JOSEA
THE JOURNAL OF SPECIAL EDUCATION APPRENTICESHIP
ISSN 2167-3454
Vol. 11(2) June 2022

A Descriptive Probe into Current Introduction to Adapted Physical Education Courses in the United States of America

[1]Kylie Wilson, M. A., [2]Scott W.T. McNamara, Ph.D., and
[3]Lauren J. Lieberman, Ph.D.
[1]Arizona State University; [2]University of New Hampshire; [3]SUNY Brockport

The number of public-school students with disabilities has increased in the last decade, as has support for teaching students with and without disabilities in the same setting. Consequently, sufficient adapted physical education (APE) training for pre-service physical education teachers is critical to ensure meaningful physical education experiences for all students. Few studies on how physical education teacher education (PETE) programs are preparing future physical educators to teach students with disabilities exist. The purposes of this study were to preliminarily describe current undergraduate APE introductory courses, including: (a) instructor demographics, (b) course characteristics, (c) course content and (d) practicum experiences. Twenty-six faculty members currently teaching an introduction to APE course completed a 35-item web-based survey (26% response rate). Demographic characteristics of instructors were mainly homogenous, suggesting a lack of diversity among those teaching these courses. Twenty-four reported their program offered a practicum. Varying coverage of APE concepts explicates important content gaps in curricula that may hinder the quality of physical education services for students with disabilities. These findings deepen the understanding of who is instructing the courses, how the APE introductory courses are being taught across the US, and can serve as a reference for creating and improving PETE programs.

Keywords: physical education teacher education; pre-service teacher; service learning

Acknowledgments

Data collection and analysis occurred while S.M. was an assistant professor and K.W. was a master's student at the University of Northern Iowa.

Author Contributions

Conceptualization, S.M., L.L., and K.W.; Methodology, S.M., L.L., and K.W.; Formal Analysis, K.W. and S.M.; Writing-Original Draft Preparation, K.W.; Writing-Review & Editing, K.W. S.M., and L.L..

Corresponding Author

Scott McNamara
University of New Hampshire; 124 Main St, Durham, NH 03824; Scott.McNamara@unh.edu

Physical educators are responsible for teaching students with a wide range of abilities, including children with disabilities. However, physical educators frequently perceive their preparation from their Physical Education Teacher Education (PETE) programs to teach students with disabilities as insufficient (Block et al., 2016; Haegele et al., 2020; Hutzler et al., 2019; Lirgg et al., 2017), leading them to struggle to provide necessary education and services (Block et al., 2016; Kwon, 2018; Maher & Fitzgerald, 2020; Piletic & Davis, 2010; Tant & Watelain, 2016). These perceptions are paired with prior findings that PETE programs in many countries have no adapted physical education (APE) course requirements (Block et al., 2016), and those in the United States of America (USA) require only a single course ('paper', 'class', 'module' in international context) in APE for their degree requirements (Kwon, 2018; Piletic & Davis, 2010). Our current understandings of the status and content covered in APE introductory courses for undergraduates come from two key prior studies (Kwon, 2018; Piletic & Davis, 2010).

Course Offerings

Piletic and Davis (2010) reported that of 128 surveyed undergraduate PETE programs, 69% indicated that only a single course of APE was offered in their program. While the remaining participants in their results did signify that there were additional APE courses available to students, only 6% of those participants reported that those courses were required. Although the Piletic and Davis study is over a decade old now, Kwon (2018) presented similar data. In a survey of 75 introduction to PETE faculty, Kwon reported 51% of participants offered a single introduction to APE course within their PETE program, and 73% reported requiring only one course for their PETE students. Further, more than 180 countries in the United Nations Convention on the Rights of Persons with Disabilities ratified that students with disabilities be included in physical activity in the school setting (United Nations, 2006). Thus, this seemingly universal lack of training among beginning physical educators becomes increasingly worrisome.

Course Content

Further, there is no consensus related to the core content to be taught in APE introductory courses to ensure teachers feel confident and knowledgeable to teach all children. One possible guiding tool for curriculum development may be the Adapted Physical Education National Standards (APENS). The APENS consist of 15 standards that provide a national (USA)

standard for guiding APE professionals and their professional development (Kelly, 2019). Though APENS are professional standards, understanding what concepts from these standards are covered, if any, provides deeper insight into the current breadth of content APE introductory courses are covering.

Piletic and Davis (2010) surveyed faculty about the content scope and sequence in their introduction to APE courses by aligning reported covered content with the APENS. Their results suggested nine concepts were covered in the surveyed courses (e.g., unique attributes, instructional design & planning, or teaching), and were not equally addressed by all participants. For example, 63% of participants in Piletic and Davis' study (2010) reported covering disabilities, yet only 10% covered concepts related to legislation and history – a topic often reported as overlooked in the required APE coursework for PETE majors (Wilson et al., 2019). Similarly, Kwon (2018) surveyed faculty (N = 75) on the most important content covered in their APE introductory courses. Information about students with disabilities ranked highest by more than 50% of the participants and law/legislation ranked most important by less than 10%.

