Instructors’ application of the theory of planned behavior in teaching undergraduate physical education courses

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The purpose of this study was to analyze adapted physical education instructors’ views about the application of the theory of planned behavior (TpB) in teaching physical education undergraduate courses. Participants (n = 17) were instructors of adapted physical activity courses from twelve randomly selected institutions of higher education in Santa Catarina, Brazil. The research paradigm was qualitative descriptive using a multisite interview design positioned in the theoretical orientation of planned behavior. The primary data source was interviewing. Interview data were analyzed with constant comparative method. The following themes were extracted during the data analysis: (a) disability socially constructed; (b) too little and too late; and (c) skepticism. The instructors’ views ranged from skeptical to encouraging toward the application of TpB in teaching physical education courses and had salient influence. The findings and recommendations are discussed.

Key words: Adapted physical activity, Brazil, higher education, physical education teacher education, theory of planned behavior.

INTRODUCTION

The inclusion of students with and without disabilities in inclusive education is a movement that is gaining increased acceptance worldwide (DePauw and Doll-Tepper, 2000; Fitzgerald, 2006). In the United States (U.S.), for example, inclusion is typically defined as a concept that supports the placement of all students whatever their abilities or disabilities in classes with their peers; in receipt of proper supports and accommodations (Block, 2000). Mindful of this movement, various researchers have studied teachers’ behaviours and beliefs about teaching students with disabilities in inclusive physical education classes at schools across the US and elsewhere.

For example, Hodge et al. (2004) analyzed physical education teachers’ behaviors and beliefs about teaching students with disabilities at suburban high schools across several states in the U.S. They found that the teachers varied in their interactions and beliefs about teaching students with disabilities. Typically the teachers had favorable beliefs about the concept of inclusion, but differed in their efficacy in achieving successful inclusion and they encountered various challenges in their inclusive approach.
classes. Some teachers felt inadequately prepared or felt they lacked the support and resources needed to teach students with severe disabilities effectively. These findings have been supported with similar results from studies conducted in Africa, Asia, Brazil, Europe, and Latin America as examples (Hodge et al., 2009; Kusano and Chosokabe, 2001; Morley et al., 2005; Sato et al., 2007; Zanandrea and Rizzo, 1998). In Brazil, for example, Zanandrea and Rizzo (1998) found that physical education majors at universities across various states in that country were ambivalent about teaching individuals with disabilities in general physical education classes.

The inclusive process whereby students with disabilities are taught in general education settings represents a progressive contemporary phenomenon in Brazil as well (Oliveira et al., 2012; Vash, 2001). Even today, however, about half of all students with disabilities attend special schools in Brazil (International Disability Rights Monitor [IDRM], 2004). Mostly the remaining students are taught either in integrated classrooms or in special classes within regular schools. And, a much smaller proportion of students with disabilities study at home or in separate residential schools (IDRM, 2004). Of particular relevancy, Federal Law 7853 enacted on October 24, 1989 has provisions that support the education and social integration of individuals with disabilities (IDRM, 2004). This means in the coming years students with and without disabilities in Brazil are more likely to be educated together than in past years (Oliveira et al., 2012).

Predictably with the enactment of legal precedents and continued advocacy for inclusion there will be increased opportunities for physical education teachers to teach students with disabilities in their general physical education classes. It is important therefore that future physical education teachers be prepared to include students with disabilities in general physical education settings (Zanandrea and Rizzo, 1998). To date with the exception of Zanandrea and Rizzo’s (1998) early work, the research base is undeveloped regarding inclusion in Brazil and the preparation of physical education teachers for teaching students with disabilities in physical education in this country.

For years, researchers have studied the effects of various educational strategies (example, academic coursework and practicum experiences) on the attitudes (beliefs) of future physical education teachers about teaching students with disabilities Martin and Kudláček, 2010; Rizzo and Vispoel, 1992). Much of this work is situated in the theory of planned behavior (Ajzen, 1985, 1991). This theoretical framework posits that behavioral intention is a precursor to actual behavior. It is further posited that behavioral, normative, and control beliefs are predictors of a person’s intent to perform a specific act (Ajzen and Fishbein, 2005). There is no debate that instructors of adapted physical education (APE) courses have a professional responsibility to ensure that physical education majors are equipped with an understanding of various theoretical models such as the theory of planned behavior (TpB), particularly in regard to the formation of attitudes and beliefs (Tripp and Sherrill, 1991). Plausibly the application of the logic of TpB in the professional preparation of undergraduate students would shift their beliefs favorably toward working with individuals who have disabilities. Research is needed to confirm that plausibility.

