzo (2013) by suggesting that collaborating with other professionals in the developmental adapted physical education field participants enhanced their confidence to work with students and empathy to appreciate the roles of other professionals in the field. Collaboration between developmental adapted physical education and general physical educators can be fostered through building relationships. Strategies to provide services for students in all settings require collaboration, which can be experienced in networking with other professionals through professional organizations by attending conferences and workshops. Minnesota has a strong network of professional organizations in physical education [Minnesota Society of Health and Physical Educators and Minnesota Developemental Adapted Physical Educators]. As part of the online program, graduate students were encouraged to attend these workshops and conferences to build communities of practice that would help them as they return to their schools. Healy et al. (2014) identify a community of learners as one of the benefits of an online program because it allows for communication with colleagues to share strategies and activities in sharing knowledge and experiences. Developing strategic planning in the online course design to nurture smaller

learning circles within the cohort will encourage graduate students to expand the circles into communities of practice at the regional and state levels.

The participants also expressed feelings of solid support networks from their family, friends, and coworkers. Even though many developmental adapted physical education teachers are in isolated rural communities in Minnesota or teach in a building with only one or two physical education teachers, they feel supported while teaching students with disabilities through family, friends, and coworkers. These teachers often serve students for all or most of their physical education classes throughout their school career, ages 3-21 years. The relationships that teachers build with students with disabilities can last a lifetime. Dewey (1938) suggests that "learning takes place in a social environment and is constructed between people and nature. Continuous learning occurs through interactions with teachers, peers, and surroundings" (p. 58). These relationships that teachers and students create also need to be modelled in online learning environments to support graduate students' lifelong professional development (Sato et al., 2017; St. Pierre, 1998). Holzweiss et al. (2014) suggest that faculty engagement and interactions with peers and instructors create the best graduate experiences in an online program. Dewey (1938) theorized that these positive connections go much further than the classroom, they will impact how teachers and students build relationships outside their classrooms through educational continuity.

Participants in this study described collaboration and connection in multiple aspects of the program. First, with peers and receiving feedback on assignments and projects. The collaboration and connection of being in an online program benefited participants because they felt their peers supported them in a similar learning situation. Second, with the mentors and co-workers who supported and guided them in learning during the online program. Lastly, through

the relationships built with the parents and students and those served with disabilities. Graduate program in general could foster strategies to expand relationships as examples positive relationship building throughout their disciplines.

McPhail et al. (2014) found that when participants shared in the construction of knowledge over time through frequent discourse and active and social engagement, there was evidence of more robust connections and enhancement of learning. Given that this online program is five semesters in time and the structure is a cohort model, this research supports the literature findings. The participants in this study had frequent interactions through peer assignments and discussion boards. Patton et al. (2015) suggest that professional development or continuing education needs to include collaborative opportunities with communities of practice to facilitate impactful learning. In considering how Bemidji's online program could be advanced, this finding of building relationships and the literature supporting relationships, communities of learners, and peer feedback on assignments could be expanded upon and refined in courses and overall program continuity.

Strategies Graduate Students Can Take to the Classroom

The teaching strategies used in the special education and developmental adapted physical education courses serve as examples for participants while in classrooms teaching students. The universal design for learning framework was used as a teaching strategy in the developmental adapted physical education program through the *what, why, and how* of learning in the motor setting and the understanding of the domains of physical education. The *what* are the fundamental psychomotor skills and patterns needed to perform and engage in activities. The *why* are the strategies, concepts and knowledge needed to understand and access cognitive

information of motor learning. The *how* are the supports and motivation to provide opportunities for all to create, express, and share in a social environment.

The participants were engaged in online asynchronous learning, which was built on prior educational experiences. The content knowledge and skills were delivered through active, hands-on learning and positive collaboration. The participants shared the benefits and success of learning through these program delivery strategies. It is anticipated that participants, through the UDL framework and the indicated beneficial core skills and standards, will create an inclusive environment for students in the developmental adapted physical education. For each participant, inclusion may look different depending on the individual student's needs, wants, and future goals. Modelling the teaching skills and strategies during the online developmental adapted physical education program will serve as a form of professional development and aid in the transfer of teaching strategies from the higher education setting to the K-12 classroom.

Chapter 7: Conclusions

The following study focused on graduate students' experiences in an online developmental adapted physical education program. After reflecting on the findings, it is evident there are still gaps in program planning and implementation. When I started this research, I believed it would be easy to investigate what graduate students felt were the best components for an online format delivery and which components of the core content of standards and skills would best help them meet the demands of teaching students with disabilities. It turned out to be more complicated than I initially imagined. First, each participant had an individual path that brought them to the program, and their needs in their classrooms were very different from those of others. Second, the demands of students with disabilities are ever-changing, so the recommendations included in this study attempt to share the insights from this group of educators at this point in time. The graduate students' experiences and voices add to the body of research for this field as they are in the trenches and doing daily work with students with disabilities. The following takeaways will guide future programs when designing frameworks for online developmental adapted physical education programs.

Provide Online Asynchronous Learning Opportunities for Graduate Students

Providing online learning opportunities is the number one reason participants enrolled in this developmental adapted physical education program. The online learning format and the asynchronous instruction met the needs of most of the participants based on the information gathered in the study.

- Graduate students need access to programs they may not have the opportunity to complete in a traditional campus format.

- Graduate students need to continue to work while completing the program to support themselves and their families.
- Graduate students need flexible schedules to be able to complete the program requirements.
- Flexibility in course access and program completion may increase the number of graduates gaining a developmental adapted physical education add-on license and decrease teacher shortages in the field of study.
- Graduate students may want to take online classes for the ease of flexible hours; however, they still want to work with students while learning in a movement setting.
- As universities continue to expand their online programs, they should consider models that enable graduates to access the program from regions outside a campus setting.
- Creating assignments that can be completed using the daily situations in the classroom, with students familiar to graduates, and in a flexible schedule may lead to increased confidence in working with students with disabilities.
- The asynchronous model allows students to work more independently and flexibly regarding time and schedule.
- University instructors with appropriate degree credentials and licensure can teach for more than one program if staffing is required.
- University curriculum planners and instructors should have knowledge and experience of current classroom situations containing student ages and program settings included in the scope of practice of the add-on license to create authentic and valuable experiences.

Building on Prior Educational Experiences as a Foundation for Future Learning

Programs need to build on graduate students' prior experience in physical education. The research suggests that the participants' past experiences with movement emerge as the

foundational building blocks of a developmental adapted physical education program, making deeper and more lasting connections to new learning in the motor setting.