These findings are comparable to a recent syllabi analysis of APE introductory courses (*n* = 30) showing coverage of disabilities (physical and intellectual) were present on 70% of syllabi; but contrastingly, the syllabi analysis showed topics related to law covered in 50%, and history covered in 20% of participants' courses (McNamara et al., 2022). Still, legislation and history are important concepts in APE service delivery, as physical educators should be educated to abide by federal education laws and understand the impactful role meaningful PE affords for all students (Kelly, 2019; Wilson et al., 2019).

Other concepts reported to be minimally or not covered in APE introductory course content include communicating with other staff and colleagues, assessment of educational services, continuing education, ethics, and communication (Piletic & Davis, 2010); behavior management, consulting, curriculum development, and social and cognitive factors related to disabilities (Kwon, 2018); and collaboration and working with paraprofessionals (McNamara et al., 2021a). Though, fittingly, some of these concepts may be more appropriate related to professionals beyond the APE introductory course.

Practicum Experiences

Previous research suggests that meaningful experiential learning may increase the perceived adequacy and attitudes towards teaching students with disabilities for physical educators (e.g., increased confidence, overall satisfaction working with students with disabilities, attitudes, understanding; McCracken et al., 2020; Taliaferro et al., 2015; Taliaferro & Bulger, 2020; Tant & Watelain, 2016; Woodruff & Sinelnikov, 2015). Specifically, Hodge and Jansma (1999) reported that pre-service physical educators' perspectives towards students with disabilities significantly alter from approximately 16 hours in a practicum experience. While Piletic and Davis (2010) reported many practicum requirements in the introduction to APE courses to be less than 16 hours (Piletic & Davis, 2010), Kwon (2018) reported approximately 72% of courses with a practicum required more than 16 hours. This increase should be interpreted cautiously, however, as Kwon (2018) reported that only two-thirds of surveyed courses required a practicum component, which is less than the 84% previously reported by Piletic and Davis (2010). With PETE students still expressing a desire for more experience working with students with disabilities, specifically in the areas of utilizing evidenced-based practices to improve students with disabilities' skills and performance, more research is needed to understand the status of practicums in the introduction to APE course (Taliaferro & Bulger, 2020; Woodruff & Sinelnikov, 2015). Though substantive research has been conducted on APE practicum experiences in PETE programs (Layne & Blasingame, 2018; Lirgg et al., 2017; Taliaferro & Bulger, 2020; Woodruff & Sinelnikov, 2015), data on the variety of implementation of these experiences remains limited (Case, 2021; Kwon, 2018; McEvoy et al., 2015; Piletic & Davis, 2010). Probing this variability may help determine which programs are most impactful for successfully preparing PE teachers for teaching students with disabilities, as well as what components are still largely lacking in pre-service APE training.

Purpose of the Study

Though prior key studies did report on instructor characteristics such as education and specialization (Kwon, 2018; Piletic & Davis, 2010), specific demographics such as race/ethnicity and gender were not reported but could provide important insight on demographic diversity among APE instructors. This is especially important given the current movement to diversify PE

professionals in relation to the demand for increased social justice among historically marginalized groups (Blackshear, 2020; Culp, 2020). Further, while physical educators in the USA are often relying on a single APE introductory course to prepare them to teach students with disabilities, there is a current lack of data used to inform curricular and pedagogical decisions for content in these collegiate courses. Through use of a survey modified from Piletic and Davis (2010), this investigation is a part of a larger investigation aimed to examine introduction to APE undergraduate courses from across the USA (McNamara et al., 2021a; McNamara et al., 2022). Specifically, the purpose of this study was to preliminarily describe current undergraduate APE introductory courses, including: (a) instructor demographics, (b) course characteristics, (c) course content, and (d) practicum experiences. Providing preliminary insight into these contextual characteristics will highlight the current status of APE introductory courses which can better guide curriculum development for existing and new PETE programs, as well as provide a starting point for more focused research into the benefits and drawbacks of noted variation in the examined characteristics.

Methods

Participants

This study was part of a larger project into undergraduate APE introductory in the USA (McNamara et al., 2021a; McNamara et al., 2022). Specifically, this study was a descriptive probe into undergraduate APE introductory course characteristics using data collected from a convenience sample (i.e., ease-of-access non-probability sampling) of APE introductory or adapted physical activity (APA) course instructors. The website stateuniversity.com was used to obtain a list of the 100 most popular PETE programs across the USA (2019), as no comprehensive list of all undergraduate PETE programs in the USA was obtainable (Piletic & Davis, 2010). The instructors of the introduction to APE courses were identified by reviewing the most relevant departments in the universities pertaining to PE, primarily the kinesiology departments. Next, the identified instructors were invited to participate in the study via email during the 2019-2020 school year. If the instructor of the APE course could not be readily identified, then the chair and/or secretary of the department responsible for the PE program was emailed and asked to forward the invitation to the introduction to APE instructor. The

inclusion criteria for the study consisted of: (a) the participants were currently the instructor for an undergraduate introduction to APE course, or a closely related introduction to APA course, and (b) had at least one semester of experience teaching the course. Informed consent was obtained via electronic acknowledgement prior to administering the survey and participants could withdraw at any time. Responses were anonymous and all data was confidentially stored securely in an encrypted database. All procedures were approved by the lead investigator's Institutional Review Board committee prior to data collection.