The purpose of this current study was to analyze APE instructors’ views about the application of planned behavior theory in teaching physical education undergraduate courses. The central research question was “Do APE instructors’ view the application of the logic of TpB essential in preparing physical education majors for teaching students with disabilities?” Insights gained from the study add to the education literature by exposing some APE instructors’ views on the application of theory in preparing undergraduate physical education majors for working with students with disabilities in the future.

Theoretical framework

TpB is a well-established theoretical model (Ajzen, 1985, 1991, 2002). It is used extensively in research focused on analyzing the attitudes (or beliefs) of physical education teachers or teacher candidates toward teaching students with disabilities (some examples include empirical studies by Hodge et al., 2009; Hodge et al., 2003; Jeong and Block, 2011; Kudláček, 2007; Kudláček et al., 2002; Martin and Kudláček, 2010; Samalot-Rivera and Hodge, 2008; Sato and Hodge, 2009; Sato et al., 2007; Theodorakis et al., 1995). TpB proposes that attitudes toward behavior, subjective norms, and perceived behavioral control are the underlying aggregates of behavioral intention (Ajzen, 1991).

Ajzen (1991) explains that a central factor in TpB is a person’s intention to perform a particular act. In particular TpB posits three conceptually independent determinants of intention. These are: (a) attitude toward the behavior which denotes the degree to which a person has a favorable or unfavorable evaluation or appraisal of the act in question (example, a teacher has a favorable attitude towards modifying a soccer game to better include a student with a physical disability); (b) subjective norm which denotes the perceived social pressure to perform or not to perform the act (example, social pressure from a professional colleague to include a child with disabilities in class activities); and (c) perceived behavioral control which denotes the perceived ease or difficulty of performing the act (example, availability of adaptive equipment needed to modify a soccer game to include a child with a physical disability in game play). Foundational to the determinants of intention are the following accessible belief systems: (a) behavioral beliefs which influence attitudes toward the behavior (example, beliefs
shaped by past experiences used in teaching a child with a physical disability), (b) normative beliefs which comprise the underlying determinants of subjective norms (example, what a teacher thinks her colleagues believe she should do), and (c) control beliefs which provide the basis for perceptions of behavioral control (Ajzen, 1991). And from these accessible belief systems, intention is the immediate antecedent of a particular behavior.

Given adequate control over the behavior, a person is likely to carry out her or his intention when afforded an opportunity to do so (example, a teacher modifies game play to include a student with a disability). In past studies, TpB’s determinants of intention were used to explain teachers' or teacher candidates' will and motivation to teach students with disabilities in physical education (Jeong and Block, 2011; Martin and Kudláček, 2010; Theodorakis et al., 1995). Ajzen (1991) asserts that intentions are "assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior". Motivation is the psychological force that drives our intentions to perform a behavior. Motivation is in essence the direction and intensity of behavioral intention. Ajzen (1991) further asserts that the more intense the intent to perform a behavior, the more likely it will be performed. Intent to perform a particular act assumes that the behavior in question is under volitional control (example, a physical education teacher has the will, power of choice, professional competencies, supports, and resources to effectively include a student with disability in motor activities). This means that perceived behavioral control is an individual's perception of the ease or difficulty of performing the behavior of interest, which is partially dependent upon resources, previous experiences and expertise, and opportunities available to the individual to perform the behavior (Ajzen, 1991).

Implementation of TpB involves direct instruction on thinking logically in terms of intent, that is, favorable or unfavorable attitude toward a particular behavior (example, helping a child who is blind throw a ball at a target); subjective norm (perceived social pressure); and perceived behavioral control (PCB) in terms of ease or difficulty in performing the act (Sherrill, 2004). For example, an APE instructor might help physical education majors think critically and proactively (attitude component) about how to manage time and resources (PBC component) in their future physical education classes as well as how, in their role as physical education teachers, they might negotiate with a school administrator (subjective norm and PCB components) about allocating more time and resources to their programs (Sherrill, 2004). Mindful of the high relevancy of this theoretical model, the aim of the current study was to analyze the views of APE instructors about their use of TpB in teaching physical education undergraduate courses.