- Undergraduates in physical education have vast knowledge of movement. Scaffolding new and previous knowledge may help lessen the demands of teaching students with disabilities and build confidence.
- Prior professional and personal movement experiences allow teachers to be active problem-solvers to bridge
- Practical experiences are sometimes difficult to document and validate in an online setting where instructors do not observe teaching lessons and can be limited in feedback for reflection and professional growth.
- Implementing developmental adapted physical education licensed mentors in collaboration with university advisors and program coordinators as a specific element of the online delivery format may also positively impact the graduate students' experience by providing mentorship and accountability during practicum work.

Deliver Quality Content of Knowledge for Active Learning

Graduate programs in developmental adapted physical education should continue to include and expand the content knowledge and skills needed to implement due process. The researcher proposes that due process and motor assessments were discovered to be the highest-ranked components of the content standards as they are foundational components of serving students with developmental adapted physical education.

- Quality core content and standards will help graduate students feel more prepared to teach all students, specifically students with disabilities.

- Quality core content and standards lessen the demands of teaching professionals when working with students with disabilities.
- Due process focuses on laws and timelines and has varying requirements in each state in America. Providing a strong knowledge base on national and state guidelines should be a starting point for all programs.
- Identifying the appropriate assessment tools based on students' needs takes an understanding of developmental abilities, the knowledge of assessment tool selection for various abilities, and a significant amount of planning time. Programs should include a working knowledge of categorical disabilities served by developmental adapted physical education teachers.
- Administration of motor assessments can be time-consuming and detailed. Providing graduate students with extensive knowledge of a wide variety of assessments across multiple age levels will help to lessen the demands of teaching students with disabilities.
- Many performance assessments involve subjective interpretation of performance skills. Graduate students should have numerous opportunities to practice with the tools in realistic and authentic settings.
- Graduate students should understand the importance of and have opportunities to demonstrate the skills of creating and presenting evaluation reports and participating in IEP meetings as part of the special education team.
- Learning is monumental when the content is meaningful and connected to the needs of the learner.

Practical Hands-on Learning Opportunities

The scope of practice, ages 3-21 years, was reported as a valuable content component when serving students in developmental adapted physical education because of learners' diverse

developmental motor, cognitive, social, and behavioural needs. Participants in this study do not believe practicum work should happen in special education settings outside the gymnasium classroom. They reported that learning classroom content or strategies unrelated to developmental adapted physical education was not beneficial. It was reported that hands-on practical experiences in the gymnasium increased the graduate students' self-confidence and lessened the demands of teaching students with disabilities.

- To further build graduate students' self-efficacy, hands-on learning opportunities in physical education focused on accommodating and modifying activities and skills should be increased.
- Providing positive examples of hands-on should continue to be demonstrated by licensed developmental adapted physical education teachers who serve as cooperating teachers or mentors during the online program.
- Practical experiences, working directly with students, are more beneficial than general field experience to graduate students.
- Experience across all developmental levels, ages 3-21 years, should be required and promoted through targeted hands-on assignments for graduate students under the direction of their mentors.

Include Positive Examples of Collaboration

As the law outlines, due process guides the policy and procedure for developmental adapted physical education services and motor teams. Understanding and implementing procedural guidelines plays a significant role in the responsibilities of developmental adapted physical education professionals, which may increase the demands of teaching students with

disabilities. Working as a team of professionals, each who carries a portion of the responsibility, will increase the self-efficacy and confidence to teach students with disabilities.

- Due process requires professionals to have extensive knowledge of timelines for meeting notices, documentation completion, and motor reports as part of the evaluation process. Graduate students should demonstrate being a part of a motor team.
- Students, parents, and teachers may benefit from developmental adapted physical education teams' ability to perform the requirements efficiently and effectively to better serve students in the motor setting. Graduate students should show knowledge of the roles and responsibilities of all IEP team members. University instructors should include mock team meetings as part of the program design.
- Transition happens in an array of situations for students and parents at all developmental levels in developmental adapted physical education. Graduate students should demonstrate an understanding of transition services and the team's responsibilities. Program planners should implement knowledge of transition processes with the goal of supporting students, K-21 of age, with lifelong learning and activities.

Looking Through the Andragogy Lens

Knowles' (1970) theory of Andragogy aligned with the findings of this study through the following aspects;

- Graduate students shared working with mentors, becoming more self-confident and ready to take on new roles and responsibilities.
- Graduate students reported taking responsibility for choosing assignments and projects that met their needs and the demands of teaching students with disabilities.

- Graduate students sought knowledge that could be applied immediately to improve their professional or personal lives.
- Graduate students reported applying the skills they learned to meet the immediate needs of their students.
- Graduate students brought valuable life experiences to the program as resources for new learning and peer discussions.
- Graduate students were problem-centred learners focused on solving real-life problems and making informed decisions for their students.

These findings suggest that instead of the traditional relationship between student, teacher, and material, adult learners participate fully in their education by influencing curriculum and learning objectives through the following implications for future instructional planning;

- Provide adults with more hands-on practical experiences.
- Provide meaningful content subjects that have immediate relevance and impact.
- Build on prior experience of the graduate students' work experience in physical education and developmental adapted physical education.
- Support self-directed learning.

Looking Through the Lens of Experience and Continuity of Education

Prior experience and continuity of education, as described by Dewey (1938), aided the participants in having more self-confidence and fewer apprehensions when deciding to move forward and add the developmental adapted physical education license.

- Graduate students' experiences were based on problems encountered finding a program to meet their needs as in-service teachers, which motivated the learner to seek solutions to complete a developmental adapted physical education license.

- Graduate students' experiences in the online program connected to what the learner already knew about physical education and built on it to form new knowledge.
- The graduate students' experiences were based on problems encountered working with students with disabilities, which motivated the learner to seek solutions to lessen the demands of teaching.
- The graduate student's prior knowledge connected new information and skills to existing knowledge, making future learning more meaningful.
- The concept of continuity promotes a lifelong love of learning. As we solve problems and encounter new situations, we continually seek out new knowledge and refine our understanding of the world.

Building on the experiences and continuity of education for graduate students, it is suggested that program designers consider and implement the following ideas;

- Programs should promote active learning by engaging graduate students in hands-on experiences.
- The program curriculum should represent real-life problems or scenarios to which graduate students can practice and apply new knowledge.
- Critical thinking skills included in program development should encourage students to analyze, question, and evaluate information related to special education practices.
- Instruction should be learner-centred to graduate students' needs to lessen the demands of teaching students with disabilities.