Data Collection

The survey the investigators distributed was adapted from a descriptive survey used 'to describe the course profile, course content, mechanism of delivery, and the application of teacher standards on content for the introduction to APE course in PETE programs' (Piletic & Davis, 2010, p. 27). The research team reviewed and revised this instrument to better suit the purposes of this study, which included minor alterations in wording and sentence structure, as well as additional questions related to the practicum experience and required textbook(s) used in the course. The original survey demonstrated face validity via a 14-item rating form completed by experts in the field. After the initial adaptation of the survey for the current study, the modified instrument was also assessed for face validity by five experts in the field of APE for feedback on content relevance and question structure. Face validity methodology involves judging the alignment of survey items to the intended constructs to be assessed and is recommended in developing surveys for social science research (Boateng et al., 2018). These experts all worked in higher education across the USA with at least five semesters of experience teaching APE courses, as well as being former adapted physical educators. After receiving feedback, the researchers again examined and revised the survey. Examples of revisions included updating survey scope to include introductory physical activity courses, modifying language to be accepting of schools with different schedules (i.e., terms, semesters), and allowing for write-in answers to questions regarding practicum characteristics (e.g., age-level served, purpose of practicum). All changes were then agreed upon by the three investigators.

The finalized 35-question survey was divided into four sections: (a) instructor demographics, (b) course demographics, (c) practicum experience, and (d) course content. The

12 questions related to the instructors' demographics, collected information such as age, gender, highest degree attained, and number of semesters teaching the introduction to APE course. The section that asked participants about demographics related to their introduction to APE courses included questions pertaining to the number of students usually enrolled in the course, the majors that took the course, and how often the course was offered. Nine questions were specific to practicum experiences that were offered as a component of the introduction to APE course. Questions included the number of hours expected to be completed, types of disabilities in the practicum, interactions with individuals with disabilities, and the purpose of the practicum. In the final section, three questions were used to examine the content and assignments in the course. The first question asked participants to identify the concepts derived from APENS standards that were addressed in their course from a prespecified list of standards. The second question asked participants to write in which textbooks were required in the introduction to APE course. The third question asked participants to describe the assignments given in the course.

Results

Of the 100 schools identified and contacted from the list, 52 responded (52% response rate). Half of the respondents (26%) reported no APE course provided by their program. Survey data included in analysis was collected from 26 (26% response rate) introduction to APE course instructors.

Instructor Demographics

Participants' ages ranged from 29 to 72 years (M = 48.42, SD = 13.73) and the number of semesters teaching the introduction to APE course ranged from 1 to 66 (M = 19.19, SD = 21.80). The majority of participants identified as white (92%) and female (69%), with 77% indicating their position as tenure track professor. Sample demographic statistics are displayed in Table 1.

Table 1

Participant Demographics

Item Description	% (*n*)
Gender	
Female	69% (18)
Male	31% (8)
Position at their university	
Tenure Track Professor	77% (20)
Lecturer	8% (2)
Adjunct	4% (1)
Other	12% (3)
Race/ethnicity	
White	92% (24)
Asian	4% (1)
Black or African American	4% (1)
Highest degree completed	
Bachelor's	4% (1)
Master's	15% (4)
Doctoral	81% (21)
Field of study with highest degree completed	
APE	23% (6)
Physical education	23% (6)
Kinesiology	15% (4)
Education	15% (4)
Sports leadership and administration	12% (3)
Exercise physiology	8% (2)
Instructional technology	4% (1)
Highest level of APE training	
Doctorate	23% (6)
Master's	19% (5)
CAPE certified	15% (4)
State certified	4% (1)
Bachelor's with one or two courses in APE	8% (2)
None	15% (4)
Other	15% (4)

Note. N = 26. APE = Adapted physical education. CAPE = Certified adapted physical education.

Profile of Courses

Descriptive statistics from the initial survey demonstrated that 13 (50%) of the participants reported their introduction to APE course was offered every semester. Nineteen (73%) cited that only one section of the course was provided during the semesters the course was offered. Twenty-three (89%) specified their courses were delivered in a face-to-face setting. A majority indicated that PE majors (*n* = 23, 89%) were enrolled in their course, followed by general kinesiology majors (*n* = 10, 39%) and exercise science majors (*n* = 9, 35%). In addition, seven participants (27%) reported that their department offered either a minor (*n* = 5, 19%), licensure (*n* = 1, 4%), and/or certification (*n* = 2, 8%) in APE. Table 2 provides an overview of the introduction to APE course demographics.