METHOD

Sampling

We used a purposeful random sampling approach (Patton, 2002). Purposeful random sampling seeks to eliminate doubts about why a particular case or cases were chosen for analysis; nonetheless, such a sample does not allow the researcher to make statistical generalizations (Patton, 2002). Important however, purposeful random sampling with even small samples does enhance the credibility of the results considerably (Patton, 2002). Specific to the current study, this sampling strategy involved the researchers randomly selecting, from both public and private institutions of higher education (IHE), 12 (48%) of 25 accredited physical education programs in Santa Catarina, Brazil. These programs were accredited by Brazil's Ministry of Education. From these programs, we sampled participants who had experiences and knowledge as instructors of adapted physical activity courses and were willing to share their views. That is we identified and contacted by e-mail or telephone instructors (N = 23) of adapted physical activity courses at the randomly selected IHEs.

Of those contacted, 17 (74%) instructors agreed to participate in this study. Six (26%) of the instructors contacted did not respond or mentioned time constraints as their reason for not agreeing to participate. The instructors agreed to participate in teaching undergraduate physical activity courses at their respective universities. They were from the following geographical regions: Litoral (n = 7); Northeast (n = 3); Vale do Itajaí (n = 3); South (n = 3), and West (n = 1). The IHEs from the Northern Upland (n = 0) and Serrano Upland (n = 0) regions did not have physical education programs with instructors of APE courses at the time this study was conducted.

Qualitative methods

This study was descriptive-qualitative using a multisite interview approach (Bogdan and Biklen, 1994; Gay, 1996). To paraphrase Gay (1996), interview studies have a unique purpose, that is, to acquire data not obtainable in any other way. There are certain things which simply cannot be observed, including (but not limited to) past events (example, an instructor’s past lectures explaining the reasoning and logic of TpB), events which happen outside of the researcher’s sphere of observation (example, an instructor’s memories of past events), and cognitive processes such as an instructor’s insights about the application of TpB logic (reasoning, theorizing). It is common to use interviewing in multisite research (Bogdan and Biklen, 1994). Open-ended interviewing was used in this study. This involved individual, face-to-face verbal interchange with the instructors as they reflected on and spoke to their views about the application of TpB in physical education curricula. This study was approved by the Ethics in Research Committee involving human beings at the lead author’s university. Before any data were collected, each participant signed informed consent forms.

Data collection

The researchers used two data collection strategies. First, the participants responded to a brief questionnaire designed to collect demographic data about them (example, age, gender, educational background) and their various IHE contexts. Second, using a semi-structured approach (Patton, 2002), they were interviewed at designated places, dates, and times set by the individual participants. The leading author conducted all of the interviews. He is an experienced APE instructor and on the faculty of a local university in Santa Catarina, Brazil. Important also, he has expertise in qualitative inquiry. None of the participants refused to answer any
of the interview questions posed by the lead researcher. The interviews lasted between 1½ to 2 h typically. Later the interviews were transcribed and prepared for analysis.

Data analysis

The participants' demographic data were summarized and reported descriptively (Thomas and Nelson, 2001). The interview transcripts were analyzed inductively by preparing the data (transcribing), reducing the data (reading, bracketing, gleanings, and winnowing text), categorizing (through constant comparative analysis) and thematizing the data (Seidman, 1998). The interview data were prepared for analysis by transcribing the audio taped interviews. Then, the leading researcher listened to the audio taped interviews while reading along with the written transcription to check for accuracy, corrections were made as needed. Next, the transcriptions were examined independently by the research team members. Each member engaged in a process of reducing, categorizing, and thematizing the interview data. In reducing the text, the researchers read and marked passages judged as of interest and importance. This process of gleaning text led to categorizing and thematizing the data by connecting threads and patterns within categories and between categories resulting in the emergence of recurring themes (Seidman, 1998). Later members of the research team converged to present their independent findings, and reach agreement through dialogue and critical review of the data to ensure verifiability of the findings (Huberman and Miles, 1998).