Dewey (1938) suggests that teachers bring their previous educational experiences into the classroom when teaching students. These previous educational experiences could be personal participation in physical education, past athletic activities, or initial teacher preparation programs

where they learned skills and experienced enjoyment through movement. Building on educative experiences will increase teacher confidence and self-efficacy when teaching students with disabilities.

Moving Forward Since the Study

Since the study's completion, the Minnesota Department of Education and the Professional Education Licensing Standards Board have changed developmental adapted physical education licensure. The special education core standards of skill are no longer required as part of the program. The developemental adapted physical education core standards of skill were expanded and revised. A content area reading course was required as part of the licensure from the professional education core skills. This requirement has been dropped and will not be replaced. The hours of field experience have been realigned to 80 hours and only in the developmental adapted physical education classroom. There has been a change to the scope of practice, which no longer requires individual hours in practical experiences in ages 3-5, K-5, 6-8, 9-12 grades, and ages 18-21. Taking or passing the Minnesota Teaching Licensing Examination has been eliminated to attain the add-on license. Many of these changes align with the findings of this study. The new core content standard will allow the program to fully explore and design a program at Bemidji State University that provides a format of delivery that most impacts the learner and includes core content standards and skills that contribute to the demands of teaching students with disabilities.

Taking it to the Classroom

The content standards and skills of the developmental adapted physical education licensure, learned in the online program, are a separate and distinct set of standards apart from the standards of effective practice learned during the participants' undergraduate physical

education programs. Being able to transfer the content knowledge learned during the developmental adapted physical education program, specific to students with disabilities, will look similar to professional development; however, many school districts do not provide the training needed to meet the needs of teaching students with disabilities. Gaining the needed content through a specific program may be more beneficial to practitioners as the skills are embedded within the content. The hands-on practical experience, set in an authentic classroom with an experienced mentor over a significant amount of time, empowers the practitioners to gain self-efficacy and teach students with disabilities in their own classrooms with confidence. This type of one-to-one professional development type learning may be the most beneficial, as reported by participants of this study.

The Bigger Picture

This study supports the findings of Calderon et al. (2020), suggesting programs introduce a new design to teacher education and reduce students' uncertainty in teaching students with disabilities, using a blended learning approach that aligns outcomes, teaching and learning activities, and assessments in an interconnected format. The hands-on model of providing instruction simultaneously with active learning within the classroom, under the supervision of a mentor teacher, was also noted by participants as an approach that benefitted learning in the classroom for in-service teachers. This model should possibly be expanded across other content areas in education to add to teacher success and, ultimately, the success of the students they teach.

Two areas that would easily be brought to other online programs would be collaboration and building relationships. McPhail et al. (2014) findings align with this study in that participants

expressed that the sharing of knowledge over time through ongoing extended interactions helped them feel connected and increased their learning of content and skills. Patton et al. (2015) suggest that professional development or continuing education needs to include collaborative opportunities with communities of practice to facilitate impactful learning. Collaboration skills and strategies should possibly be taught as a focus of all programs because of the diverse teams needed to support students with disabilities in school, home, and community settings.

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Appendix A

Minnesota Revisor (Minnesota Legislature, 2021).

8710.5000 CORE SKILLS FOR TEACHERS OF SPECIAL EDUCATION.

Subpart 1. Licensure requirements.

A. A candidate recommended for licensure in special education shall complete the core skill area licensure requirements in subpart 2 as part of each special education teacher preparationprogram approved under Chapter 8705 by the Professional Educator Licensing and Standards Board.

B. A candidate recommended for licensure in special education shall meet the statutory requirements regarding comprehensive scientifically based reading instruction required by MinnesotaStatutes, section 122A.09, subdivision 4, paragraph (e), and as specified in part 8710.3200, subpart3, items C to F.

Subp. 2. Core skill areas. A teacher of special education possesses understandings and skills in special education foundations: referral, evaluation, planning, and programming processes; instructional design, teaching, and ongoing evaluation; and collaboration and communication in items A to D.

A. Foundational knowledge: A teacher of special education understands the foundations of special education, including information about students served by special education. The teachermust demonstrate knowledge of the:

(1) role of special education within the structure of a single, evolving, and changing education system that provides, based on an individualized planning and programming process, free appropriate public education to students in special education through a continuum of services;

(2) relationship of special education to other components of the education system, including access to grade-level content standards, prevention efforts and early intervening services, Title 1, bilingual education, the education of English learners, Section 504 accommodations, and gifted education;

(3) historical and philosophical foundations, legal bases, ethical principles and standardsof professional practice, principles of evidence-based practice, the effects of attitudes and expectations, and contemporary issues pertaining to the education of individuals with disabilities;

(4) definitions, characteristics, and educational implications for students with disabilities eligible for special education services;

(5) similarities and differences among the cognitive, physical, sensory, cultural, social, emotional, behavioral, and communication needs of individuals with and without disabilities and across different disabilities;

(6) impact of coexisting conditions, multiple disabilities, and gifts and the implicationsfor the provision of educational services;

(7) impact of gender, familial background, socioeconomic status, racial, cultural, and linguistic diversity on disabilities and involvement in all aspects of special education;

(8) rights and responsibilities of students, parents, teachers, other professionals, and schools related to students with disabilities;

(9) medical terminology and educational implications of medical conditions, includingthe effect of medication and specialized health care in educational settings;

(10) standards for restrictive procedures, alternatives to using those procedures, the risks of using those procedures including medical contraindications, and principles of individual and schoolwide positive behavioral interventions and supports, including the roles of systems, data,and practices;

(11) the importance and utility of parent involvement in student academic achievement,and the implications for the provision of educational services;

(12) legal, judicial, medical, and educational systems and their terminologies and implications in serving students with disabilities; and

(13) roles and organizational structures of general and special education and the part they play in providing total services to all students.