Survey results demonstrated that the textbook *APE and Sport* (*n* = 15, 58%; Winnick & Porretta, 2016) was the most frequently used textbook in the introduction to APE courses. This was followed by *A Teacher's Guide to APE: Including Students with Disabilities in Sports and Recreation* (*n* = 3, 12%; Block, 2016) and *Principles and Methods of APE and Recreation* (*n* = 3, 12%; Roth et al., 2017). Table 3 provides information on the frequency of varying concepts covered in the courses. Responses to the survey item "Describe some of the major assignments that you give your students in your introduction APE course" were categorized independently by the researchers. The assignments indicated were lesson plans (*n* = 12, 46%), assessments (*n* = 10, 38%), reflections (*n* = 10, 38%), IEPs (*n* = 10, 38%), projects (i.e., fact sheets, disability sport programs, case studies = 8, 31%), research papers (*n* = 8, 31%), accessibility routes (*n* = 3, 12%), presentations (*n* = 3, 12%), and observations (*n* = 3, 12%).

Table 2

Characteristics of Surveyed Introduction to APE Courses

Item Description	% (*n*)
Course format	
Face-to-face	89% (23)
Blended	12% (3)
College majors enrolled	
Exercise science	35% (9)
Physical education	89% (23)
Athletic training	19% (5)
Coaching	27% (7)
Therapeutic recreation	8% (2)
Special education	12% (3)
Pre-physical therapy	31% (8)
Pre-occupational therapy	23% (6)
Kinesiology	39% (10)
Other	15% (4)
Level of students	
Freshmen	15% (4)
Sophomore	35% (9)
Junior	89% (23)
Senior	58% (15)
Number of students enrolled	
5-10	4% (1)
11-15	31% (8)
15-20	23% (6)
21-25	4% (1)
26-30	23% (6)
31-35	4% (1)
36-40	4% (1)
Over 51	8% (2)
How often is the course offered	
Every semester	50% (13)
Every other semester	42% (11)
Every other year	8% (2)
Length of course	
10 weeks	4% (1)
15 weeks	15% (4)
16 weeks	81% (21)
Number of sections offered	
1	73% (19)
2	15% (4)
3	8% (2)
4	4% (1)

Note. N = 26.

Table 3

Concepts Covered in Surveyed Introduction to APE Courses

Concept	% (*n*)
Human development	39% (10)
Motor behavior	81% (21)
Exercise science	31% (8)
Measurement and evaluation	65% (17)
History and philosophy	46% (12)
Unique attributes of learners	73% (19)
Curriculum theory and development	27% (7)
Assessment	73% (19)
Instructional design and planning	81% (21)
Teaching	81% (21)
Consultation and staff development	27% (7)
Student and program evaluation	35% (9)
Continuing education	4% (1)
Ethics	46% (12)
Communication	69% (18)

Note. N = 26. Concepts derived from the Adapted Physical Education National Standards (APENS).

Profile of Practicums

Twenty-four (92%) of the participants revealed a practicum component as part of their introduction to APE course. With regard to the location of the practicum, on-campus (*n* = 9, 38%), off-campus (*n* = 8, 33%), and both on-campus and off-campus (*n* = 7, 29%) were reported. Twenty-four also indicated that individuals with autism spectrum disorder, physical disabilities, and intellectual disabilities attended the practicums. Table 4 provides an overview of the practicums offered in conjunction with the introduction to APE courses.

Table 4

Profile of Surveyed Practicums

Item Description	% (*n*)
Disability types	
Autism Spectrum Disorder	100% (24)
Physical disabilities	100% (24)
Intellectual disabilities	100% (24)
Visual impairments	71% (17)
Deaf-blind	13% (3)
Hearing impairment	54% (13)
Other health impairment	50% (12)
Emotional disturbance	42% (10)
Multiple disabilities	71% (17)
Learning disabilities	63% (8)
Traumatic brain injury	54% (13)

Speech and language impairment	46% (11)
Student grade levels	
Pre-kindergarten	38% (9)
Elementary	76% (18)
Middle school	76% (18)
High school	83% (20)
Adult	38% (9)
Number of hours	
0-10	17% (8)
11-20	46% (11)
21-30	13% (3)
Over 31	8% (2)

Note. N = 24.

Discussion

All physical educators are expected to facilitate learning for students with a variety of needs, including students with disabilities. However, the preparation to teach students with disabilities in a PE setting varies among undergraduate PETE programs (Piletic & Davis, 2010). Many beginning physical educators are expected to teach students with disabilities after taking one preparation course in APE despite the vast amount of knowledge required to appropriately work with these students (e.g., content knowledge, legal procedures; Kwon, 2018; Piletic & Davis, 2010). Hence, the purpose of this study was to preliminarily describe current undergraduate APE introductory courses, including: (a) instructor demographics, (b) course characteristics, (c) course content and (d) practicum experiences in the USA. We discuss the findings from each category and their implications for practice, as well as areas for future research.

Instructor Demographics

With regard to instructors' training, previous research on APE training of those teaching the introduction to APE course has been mixed. Kwon (2018) reported that a majority of the participants held a doctorate in APE, but the Piletic and Davis (2010) findings show that slightly less than half of faculty teaching APE introductory courses had attained their doctorate with a specialization in APE. Results from the current sample support PETE faculty not having a specialization in APE, as only 23% of the current sample held a doctorate with this specialization. Faculty without a specialization in APE may also focus on different content areas

when compared to faculty with a doctorate in APE (Piletic & Davis, 2010), which may have led to large discrepancies in the content taught from the current sample.