Trustworthiness and transferability

We used a series of strategies to reduce the potential for subjective bias and to establish trustworthiness. For trustworthiness, we: (a) collaborated in planning the multisite interview study, (b) worked separately and later converged to analyze and interpret the participants' interview data (that is, triangulation of the data and investigator triangulation in searching for agreement and consistency of evidence across sites) to ensure dependability of the findings; and (c) used member checks and peer debriefs to ensure credibility and confirmability (Brantlinger et al., 2005; Creswell, 2009).

For member checks, the leading researcher returned the interview transcripts to each participant for her or his review. They were asked to comment, clarify, elaborate, or suggest changes that would most accurately represent their views (Brantlinger et al., 2005). A few minor edits were made. Each participant agreed with the accuracy of the data. Additionally, an APE instructor, not a member of the research group but familiar with research in this area, served as a peer debriefer. He analyzed the themes and member of the research group but familiar with research in this area, served as a peer debriefer. He analyzed the themes and member checks and peer debrief to ensure accuracy, corrections was made as needed. Next, the transcriptions were examined independently by the research team members. Each member engaged in a process of reducing, categorizing, and thematizing the interview data. In reducing the text, the researchers read and marked passages judged as of interest and importance. This process of gleaning text led to categorizing and thematizing the data by connecting threads and patterns within categories and between categories resulting in the emergence of recurring themes (Seidman, 1998). Later members of the research team converged to present their independent findings, and reach agreement through dialogue and critical review of the data to ensure verifiability of the findings (Huberman and Miles, 1998).

Transferability is permissible if various results in this current study can be transferred to another similar circumstance or setting while maintaining the particularized meanings, interpretations, and inferences made here in this qualitative study (Leininger, 1994). The degree of transferability of the findings beyond this multisite interview study to other contexts, situations, or cultures rests with identifiable congruence of higher education faculty and physical education programs elsewhere (Leininger, 1994).

RESULTS

The participants were 17 higher education faculty members from twelve physical education programs in the State of Santa Catarina in Brazil. They all taught adapted physical activity courses at their respective IHEs. Pseudonyms (example, Participants 1, 2, 3, and so on) were used in reference to individual participants. There were nine men (52.9%) and eight (47.1%) women. The mean age was 42.2 years. On average, the participants had 3.5 years of experience as faculty members in higher education and 2.9 years of experience in teaching adapted physical activity courses. Seven (41.2%) participants worked at private and 10 (58.9%) worked at public colleges and universities. Next, we present the thematic findings that emerged from interviews with the instructors. The interrelated themes were: (a) disability socially constructed; (b) too little, too late; and (c) skepticism. The thematic findings are discussed in narrative with quotes from the participants.

Disability socially constructed

The common thread forming this recurrent theme was that the instructors' spoke about society's social construction of disability and how this often had an unfavorable influence on the beliefs of undergraduate students in their courses. This theme exposed how disability was socially constructed as lesser than or deficient existence for persons with disabilities. For the instructors this meant they were challenged to first deconstruct unfavorable beliefs and then second to reconstruct more favorable beliefs in shaping the meaning of disability status to help undergraduate students overcome negative beliefs they held. This was considered a major barrier to overcome as Participant 16 explained; in that it was necessary, "...to deconstruct some values first, and then, reconstruct the idea of disability as socially constructed phenomenon..." Further Participant 16 stated that it was imperative to demonstrate that "...how the undergraduate student positions himself in life, his world view and the beliefs he has on persons with disabilities, will reflect on his future behavior, both in his internship in adapted physical education as in his professional life,... but nevertheless, one should ...respect prejudicial attitudes, as they are also a way of viewing the disability. Whereas the belief grows precisely from a preconception, a preconceived notion that persons with disability don't have equal status, or are seen as deficient, less valuable..."

Participant 3 commented that TpB "...was approached, but not in a thought and systematic way... it's more of a, let's say, spontaneous way..." On the other hand, Participant 15 stated that this theoretical model was presented to students in various courses (example, sociology, psychology, anthropology) outside the physical education program at the IHE. Participant 15 asserted that in such courses the instructor and student might "...discuss human behavior, including the stigmatizing behavior of differentiating people..." what this showed us
was that “...the main problem is the lack of information. In this process of stigmatizing someone, there is nothing that is as decisive as the lack of knowledge about someone...”