B. Referral, evaluation, planning, and programming: A teacher of special education understands and applies principles of prevention and intervening early and procedures for referral,assessment, evaluation, individualized planning, programming, and placement. The teacher must be able to:

(1) convey the rights and responsibilities of students, parents, teachers, and schools regarding the provision of educational services to students with disabilities;

(2) satisfy the due process, data privacy, procedural safeguards, and ethical requirementsof the referral, evaluation, planning, and programming processes of special education;

(3) satisfy child find requirements during universal screening and early intervening efforts;

(4) integrate multiple sources of student data relative to progress toward grade-level content standards from prior prevention and alternate instruction efforts into the referral process;

(5) implement required prereferral intervention procedures;

(6) design, facilitate, and support a comprehensive, multidisciplinary evaluation processusing unbiased assessment measures;

(7) select and use assessment measures and procedures that are technically adequate and appropriate for the student and specific assessment purpose, including assistive

technology supports where appropriate;

(8) communicate the results of assessments and the evaluation process to students, families, teachers, and other professionals;

(9) understand the effects of various physical and mental health conditions, includingthe effects of medications, on the educational, cognitive, physical, social, and emotional behaviorof individuals with disabilities when planning and administering assessments;

(10) conduct functional behavioral assessments and use the results to develop behavior intervention plans;

(11) assess the impact of environmental factors on assessment results and the special education evaluation, planning, and programming process;

(12) assess the impact of gender, familial background, socioeconomic status, and culturaland linguistic diversity on assessment results and the special education referral, evaluation, planning,and programming process;

(13) integrate multiple sources of data to develop individualized educational programs and plans;

(14) produce and maintain the reports, plans, and student assessment and performance data that are required by due process procedures and the school system according to the timelinesfor each;

(15) support the selection, acquisition, and use of assistive technology and supplementaryaids and services in collaboration with parents and specialists; and

(16) address the transition needs of students to enhance participation in family, school, recreation or leisure, community, and work life, including personal self-care, independent living, safety, and prevocational and vocational skills.

C. Instructional design, teaching, and ongoing evaluation: A teacher of special education understands how to provide and evaluate specially designed instruction to meet the unique needs of students in special education through individualized educational plans. The teacher must be ableto:

(1) adapt and modify curriculum and deliver evidence-based instruction, including scientific research-based interventions when available, aligned with state and local grade-level content standards to meet individual learner needs;

(2) lead individual education plan teams through statewide assessment options to make appropriate decisions for a learner's participation within the statewide assessment system;

(3) apply evidence-based methods, strategies, universal design for learning, and accommodations including assistive technologies, to meet individual student needs and provide access to grade-level content standards;

(4) use evidence-based instruction, knowledge of subject matter, grade-level content standards, task analysis, and student performance data to sequence instruction and accelerate the rate of learning;

(5) collaborate with other professionals and parents on the design and delivery of prevention efforts, early intervening services, prereferral interventions, English learning, gifted education, and intervention strategies to promote the academic, behavioral, linguistic, communication, functional, social, and emotional competency of students;

(6) apply behavioral theory, student data, evidence-based practices, and ethics in developing and implementing individual student and classroom behavior management plans;

(7) design and manage positive instructional environments that convey high expectationsfor students to develop independence, self-motivation, self-direction, self-regulation, and self-advocacy;

(8) teach in a variety of service delivery models, including the delivery of specially designed instruction in the general education classroom and collaboration with other educational professionals and paraprofessionals;

(9) apply systematic procedures for compiling and using data for the purposes of continuous progress-monitoring, modification of instruction, and program and schoolwide improvement;

(10) apply knowledge of comprehensive scientifically based reading instruction, including phonemic awareness, phonics, fluency, vocabulary development, and reading comprehension as required in subpart 1, item B;

(11) construct and implement instructional sequences to address and teach transition skills based on the cognitive, affective, and academic strengths of each student and plan for transitionfrom school to community living, recreational and leisure, postsecondary training, career training,and employment.

D. Communication and collaboration: A teacher of special education cultivates and maintains positive, collaborative relationships with children and youth, families, educators, other professionals, and the community to support student development and educational progress. The teacher must beable to:

(1) understand how disabilities can impact families as well as the student's ability to learn, interact socially, and contribute to the community throughout the life span;

(2) take into account the dynamics, roles, and relationships within families and communities resulting from differences in familial background, socioeconomic status, and culturaland linguistic diversity and collaborate with language interpreters and cultural liaisons when communicating with families and planning and implementing services;

(3) assist families in identifying resources, priorities, and concerns in relation to a child's development and education;

(4) work collaboratively with family members, including children and youth, indesigning, implementing, and evaluating individual educational plans and programs;

(5) facilitate and manage student-specific teams, including those for child study, individualized education program planning, and planning for transitions;

(6) understand and make use of structures supporting interagency collaboration, including interagency services, agreements, referral, and consultation;

(7) provide consultation to and receive it from other professionals regarding specially designed instruction and program organization and development for children and youth, and families;

(8) direct and monitor the activities of paraprofessionals, aides, volunteers, and peer tutors;

(9) access services, networks, agencies, and organizations relevant to the needs of the children and youth and their families;

(10) access and evaluate information, research, and emerging practices relevant to thefield of special education through consumer and professional organizations, peer-reviewed journals, and other publications;

(11) engage in continuing professional development and reflection to increase knowledgeand skill as a special educator and inform instructional practices, decisions, and interactions with children and youth and their families; and

(12) cultivate professional relationships that encourage peer observation, coaching, andsystems for giving and receiving feedback from colleagues to enhance student instruction and program outcomes.

Subp. 3. Program requirements.

A. An institution applying to the Professional Educator Licensing and Standards Board for approval to prepare teachers of special education in parts 8710.5100 to 8710.5800 shall incorporatethe requirements of this part in each preparation program.

B. All colleges and universities approved by the board to prepare persons for classroom teacher licensure must include in teacher preparation programs research-based best practices in reading, consistent with Minnesota Statutes, section 122A.092, subdivision 5, that enable the licensure candidate to know how to teach reading in the candidate's content areas.

Subp. 4. Effective date. The requirements in this part are effective January 1, 2013, for all applicants for licensure in areas or fields in special education.

Statutory Authority: MS s 122A.09; 122A.18

History: 23 SR 1928; 36 SR 1243; L 2012 c 239 art 1 s 33; L 2017 1Sp5 art 3 s 36; art 12 s 22

Published Electronically: September 12, 20

Minnesota Revisor

8710.5300 TEACHERS OF SPECIAL EDUCATION: DEVELOPMENTAL ADAPTEDPHYSICAL EDUCATION.

Subpart 1. Scope of practice. A teacher of special education: developmental adapted physical education is authorized to provide evaluation and specially designed instruction in physical education to eligible students from prekindergarten through age 21 who have needs in the areas of physical fitness and gross motor skills. Teachers collaborate and consult with families, other classroom andspecial education teachers, and specialized service providers in designing and implementing individualized physical educational program plans.

Subp. 2. License requirements. A candidate for licensure as a teacher of special education: developmental adapted physical education to teach students from prekindergarten through age 21who have needs in the areas of physical fitness and gross motor skills shall:

A. hold a baccalaureate degree from a college or university that is regionally accredited bythe association for the accreditation of colleges and secondary schools;

B. hold or apply and qualify for a valid Minnesota physical education teaching license;

C. demonstrate core skill requirements in part 8710.5000; and

D. show verification of completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of special education: developmental adapted physical education in subpart 3.