Participants were predominantly female, White, and tenure track (i.e., position with the possibility of tenure) professors. The overwhelming majority of White professors in APE introductory courses highlights the dominating trend of White PE professionals throughout the field (Landi et al., 2020). As personal identities and experiences contribute to how courses are taught and led (Fitzpatrick & Santamaria, 2015), current reform movements in PE advocate for increased focus on social justice, including more diverse, multicultural demographics among professionals and challenging the normalization of whiteness (i.e., identifying with and perpetuating ideals entrenched in racial constructs) that may also exist in the subfield of APE based on this investigation's homogeneity of APE introductory professors (Blackshear, 2020; Culp, 2020).

One potential starting point for diversifying PE and APE instructor demographics is for existing professionals to practice Applied Critical Leadership, including open and scrutinized discussions of race and ethnicity, reflection on racism, and a willingness to understand individual experiences of students (Fitzpatrick & Santamaria, 2015). Secondly, Fitzpatrick and Santamaria (2015) advocate that purposeful recruitment of students with more diverse backgrounds to PETE, as well as expansion of leadership reflective of diversity, may help disrupt racialization in PE leadership. Though some evidence exists of this shift among student populations (Harrison & Clark, 2016), this shift is not yet reflected in PETE faculty, including among APE introductory course faculty as evidenced here. Additionally, prior work on women and Black APE professionals suggests that early exposure to people with disabilities plays a role in pursuit of an APE profession, perpetuating the need for both recruitment of these groups and practicum experiences in APE introductory courses (McGrath, et al., 2019; Webb & Hodge, 2003; Yang & Elliott, 1999). Future work should examine how experiences in APE introductory courses contribute to development of APE professionals with a specific focus on increasing diversity of leadership among the profession.

Courses Characteristics

Several commonalities were found among the participating introduction to APE courses. The majority of courses were taught in a face-to-face setting, with most courses being offered for three credit hours. The findings align with previous studies on the demographic information regarding the introduction to APE course (Kwon, 2018; Piletic & Davis, 2010). Most courses represented in this study consisted primarily of upper-class students (i.e., juniors and seniors) with most students classified as PE majors. Piletic and Davis (2010) reported similar results and suggested that many pre-service PE students do not have a methods course until their junior year. Without a strong background in PE pedagogy, this may lead students to question the benefits of the topic at hand and may negatively influence their value towards the topic (Hetland & Strand, 2010; Piletic & Davis, 2010). Furthermore, Piletic and Davis (2010) explained "students who are without a methods course prior to their introduction to APE course, often do not have a sufficient foundation of teaching to include instructional strategies that can then be built upon to address teaching students with disabilities" (p. 31). This may also divert class time from APE specific content to more pedagogical content; however further research is needed to understand how the absence of, or a corresponding, methods course impacts the content of the introduction to APE course. Regardless, it is suggested that PETE programs deliver APE courses after pre-service physical educators have a strong PE pedagogy foundation.

Course Content

There are currently no official guidelines to develop a framework for APE introductory courses. Therefore, we as leaders in the field turn to the only standards that are available to the profession at this time for guidance. APENS-related concepts covered by the majority of respondents included teaching, instructional design, assessment, and unique attributes of learners, which aligns with previous findings of most important and commonly covered content in APE introductory courses (McNamara et al., 2022; Kwon, 2018; Piletic & Davis, 2010). Promisingly, concepts previously cited as being overlooked in APE introductory coursework, such as communication, ethics, and student and program evaluation (Piletic & Davis, 2010), appear to be addressed by at least 35% of participants in the current study.

While it is encouraging that the surveyed PETE programs appear to be addressing these concepts to better prepare future physical educators, additional research is needed to understand the extent that content related to these concepts is being taught. One possible area of further research emphasis may lie within the textbooks that instructors are using in their introduction to APE courses. The textbook used in most courses may provide additional insight into how instructors are choosing content to focus on, and for how long (McNamara et al., 2022). Indeed, textbooks often play an important role in course sequencing and content (Stark, 2000). For example, the Winnick and Porretta (2016) textbook, which was used by more than half of the participants, has several chapters focused on specific disabilities. The high amount of faculty that reported covering Unique Attributes of Learners may be at least partially attributed to this focus within the textbook. In contrast, the Winnick and Porretta (2016) textbook does not have a strong emphasis on exercise science or curriculum theory, which again may be attributed to a small number of faculty that reported a focus on these concepts. There is a need for further research on the textbooks and other factors that drive content emphases in these courses.