Further the instructors recognized that the undergraduate students had different views about disability that may or may not have been consistent with their positioning as advocates for the construction of disability through the lens of social justice in the logic of TpB. Participant 16 felt that “…if the higher education teacher was not given the respect to also address in a dignified way the student’s position, then the instructor was experiencing in the same way as the student who can’t accept persons with disability...” But when the instructor manages to demonstrate that disability was a socially constructed phenomenon and that one’s previous experiences also defined the way of seeing persons with disability, through their cultural, religious, and personal perspectives that will substantiate or explain the way he understood persons with disability, it was ultimately possible to verify that the beliefs “...were not something disconnected from an intentionality...”. The instructors did not fully emerge their own class lectures in the logic of TpB. That is to say, most of the instructors’ generally neglected to infuse TpB concepts and logic (reasoning) into the physical education curriculum. Nonetheless most of them mentioned strategies they thought would be useful to enhance undergraduate students’ understanding of TpB in working with individuals with disabilities. They, however, gave few accounts of how physical education programs could improve the application of concepts reflecting TpB within the curriculum.

**Too Little and Too Late**

The common thread comprising this second theme was the instructors’ views about what they perceived as programmatic neglect in providing adequate opportunities for undergraduate students to teach or interact with individuals with disabilities during their professional preparation. The undergraduate students had limited or no contact with persons with disabilities. Participant 1 explained that, “…the classes were developed through readings of texts, viewing of videos, and limited contact with some persons with disability... this was the way how it’s tried to get the student to rethink the concepts he had” …and, with that, he will be constructing a new value, a new belief concerning persons with disability...”. Similarly Participant 2 asserted that, “…the instructors focus a lot on specific content, but don’t have a more macro view of education... they don’t explore the possibilities of bringing together the student with persons with disability...”. In the pretext of limited content knowledge and little or no experience, the instructors questioned how they might provide undergraduate students with hands on experiences with persons with disabilities. This was perplexing to them. Further, most of the instructors felt that they did not have adequate professional preparation or expertise in adapted physical education themselves. Participant 17 admitted that, “…in my time I have not had this discipline... we have not actually had the formation to work ...and so, therefore, we had a misconception of persons with disability...”

Moreover the instructors acknowledge that undergraduate students are not exposed to much content about (example, books or articles) nor do they have contact with individuals with disabilities until late in their programs of study. Participant 2 explained that, “…the students spend seven stages without any formation in this subject, virtually the entire physical education curriculum, and when they get to the eighth stage they have a flurry of disciplines focused on disability...”. Participant 3 asserted that, “…theoretically the student doesn’t have this kind of knowledge about persons with disability... there was no training, no specialized content about the relevance of acting favorably... of believing that it was possible to act close to persons with disability...”.

In this regard, the prejudices that some undergraduate students had about persons with disabilities were reflected in terms such as “…disrespect, segregation, inability and dependence...” (Participant 1), which contradict the position that persons with disabilities “…don’t need to be treated with pity, they need to be treated with respect and dignity, therefore, can’t be treated differently from other persons, but have to be adapted to the methodological, physical and human conditions...” (Participant 16). With an optimistic, yet confessional view, Participant 2 commented that, “…we’re still getting ready to be an inclusive university...”.

**Skepticism**

The third recurrent theme captured the instructors’ skepticism about physical education majors perceiving they have behavior control in teaching physical education to students with disabilities due to restrictions associated with limitations in professional preparation, facilities, resources, and opportunities. This was pointed out by Participant 2, who asserted that “…a few doubts about some colleagues, that, suddenly, have students with disability doing the physical education course..., how will they deal with these students? Some, certainly, will search new ways to teach new forms of communication to facilitate the learning, but for others, it all may still be a problem, especially if the disability is severe... We can still find professionals that will have a great difficulty in imagining, in projecting this professional future to attend to the students with disability...”. The participants expressed uncertainties about how to implement the logic of TpB in the preparation of physical education majors.