Subp. 3. Subject matter standard. A candidate for licensure as a teacher of special education: developmental adapted physical education must complete a preparation program under subpart 2,item D that must include the candidate's demonstration of the knowledge and skills in items A toE.

A. Foundational knowledge. A teacher of special education: developmental adapted physical education understands the foundations of special education services for students with disabilities relating to physical and motor fitness on which to base practice. The teacher must demonstrate knowledge of the:

(1) historical and philosophical foundations, legal bases, and contemporary issues pertaining to the education of students with identified disabilities as the issues apply to physical and motor fitness;

(2) educational definitions, issues related to identification, and eligibility criteriapertaining to students who have disabilities relating to physical and motor fitness;

(3) theoretical foundations and sequences of typical and atypical motor learning, motor

development, and motor skills acquisition from birth to adulthood relating to physical and motor fitness;

(4) special physical education, adapted physical education, movement education, andmotor development, including skills in aquatics, dance, games, and individual, group, intramural,and lifetime sports;

(5) implications of medical, health, skeletal, and neurological conditions on motor learning, including typical and atypical development across the life span;

(6) principles of anatomical structure, physiology, and kinesiology across the lifespan, including typical and atypical development;

(7) impact of single, multiple, coexisting conditions or disabilities on motor functioningand motor skill acquisition; and

(8) impact of typical and atypical motor development and function on the educational,social, and psychological well-being of students.

B. Referral, evaluation, planning, and programming. A teacher of special education: developmental adapted physical education understands and applies principles of prevention and intervening early and procedures for referral, assessment, evaluation, individualized planning, programming, and placement specific to teaching students with disabilities relating to physical andmotor fitness. The teacher must be able to:

(1) understand the use, limitations, ethical concerns, administration, and interpretationof formal and informal assessments for students with identified disabilities that impact physical and motor fitness and how to communicate the results to the students, families, educators, and other professionals;

(2) adapt and modify existing assessment tools and methods to accommodate the uniqueabilities and needs of students with disabilities in physical and motor fitness;

(3) apply an understanding of health-related aspects of physical and motor fitness in program planning;

(4) support the selection, acquisition, and use of assistive technology for the developmentof physical and motor fitness, including physical education hardware and software, adapted and adaptive equipment, and supports for participation and communication;

(5) apply evaluation results to assist the IEP team in selection of service options for addressing individual needs in physical education; and

(6) design individualized program plans that integrate evaluation results, student and family priorities, and concerns that incorporate academic and nonacademic goals in physical education.

C. Instructional design, teaching, and ongoing evaluation. A teacher of special education: developmental adapted physical education understands how to use individualized education programplans to design, implement, monitor, and adjust instruction for students with

disabilities relating to physical and motor fitness. The teacher must be able to:

(1) design, implement, monitor, and adjust a variety of evidence-based instructional resources, strategies, and techniques, including scientifically based research interventions when available, to implement developmental adapted physical education services;

(2) select and adapt equipment used for instruction in physical and motor fitness;

(3) design and adapt learning environments that support students with disabilities in safely and actively participating in physical and motor fitness;

(4) communicate with students, using a range of methods and strategies, including students who are nonverbal or have limited verbal expression;

(5) provide students with exploration and learning experiences that support life-long participation in physical recreation and leisure activities;

(6) develop students' self-advocacy and life skills relevant to independence, social skills, community and personal living, recreation, leisure, and employment; and

(7) monitor progress, adjust instruction, and evaluate the acquisition of skills related to developmental adapted physical education.

D. Communication and collaboration. A teacher of special education: developmental adapted physical education cultivates and maintains positive, collaborative relationships with students, families, other professionals, and the community to support student development and educationalprogress. The teacher must be able to:

(1) collaborate with students and their families in making choices, given identified strengths and needs in physical and motor fitness, that impact academic, occupational, and other domains across the life span;

(2) access services, networks, agencies, and organizations relevant to the field of developmental adapted physical education;

(3) identify and coordinate educational roles and responsibilities with individualized education program plan team members and stakeholders in providing educational services that impact physical and motor fitness;

(4) provide and receive consultation and coordinate with related service providers, including occupational therapists and physical therapists, in delivering developmental adapted physical education services;

(5) collaborate with students, families, and other service providers to locate communityand state resources for further participation in leisure and recreational activities;

(6) promote collaborative practices that respect the individual's and family's culture and values relative to access to physical education and recreation and leisure options across the lifespan;

(7) access and evaluate information, research, and emerging practices relevant to the field of developmental adapted physical education through consumer and professional organizations, peer-reviewed journals, and other publications; and

(8) engage in continuing professional development and reflection to increase knowledgeand skill as a special educator and inform instructional practices, decisions, and interactions with students and their families.

E. Clinical experiences. A teacher of special education: developmental adapted physical education applies the standards of effective practice through a variety of early and ongoing clinicalexperiences in teaching students who have needs in the areas of physical fitness and gross motor skills in prekindergarten and primary (prekindergarten through grade 4), middle level (grades 5 through 8), and high school (grades 9 through 12) settings across a range of service delivery models.

Subp. 4. Continuing licensure. A continuing license shall be issued and renewed accordingto rules of the Professional Educator Licensing and Standards Board governing continuing licenses.

Subp. 5. Effective date. Requirements in this part for licensure as a teacher of special education: developmental adapted physical education are effective on January 1, 2013, and thereafter.

Statutory Authority: MS s 122A.09; 122A.18

History: 23 SR 1928; 36 SR 1243; L 2017 1Sp5 art 12 s 22
Published Electronically: August 21,

Appendix B

Online Delivery Content of the BSU DAPE License

Face to Face Meetings: Recommended, not mandatory
- Kick-off: 1 week before first semester
- Mid Program: After nine credits in SPED before DAPE content begins

Desire to Learn(D2L): Learning Management System (LMS)
- Advising Shell: Student digital file cabinet
  - Content Modules
  - Plan of Study (POS)
  - Field Experience Documents
- Class Shell: Each course is an individual shell
  - Content Modules for classes
  - Announcement Tool
  - Quiz Tool
  - Discussion Boards
  - Groups

Kaltura Media Space: Digital Management System DMS
- Kaltura Capture: Screen share with voice
- Express Capture: Video recording
- Audio Capture: Audio recording

TaskStream: Digital portfolio for university & PELSB review
- Key Assessments:
- Plan of Study (POS): Review by Instructors
- Field Experience Documents: Signed mentors and Approved by Instructors
- Field Experience Demographic Sheets: Self-populating from MDE

Minnesota Teaching Licensure Examination/ National Essential Academic Skills (MTLE/NES):
- License Exam
- SPED CORE Subsection 1 & 2