Less than half of surveyed instructors focused on the concepts of ethics, history and philosophy, or curriculum theory and development, aligning with prior findings (Kwon, 2018; Piletic & Davis, 2010). These standards encompass understandings of philosophies around educational laws, developing and selecting assessments appropriate for PE students, and engaging in ethical practices with the purpose of advancing the status of students with disabilities in physical activity settings (Kelly, 2019). Understanding these concepts is fundamental for developing physical educators with strong pedagogical philosophies that can effectively teach students from diverse and marginalized backgrounds, including students with disabilities. The lack of coverage on these concepts is not surprising, as previous literature suggests the introduction to APE course is focused primarily on introduction to content and not depth of content (Piletic & Davis, 2010), wherein some of these concepts may be more understood and applicable for professionals beyond the APE introductory course. When considering the large amount of information that must be covered in this single course, the surveyed instructors may have (rightfully) selected concepts they deemed more important than

others. This deficiency substantiates claims that the current emphasis on theory and practice of inclusion with regard to students with disabilities is not enough (McGrath et al., 2019), especially given that physical educators who value inclusion are more likely to adopt inclusive pedagogical practices (Vickerman & Maher, 2018). Accompanied by research showing physical educators often feel their initial training inadequately prepared them to teach students with various disabilities, especially in an inclusive setting (Block et al., 2016; Haegele et al., 2020; Hutzler et al., 2019; Lirgg et al., 2017; McGrath et al., 2019; Morley et al., 2020), an additional course dedicated to covering APE content for PETE students appears overwhelmingly necessary. Of note, however, is that roughly half of PETE programs in the USA have previously been reported to practice infusion of APE concepts into other courses (Kwon, 2018; Piletic & Davis, 2010). The specific content and extent of infusion of APE concepts in other courses needs further research. Further, the level of research-based content being covered in these courses is also unknown but may provide additional insight into current and best practices for content selection (McNamara et al., 2021b).

Practicum Experiences

Nearly all of the participants (92%) reported a practicum component. This preliminary prevalence is higher than both Piletic and Davis' (2010) and Kwon's (2018) previous findings (66% and 84%, respectively). The results of the present study also indicated there may be disparity in the types of practicum experiences, demonstrated by a variety of practicum types (e.g., observations, direct teaching), settings (e.g., public schools, communities), and populations (e.g., age-level, disability type) reported.

The surveyed practicums included people with a variety of disabilities. Lirgg and colleagues (2017) have stated that teachers feel the most difficult disabilities to teach are children with autism, visual impairment, or multiple and severe disabilities. Results from the current study show that 100% of the practicums included children with autism. Seventy-one percent (71%) included children with visual impairment, and 71% also said they included children with multiple disabilities. While not every PETE student will work with each disability, it appears that they are being exposed to a variety of disabilities to help them with their introduction into teaching in public schools.

Nearly 20% of the surveyed APE introductory courses had less than 10 hours dedicated to practicum experiences, which is like the 22.43% reported by Piletic and Davis (2010) but more than the 13% reported by Kwon (2018). However, both of these key prior studies also indicate one-quarter up to half of surveyed programs requiring more than 20 hours of practicum experiences in comparison to the current study's 21%. This finding is concerning, as some data suggests that differences in pre-service physical educators' perspectives towards students with disabilities significantly alter from approximately 16 hours in a practicum experience (Hodge & Jansma, 1999; Kwon, 2018). Further analysis of practicum experiences is necessary to determine how different formats and experiences vary in their influence on pre-service physical educators' knowledge and attitudes towards students with disabilities, as prior research indicates conflicting results regarding variability (Qi & Ha, 2012).

Limitations

Several limitations in this preliminary investigation into APE introductory course characteristics should be addressed. First, a larger sample is desirable to better represent the population and provide more confidence in the reported findings. The 100 schools invited to participate were based on a list of the most popular PE programs from stateuniversity.com; however, the website sponsor does not guarantee the accuracy of the list. A validated list of current PETE programs would help in improving sampling strategies, survey reach and response rates, as well as guide future research related to the status of APE introductory courses in PETE programs. The survey used in this study demonstrated face validity in line with similar prior research; however conducting psychometric evaluations on the survey could improve validity. The results from this study should be generalized with caution, as those with more expertise and interest in APE may have been more apt to participate, subjecting the results to participation bias. Additionally, the results in this study are from self-reported data and are dependent on the honesty of the participants. This limitation, however, is pervasive in many previous studies related to PETE programs and their associated courses (e.g., McEvoy et al., 2015; Piletic & Davis, 2010). Finally, information was collected from both introduction to APE and APA courses, though they are not synonymous. To help mitigate this limitation, course

descriptions and objectives were reviewed in the syllabi to confirm that the participating course specifically mentioned teaching individuals with disabilities in a PE setting.

Conclusions

The results from this preliminary study echo findings from Piletic and Davis (2010) and Kwon (2018) including instructor qualifications and other general course details, but differ with fewer practicum hours required. PETE programs in the USA continue to dedicate a single 3-credit course for APE introductory training, despite perceptions of inadequacy to work with students with disabilities and desire for more pre-service training from physical educators. Although there may be benefits associated with the noted variability in these courses, benefits may also exist from creating a more uniform and evidence-based curriculum for APE introductory courses for future physical educators. However, highlighting the current status of APE introductory courses may assist in driving curriculum development for existing and new PETE programs such as content gaps, and the number and sequence of courses offered (i.e., methods before APE). Further research is needed to deepen the understanding of how PETE programs are preparing their students to work with students with disabilities, and if program variability affects the pre- and in-service physical educators' content knowledge, teaching abilities, or attitudes towards teaching students with disabilities. However, this study provides forward progress in light of the limited research in physical educators' APE training.