**DISCUSSION**

Increasingly, physical education teachers are compelled
to embrace student diversity as an expected and valued social and educational norm. This does not always occur, however. More times than not, teachers and instructors assume that their view of the inclusive experience is the student’s view as well, although this may not be the case (Goodwin and Watkinson, 2000). In this current study, a randomly sampled group of APE instructors in Brazil openly discussed their views about the application of, or neglect to emphasize concepts and content representing the logic of TpB in teaching undergraduate physical education courses. Their candor and openness exposed limitations to their practice. That is too say, the instructors’ views ranged from (a) skepticism reflecting a lack of perceived behavioral control in influencing the beliefs of undergraduate students effectively and favorably (b) optimism in their readiness and awareness about the application of TpB and implementing attitude change strategies. The understanding of this process as a whole by the instructor does not necessarily mean acceptance, but respect for the different types of existing attitudes toward persons with disability. This process is necessary for the deconstruction of unfavorable beliefs about disability status reflecting prevalent views in the Brazilian society. “Disability is largely a social con-struction in Brazil”, insisted the instructors, “as in most countries and societies worldwide” (Grenier, 2006, 2007; Shogan, 1998).

The APE instructors further insisted that a need exists for exposing physical education majors to various attitude change strategies such as practicum experiences where they can challenge preconceived notions and beliefs associated with teaching students with disabilities. It appears that APE instructors could benefit from such exposure as well. Increasing experiential learning is important for physical education majors. They would benefit from exposure to a diversity of students with disabilities in real-world settings (example, physical education programs housed at regular and/or special schools). They could better reflect on, and in-turn, come to understand how such students interact, behave, are motivated, and learn best (Hodge et al., 2003). Plausibly such experiences would also help physical education majors overcome or eliminate biased stereotypical beliefs held against various students with disabilities and special educational needs.

In this study also, unknowingly perhaps, there were instructors who articulated inadequacies in their own professional preparation, by admitting that they were not well prepared to teach students with disabilities. To effectively implement the logic of TpB and to use attitude change strategies effectively, instructors of APE courses must first receive adequate professional preparation to move to a place of positive self-efficacy. This must include having alertness to sound pedagogical and managerial principles and strategies, specialized content knowledge, and an appreciation through experience and self-reflection in teaching individuals with various disabling conditions (Hodge et al., 2003).

The instructors’ own inadequacies and skepticism regarding the application of TpB were reflected in the lack of such elements in their classes. Despite neglect in the application of the logic of TpB, the instructors discussed a few solutions and strategies that they felt would facilitate the process of exposing physical education majors to various theoretical models. One idea was to expose students to theoretical concepts and content about TpB through assigned readings from the extant literature. The instructors felt that another way to impact physical education majors' attitudes would be to increase their exposure to individuals with disabilities through internships at school settings, for example. They advocated practicums and field experiences in regular and special schools so that physical education majors could immerse themselves in disability cultures. This would likely challenge their negative views about teaching students with disabilities (Hodge et al., 2003).

**Study limitations**

This study had several limitations. First, the sample was made up of instructors of APE courses from only one state (Santa Catarina, Brazil). These participants may have had an unconscious bias for or against the application of the logic of TpB in teaching undergraduate physical education courses. Second, the number of participants was relatively small. But qualitative inquiries, including multisite interviewing, typically use small samples and in the logic of purposeful random sampling, the intent is to identify participants who have experienced, or have knowledge about the phenomenon under study (Patton, 2002). Our intent in using this sampling approach was to uncover common themes reflective of instructors who taught APE courses within physical education programs. A third limitation was the single face-to-face focused interview approach used. Multiple interviews conducted over an extended period of time would have allowed the researchers to more fully examine the complexities of issues identified and this would be a logical next step to this study.

**CONCLUSION AND FUTURE DIRECTIONS**

Inclusion is progressing, albeit slowly, in Brazilian society at-large and educational settings in particular. This means physical education teachers will have greater opportunities to teach students with disabilities in their classes. However, the APE instructors we studied were skeptical about inclusion and some of them even admitted that they were not well prepared to implement concepts and content positioned in the logic of TpB for preparing college students to work with individuals with disabilities. It is evident that physical education programs
must do more to infuse the logic of TpB into their curricular. Progressive efforts of this nature could potentially increase physical education majors’ awareness, understanding, and pedagogical competence in teaching students with disabilities. We submit that physical education programs should do more to recruit and hire highly qualified and competent instructors for teaching their APE courses. Meanwhile, APE instructors must themselves transit from unconscious skepticism to highly competent educators who advocate for students with disabilities in preparing physical education majors.

REFERENCES