Appendix C

Bemidji State University Professional Education Plan of Study

License: *Developmental Adapted Physical Education*

(Age 3-21)

Name: ID Number:
Graduate Students- Minnesota License File#:

I. Complete the following Professional Education Standards of Effective Practice (SEP) Courses for Undergraduate status or holds a Physical Education PreK- 12 License:
ED 5100, ED 5110, ED 5350, ED 5140, ED 5780 ***Applications review by Human Performance Sport & Health, Center for Extended Learning, Graduate Studies***
PELSB: Standards Rules for Additional License ***II. Review of Professional Experience:*** ***Current Teaching: Grade levels/ Ages: School/ District:*** ***Cooperating Teaching: University Supervisor: Sherry K Holloway***
III. Triad Meeting 1:

V. Complete <u>all</u> of the following DAPE Content/Methods Courses.

BSU Course ID and Name	***ALL STUDENTS***		***Complete this section ONLY if using a course from another school****	
	Semester & Year	***Grade***	***Course ID and Name***	***Where was this course taken?***
PHED 4514/5514 **(3 credits)** ****15 hours of practical experience**** ***Key Assessment #1 Feedback:***			**NA**	**NA**
PHED4515/5515 Teaching Strategies DAPE (3 credits) ****30 hours of practical experience**** ***Key Assessment #2 Feedback:***			**NA**	**NA**
PHED4516/5516 The DAPE Professional (3 credits) ****20 hours of practical experience**** ***Key Assessment #3 Feedback:***			**NA**	**NA**

Triad Meeting 2:

IV. Complete <u>all</u> of the following Special Education, Reading, and Physical Education Courses.

BSU Course ID and Name	***ALL STUDENTS***	***Complete this section ONLY if using a course from another school****

	Semester &Year	*Grade*	*Course ID and Name*	*Where was this course taken?*
SPED 3600/ 5600 Study of the Learner with Special Needs (3 credits) ***10 hours of practical experience****				
SPED 3650/ 5650 Collaborative Techniques for SPED (3 credits) ***10 hours of practical experience****			**NA**	**NA**
SPED 3655/ 5655 Due Process in SPED (3 credits) ***10 hours of practical experience****			**NA**	**NA**
ED 4737 Content Area Reading (3 credits) ***25 hours of field experience****				

VI. FIELD EXPERIENCE: Minnesota Licensed DAPE Mentor Teacher Supervision. Course FE forms must be signed by supervising mentor teacher and accompany this form. All forms approved by DAPE Program Coordinator/ Advisor and BSU Licensing Officer.
Hours must be across PreK-21 with no specific number of hours in each category

School Name & School District Number	*Content*	*Course #*	*Grade Level(s)*	*Dates*		*Hour Totals*
				Start	*End*	

			Ages 3-5			
			Grades K-6			
			Grades 7-12			
			Ages 18-21			
			Total Hours			
VII. 80 hours with one group of students						

VIII. Licensure Exams: Before BSU can recommend you for licensure, we must have official scores on file for all required SPED Core Subsections 1 & 2 Exams.		
IX. Test	***Score***	***Date Taken***
MTLE SPED Core Subtest 1 ≥ 240		
MTLE SPED Core Subtest 2 ≥ 240		

****Please note: If you are using a course from another school, BSU will need official transcripts on file for all relevant institutions, course descriptions & syllabi, and approved substitution forms.***

DAPE Program Coordinator/ Advisor: Date:
Final Plan of Study Approved by Certification Officer: Date:

Appendix D

Example of Invitation to Participate in the Study

UNIVERSITY OF ALBERTA
FACULTY OF EDUCATION

Invitation to Participate
Study: What are graduate students' experiences in an online Developmental Adapted Physical Education Licensure Program

Dear Potential Participant,

You are invited to participate in a research study. We are interested in exploring the experiences you had during the Online DAPE program at Bemidji State University between 2017 to 2020. You will be asked to complete a Pre-Interview Activity comprised of written exercises, an interview of verbal questions in a live virtual format, and a live virtual follow-up meeting reviewing clarity and addressing participant potential questions. We are interested in in-service teachers at the graduate level who completed the entire DAPE program online.

If you are interested in participating, please contact Sherry Holloway at Sholloway@bemidjistate.edu or by text at 218.760.6317. The study will take approximately a total of 2 hours in 3 separate segments to complete.

If you have any questions about the aspects of this study, you may contact either the investigator at the contact information provided or the University of Alberta Ethics Office at 780.492.2615.

Thank you for your consideration,

Principal Research Investigator:
Sherry K Holloway, Ph.D. Student
Department of Secondary Education/
Physical Education
551 Education South
University of Alberta
Edmonton AB T6G 2G5
shollowa@ualberta.ca
780-728-6116

Appendix E

Informed Consent Form - Teachers

February 2021

Project Title:

An online adapted physical education licensure program: Adding student voice to the graduate experience

Principal Investigator (PI):

Dr. Lauren Sulz
Faculty of Education
University of Alberta
lsulz@ualberta.ca

Principal Student Investigator (PSI):

Sherry K Holloway, PhD student
Faculty of Education
University of Alberta
Shollowa@ualberta.ca

Invitation
You are invited to participate in a study that involves research. The purpose of this research project is to examine the experiences of graduate students in an online adapted physical education licensure program. We believe that student lived-experiences in the program should be part of planning and programming. We want to know; how content components helped graduate students meet the demands of teaching students with disabilities, what elements of the online format aided the graduate students' experience self-efficacy during the learning process, and how did the program content components help the graduate students meet the demands of core competencies of teaching DAPE?

What's Involved
As a participant, you will be asked to engage in an online demographic survey. At that time, you will be asked to share your experiences in teacher preparation, teaching history, demographic location, and future education. Participation in this portion of the research will take approximately 30 minutes of your time. As a participant, you will be asked to participate in Pre-Interview Activities, including writing, drawing, and creating items to evoke memories, thoughts, and feelings. The items to be completed with instructions will be sent via email to your Bemidji State University account. Participation in this portion of the research will take approximately 30 minutes of your time. You will also have the opportunity to ask questions of the research team to further your understanding of the approach across the duration of the study You will be asked to engage in an online interview with members of the research team. During that time, you will be asked to share your experiences of completing the Developmental Adapted Physical Education licensure program at Bemidji State University. Participation in this portion of the research will take approximately 60 minutes of your time. Time will also provide the opportunity for you to ask questions and consider ideas other ideas you may wish to share. You will also be asked to engage in an online follow-up interview. Participation will take approximately 15 minutes of your time. These meetings may be video or audio recorded for transcription purposes.