References

Blackshear, T. B. (2020). # SHAPEsoWhite. *Physical Education and Sport Pedagogy, 25*(3), 240-258. https://doi.org/10.1080/17408989.2020.1741533

Block, M. E. (2016). *A teacher's guide to adapted to physical education* (4th ed.). Paul H. Brookes Publishing.

Block, M. E., Kwon, E. H., & Healy, S. (2016). Preparing future physical educators for inclusion: Changing the physical education teacher training program. *Revista da Associando Brasileira de Atividade Motora Adaptada, 17*(1), 9-12. https://doi.org/10.36311/2674-8681.2016.v17n1.02.p9

Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health, 6*, 149. https://doi.org/10.3389/fpubh.2018.00149

Case, L. K. (2021). *An updated view of university-based service-learning in adapted physical activity: Instructor-reported use of best practices, challenges and supports* [Doctoral dissertation, Oregon State University]. ScholarsArchive@OSU. https://ir.library.oregonstate.edu/concern/graduate_thesis_or_dissertations/p8418v77z

Culp, B. (2020). Physical education and anti-blackness. *Journal of Physical Education, Recreation & Dance, 91*(9), 3-5. https://doi.org/10.1080/07303084.2020.1811618

Fitzpatrick, K., & Santamaría, L. J. (2015). Disrupting racialization: Considering critical leadership in the field of physical education. *Physical Education and Sport Pedagogy, 20*(5), 532-546. https://doi.org/10.1080/17408989.2014.990372

Flory, S. B., & Landi, D. (2020). Equity and diversity in health, physical activity, and education: Connecting the past, mapping the present, and exploring the future. *Physical Education and Sport Pedagogy, 25*(3), 213-224. https://doi.org/10.1080/17408989.2020.1741539

Haegele, J., Wilson, W., Zhu, X. Bueche, J. J., Brady, E., & Li, C. (2020). Barriers and facilitators to inclusion in integrated physical education: Adapted physical educators' perspectives. *European Physical Education Review, 27*(2), 297-311. https://doi.org/10.1177/1356336X20944429

Harrison Jr, L., & Clark, L. (2016). Contemporary issues of social justice: A focus on race and physical education in the United States. *Research Quarterly for Exercise and Sport, 87*(3), 230-241. https://doi.org/10.1080/02701367.2016.1199166

Hetland, K. M., & Strand, B. (2010). A descriptive analysis of undergraduate PETE programs in the central district. *ICHPER-SD Journal of Research in Health, Physical Education, Recreation Sport and Dance, 5*(1), 3-9.

Hodge, S. R., & Jansma, P. (1999). Effects of contact time and location of practicum experiences on attitudes of physical education major. *Adapted Physical Activity Quarterly, 16*(1), 48–63. https://doi.org/10.1123/apaq.16.1.48

Hutzler, Y., Meier, S., Reuker, S., & Zitomer, M. (2019). Attitudes and self-efficacy of physical education teachers toward inclusion of children with disabilities: A narrative review of international literature. *Physical Education and Sport Pedagogy, 24*(3), 249-266. http://doi:10.1080/17408989.2019.1571183

Kelly, L. E. (2019). *Adapted physical education national standards*. Human Kinetics.

Kwon, E. H. (2018). Status of introductory APE course and infusion in PETE program. *Palaestra, 32*(1), 32-39.

Landi, D., Lynch, S., & Walton-Fisette, J. (2020). The A–Z of social justice physical education: Part 2. *Journal of Physical Education, Recreation & Dance, 91*(5), 20-27. https://doi.org/10.1080/07303084.2020.1739433

Layne, T. E., & Blasingame, J. (2018). Analysis of a physical education teacher education field experience of working one-on-one with students with severe and profound disabilities in a self-contained environment. *The Physical Educator, 75*(4), 638-700. http://doi:10.18666/tpe-2018-v75-i4-7952

Lirgg, C. D., Gorman, D. R., Merrie, M. D., & Shewmake, C. (2017). Exploring challenges in teaching physical education to students with disabilities. *Palaestra, 31*(2), 13-18.

Maher, A. J., & Fitzgerald, H. (2020). Initial teacher education and continuing professional development: The perspectives of special school physical education teachers. *Curriculum Studies in Health and Physical Education, 11*(1), 18-33. https://doi.org/10.1080/25742981.2019.1696687

McCracken, T., Chapman, S., & Piggott, B. (2020). Inclusion illusion: A mixed-methods study of preservice teachers and their preparedness for inclusive schooling in health and physical education. International Journal of Inclusive Education, 1-19. Advance online publication. https://doi.org/10.1080/13603116.2020.1853259

McEvoy, E., MacPhail, A., & Heikinaro-Johansson, P. (2015). Physical education teacher educators: A 25-year scoping review of literature. *Teaching and Teacher Education, 51*, 162-181. https://doi:10.1016/j.tate.2015.07.005

McGrath, O., Crawford, S., & O'Sullivan, D. (2019). 'It's a challenge': Post primary physical education teachers' experiences of and perspectives on inclusive practice with students with disabilities. *European Journal of Adapted Physical Activity, 12*(1), 1-14. https://doi.org/10.5507/euj.2018.011