Potential Benefits and Risks

This research and its findings offer the following possible benefits. First, the findings of this research will contribute to understanding a student-centered approach in adapted physical education licensure as it relates to core competencies and the skills of DAPE teachers. Second, the experiences you will be asked to share through the survey, pre-interview activities, and interviews have the potential to influence the development of licensures in adapted physical education. Third, you may have the benefit of contributing to the field of DAPE as to the literature on this topic. Any statements made in this context will be considered confidential but not anonymous, given the nature of the interviews. However, the research team will present any findings from these meetings anonymously.

Confidentiality

All information you provide will be considered confidential. Your name will be replaced with a pseudonym to protect your identity; access to the master list of pseudonyms will be restricted to the research team. Please note that with your permission, your anonymous quotations may be used in the final reports of the research. Please note that no information will be reported that will render your quotes personally identifiable.

Data collected during this study will be stored on password-protected computers in locked offices on the University of Alberta's campus. Data will be kept only until the completion of the final report, after which time any hardcopy documents will be confidentially shredded, and electronic files will be permanently erased.

Voluntary Participation

Participation in this study is entirely voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time within two weeks of the data collection and may do so without any penalty.

Publication of Results

This study's results may be published in professional journals and presented at conferences to audiences of teachers and researchers. If you wish to receive a final report of this research, please contact Jodi Sherry K Holloway via email.

Contact Information and Ethics Clearance

If you have any further questions regarding this study, please do not hesitate to contact Dr. Lauren Sulz at 780-492-0878. The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta (Project #). For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Informed Consent Form

I agree to participate in the study “An online adapted physical education licensure program: Adding student voice to the graduate experience” as described above.

I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name of Participant: _____

Signature: _____ Date: _____

Appendix F

UNIVERSITY OF ALBERTA

RESEARCH ETHICS OFFICE

2-01 North Power Plant (NPP)
11312 - 89 Ave NW
Edmonton, Alberta, Canada T6G 2N2
Tel: 780.492.0459
www.uab.ca/reo

Notification of Approval

Date:	February 1, 2022
Study ID:	Pro00089606
Principal Investigator:	Sherry Holloway
Study Supervisor:	Lauren Sulz
Study Title:	An Online Adapted Physical Education Licensure Program: The Power of adding student voice to the graduate experience.
Approval Expiry Date:	January 31, 2023

Thank you for submitting the above study to the Research Ethics Board 1. Your application has been reviewed and approved on behalf of the committee.

Approved Documents:

Letter of Initial Contact
Invitation to the Study Version 3
Consent Forms
Informed Consent Form version 4
Questionnaires, Cover Letters, Surveys, Tests, Interview Scripts, etc.
Interview Question Guide version 3
Demographic Survey Link version 3
Pre-Interview Activities version 3
Other Documents
DAPE Program Plan of Study

Any proposed changes to the study must be submitted to the REB for approval prior to implementation. A renewal report must be submitted next year prior to the expiry of this approval if your study still requires ethics approval. If you do not renew on or before the renewal expiry date, you will have to re-submit an ethics application.

Approval by the REB does not constitute authorization to initiate the conduct of this research. The Principal Investigator is responsible for ensuring required approvals from other involved organizations (e.g., Alberta Health Services, Covenant Health, community organizations, school boards) are obtained, before the research begins.

Sincerely,

Theresa Garvin, Ph.D, MUA, BA
Chair, Research Ethics Board 1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

Appendix G

IRB Approval BSU

Addendum to the approval. Mr. McConnell left the university in 2023 and removed all shared documents. The form with the dates and signatures were removed with the shared documents. I have reached out to the Graduate Office and the IRB committee with no resolve.

This is a copy of the email I received in March of 2022.

Sherry,

I have reviewed your documents and they meet the requirements of the IRB. I approve your moving forward as the Convener of BSU's IRB.

George McConnell
School of Graduate Studies, Director
IRB, Convener
Bemidji State University
310 Memorial Hall, #48
Bemidji, MN 56601
218-755-2027

Appendix H

Participant Timeline

March	2022	Invite Participants to the Research
	2022	Email Timeline & Informed Content Form to participants
	2022	Email demographic Survey link
April	2022	Email Pre-Interview Activity directions & discuss the process.
	2022	Set up Face-to-Face Interviews.
	2022	Conduct interviews and collect PIA information.
May	2022	Email and Zoom follow-up with participants.

Appendix I

Sample of DAPE Survey: Qualtrics Survey Tool Link

Instructions for Demographic Survey

Here is a link of the instructions in a recorded verbal format:
_____.

Thank you for participating in the initial Demographic Survey through Qualtrics and Bemidji State University. Please click the link below to start the survey. The anticipated completion time is 15 mins. If you have questions or difficulties with the link, please contact the Primary Investigator, Sherry Holloway, at Sholloway@bemidjistate.edu or text 218.760.6317.

https://bemidji.co1.qualtrics.com/jfe/form/SV_3l1HT3LSnXeuH41

Bemidji State University

Appendix J

Sample Pre-Interview Activity

Instructions for Pre-Interview Activities

Please complete two or more of the following visual representation activities and bring them to our virtual interview scheduled on_____ at _____.

Here is a link of the instructions in a recorded verbal format:
_____.

Please use pens, pencils, and preferably colored markers on blank paper. We will begin our interview by having you show me and tell me about the ones you completed. The anticipated completion time is approximately 30 mins. If you have questions, please contact the Primary Investigator, Sherry Holloway, at Sholloway@bemidjistate.edu or text 218.760.6317.

Pre-Interview Activities (PIAs): About the person in general

We will begin our interview by having you show me and tell me about the ones you completed.

1.	Draw a picture or diagram of a place that is important to you and use keywords to indicate the parts or what happens in each of the parts.
2.	Draw a schedule for your week (day or year) and use colors to indicate how time is spent. Make a legend to explain the colors.
3.	Think of a component of your life that is very important for you (for example, sports, money, school, home, relationship with a particular person, travel). Make a timeline listing key events or ideas that changed the way you experience it
4.	Imagine that someone will make a movie about your life. List or draw five scenes that would be important or pivotal moments in the movie.
5.	Think of an activity that is very engaging for you. Use three colors to make an abstract diagram that expresses what it is like for you to do this activity.
6.	Make a diagram or images to show where your support or support systems come from.

Pre-Interview Activities (PIAs): About the topic of the research
Please complete two or more of the following visual representation activities and bring them to our interview. Please use pens, pencils, and preferably coloured markers on blank paper. We will begin our interview by having you show me and tell me about the ones you completed.

1.	Use colors to make three drawings that symbolize how your experience as a student has changed over time.
2.	Make a timeline listing key events or ideas that changed the way you experienced your graduate program.

3.	Think of an event or idea that changed what being a student is like for you. Make two drawings showing what things were like for you before and after the change. Feel free to use speech or thought bubbles.
4.	Make a list of 20 important words that come to mind for you when you think of online programs, and then divide the list of words into two groups in any way that makes sense to you. Please bring both the original list and the two smaller groups of words to the interview.
5.	Think back on your education. Make two drawings: one showing what it was like in a good situation and one showing what it was like in a "not so good" situation. Feel free to use thought bubbles or speech bubbles.
6.	Complete the following two sentences: Being in an online cohort is like_____. Being in a graduate student as Bemidji State University is like_____.

Appendix K

Sample Interview Guide with Open-Ended Questions:

Group 1: Getting to know you questions:

1.	In all the things you are interested in or have spent time thinking about, what has puzzled you the most?
2.	In the world of nature, the world of things, or the world of people, what surprises you the most?
3.	What would you like to be really good at doing?
4.	If you had one week off a month, what are some of the things that you would like to do with the extra time?
5.	If you could pick something that you would not have to worry about anymore, what is one thing you might choose?
6.	Have you done anything different from what most people your age has done? Have you made something, read up on something, planned something, or tried something?

Group 2: Questions about the experience as an undergraduate student:

1.	As you look back over all of your educational experience, what aspects of learning would you say are most satisfying or engaging? What keeps bringing you back to it?
2.	As a student, if one school was better than another school, what helped it be a better year?
3.	As a student, what kinds of support did you hope for or appreciate from other people in the school/university?
4.	As a student, whenever you met your teachers at the beginning of each semester, what kinds of things did you pay attention to or hope to learn quickly?

Group 3: Questions about the experience as a graduate student:

1.	Before you started the graduate program, what were some of your expectations about what it would be like?
2.	What were some of the parts of graduate school that you most looked forward to?
3.	Were there surprises you have experienced in graduate school or about the way you enjoyed some parts more than others?
4.	Over time, how did you change any of your ideas about Graduate School? For example, did you change your goals, or did you change your ideas about the best ways to approach certain things?

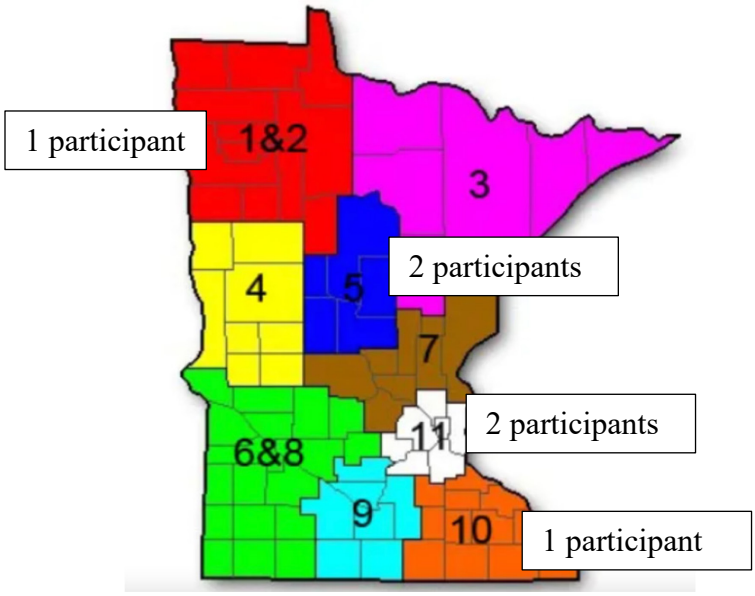
Group 4: Questions about the experience of the DAPE Online Program:

1.	When you are taking a class online, what makes some classes better than others?
2.	What tips would you offer to DAPE graduate students to help that person prepare for their role in the online DAPE program?
3.	If you could change one thing about the process of the DAPE program at BSU, what would it be?
4.	Over time have you made any changes to the way you approach things in the online DAPE program?

5.	What parts of the online DAPE program prepared you for the job requirements?
6.	If you could change one thing about the content of the online DAPE program at BSU, what would it be?

Appendix L

Demographic Survey: MN Developmental Adapted Physical Education Regions 1-11



Note. Graphic (Minnesota Department of Education, 2022) Data: (Holloway, 2023).

Appendix M

Demographic Survey-General Information

Participants	Mr. Sal	Mr. Rudy	Ms. Cali	Mr. Ren	Mr. Wes	Mr. Fritz
MN DAPE Region	5	5	1 & 2	11	11	10
Currently Teaching Developmental Adapted Physical Education	Yes	Yes	Yes	Yes	Yes	No
Years of Service	6-10	1-5	1-5	11-15	11-15	1-5
Previous Variance License	No	No	Yes	No	Yes	No
Number of Inclusion Credits	+10	1-3	1-3	4-9	4-9	0
MN Undergraduate Degree	No	Yes	Yes	Yes	Yes	No
Master's Degree Complete before, during, or after Online Program	Yes	Yes	No	Yes	No	No

Note. Compiled from Qualtrics Demographic Survey Data.

Appendix N

Rating of Participant Experiences of the Core Content Standards and Skills – Individual Participants Rating

Participants **BSU Content Alignment**	**Mr. Sal**	**Mr. Rudy**	**Ms. Cali**	**Mr. Ren**	**Mr. Wes**	**Mr. Fritz**	**Average Score**	**Overall Rank**
Scope of Practice K-12								
Field Experience	11	10	11	2	2	5	6.8	7
Community Transition	5	4	9	8	11	10	7.6	9
License Requirement								
MTLE/NES	9	12	12	12	10	12	11.1	12
Subject Matter Content								
Due Process	3	9	1	3	6	1	3.8	2
Motor Assessment	2	2	3	5	3	2	2.8	1
Motor Evaluation	4	3	2	7	8	8	4.1	3
SPED Forms	1	1	7	6	9	3	4.5	4/5
Conducting Meetings	10	11	4	10	12	6	8.8	11
Universal Design	6	5	8	9	7	9	7.3	8
Lesson Planning	12	8	5	4	4	7	6.6	6
Teaching Strategies	8	7	6	1	1	4	4.5	4/5
Continuing Licensure								
Professional Development	7	6	10	11	5	11	8.3	10

Note. The table's categories are the core content standards and skills of developmental adapted physical education as required by the Professional Education Licensing Standards Board under the guidelines of the Minnesota Department of Education.