McNamara, S. W. T., Wilson, K., & Lieberman, L. (2022). The syllabus is a living document: An examination of introductory adapted physical education syllabi. *The Physical Educator*, *79,* 117-141. https://doi.org/10.18666/TPE-2022-V79-12-10607

McNamara, S. W. T., Lieberman, L., Wilson, K., & Colombo-Dougovito, A. (2021a). 'I mean I hate to say it's sink or swim, but…': College course instructors' perceptions of the adapted physical education content that they prioritize and teach. *Sport, Education and Society, 92*(3), 339-351. https://doi:10.1080/13573322.2021.1882978

McNamara, S., Colombo-Dougovito, A., Weiner, B., & Ahrens, C. (2021b). Adapted physical educators' perspectives of educational research. *Research Quarterly for Exercise and Sport, 92*(3), 339-351. https://doi.org/10.1080/02701367.2020.1732858

Morley, D., Banks, T., Haslingden, C., Kirk, B., Parkinson, S., Van Rossum, T., Morley, I., & Maher, A. (2020). Including pupils with special educational needs and/or disabilities in mainstream secondary physical education: A revisit study. *European Physical Education Review, 27*(2), 401-418. https://doi.org/10.1177/1356336X20953872

National Center for Education Statistics (NCES). (2020). *The condition of education: Students with disabilities* (NCES 2020-144). Washington, D.C.: National Center for Education Statistics.

Piletic, C. K., & Davis, R. (2010). A profile of the introduction to adapted physical education course within undergraduate physical education teacher education programs. *ICHPER-SD Journal of Research, 5*(2), 26-32.

Qi, J., & Ha, A. S. (2012). Inclusion in physical education: A review of literature. *International Journal of Disability, Development and Education, 59*(3), 257-281. https://doi.org/10.1080/1034912X.2012.697737

Rekaa, H., Hanisch, H., & Ytterhus, B. (2019). Inclusion in physical education: Teacher attitudes and student experiences. A systematic review. *International Journal of Disability, Development and Education, 66*(1), 36-55. https://doi.org/10.1080/1034912X.2018.1435852

Roth, K., Zittel, L., Pyfer, J., & Auxter, D. (2017). *Principles and methods of adapted physical education and recreation* (12th ed.). Jones & Bartlett Publishers.

Stark, J. S. (2000). Planning introductory college courses: Content, context and form. *Instructional Science, 28*(5), 413-438. https://doi.org/10.1023/A:1026516231429

Taliaferro, A. R., & Bulger, S. M. (2020). A Delphi study of effective adapted physical education practicum experiences. *Adapted Physical Activity Quarterly, 37*(1), 20-40. https://doi.org/10.1123/apaq.2018-0199

Taliaferro, A. R., Hammond, L., & Wyant, K. (2015). Preservice physical educators' self-efficacy beliefs toward inclusion: The impact of coursework and practicum. *Adapted Physical Activity Quarterly, 32*(1), 49-67. http://doi:10.1123/apaq.2013-0112

Tant, M., & Watelain, E. (2016). Forty years later, a systematic literature review on inclusion in physical education (1975-2015): A teacher perspective. *Education Research Review, 19*, 1-17. https://doi.org/10.1016/j.edurev.2016.04.002

United Nations. (2006). *Convention on the rights of persons with disabilities. Treaty Series*, 2515, 3. Retrieved January 4, 2021 from https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html

U.S. Department of Education. (2018, January). *39th annual report to Congress on the implementation of the Individuals with Disabilities Education Act*, *2017* (ED-OSE-12-C-0031). Retrieved from https://www2.ed.gov/about/reports/annual/osep/index.html

Vickerman, P., & Maher, A. (2018). *Teaching physical education to children with special educational needs and disabilities*. Routledge.

Webb, D., & Hodge, S. R. (2003). Factors that influence career choice of African American students to enter the adapted physical education profession. *The Physical Educator, 60*(3), 134-150.

Wilhemsen, T., & Sorensen, M. (2017). Inclusion of children with disabilities in physical education: A systematic review of literature from 2009 to 2015. *Adapted Physical Activity Quarterly, 34*(3), 311-337. https://doi.org/10.1123/apaq.2016-0017

Wilson, W. J., Kelly, L. E., & Haegele, J. A. (2019). 'We're asking teachers to do more with less': Perspectives on least restrictive environment implementation in physical education. *Sport, Education, and Society*. Advance online publication. https://doi.org/10.1080/13573322.2019.1688279

Winnick, J., & Porretta, D. L. (2016). *Adapted physical education and sport* (6th ed). Human Kinetics.

Woodruff, E. A., & Sinelnikov, O. A. (2015). Teaching young adults with disabilities through service learning. *European Physical Education Review, 21*(3), 292-308. https://doi.org/10.1177/1356336 X14564171

Yang, J. J., & Elliott, G. (1999). Socialization and leadership in adapted physical education/activity: perspectives of female faculty. *The Physical Educator, 56*(2), 83-91.