

PREPARING FUTURE PHYSICAL EDUCATORS FOR INCLUSION: CHANGING THE PHYSICAL EDUCATION TEACHER TRAINING PROGRAM

PREPARAÇÃO DE FUTUROS PROFESSORES DE EDUCAÇÃO FÍSICA PARA A INCLUSÃO: MUDANÇAS NO PROGRAMA DE FORMAÇÃO DE PROFESSORES DE EDUCAÇÃO FÍSICA

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ABSTRACT: Students with disabilities around the world are leaving special schools and special classes and are receiving their education in general education schools. In addition to attending general education classes, these students with disabilities are attending general physical education classes. Unfortunately, research has clearly demonstrated that physical educators do not feel prepared to include students with disabilities into their general physical education classes. Such findings are not surprising given that the typical physical education teacher education program in the United States only requires one course in adapted physical education, and in many countries around the world not even one adapted physical education course is required. However, many physical education teacher education programs do not have the space to add more adapted physical education classes, and other universities do not have professors with specialized knowledge to teach adapted physical education. What can be done to better prepare future and current physical educators? Online education is a relatively new method for delivering information about disability in general and more specifically how to include students with disabilities into general physical activities. The purpose of this paper is to introduce online education and present preliminary research that supports the use of online training with physical educators.

KEYWORDS: Inclusion. Physical Education. Teacher Training.

RESUMO: Os estudantes com deficiência em todo o mundo estão deixando as escolas especiais e as classes especiais e, estão recebendo a sua educação em escolas de ensino regular. Além de assistir às aulas do ensino regular, esses estudantes com deficiência estão frequentando aulas regulares de educação física. Infelizmente, a pesquisa demonstrou claramente que os educadores físicos não se sentem preparados para incluir os estudantes com deficiência em suas aulas regulares de educação física. Tais resultados não surpreendem, dado que o típico programa de formação de professores de educação física nos Estados Unidos requer apenas uma disciplina de educação física adaptada, e em muitos países ao redor do mundo nem mesmo uma disciplina de educação física adaptada é necessária. No entanto, muitos programas de formação de professores de educação física não têm o espaço para adicionar mais aulas de educação física adaptada, e outras universidades não têm professores com conhecimentos especializados para ensinar educação física adaptada. O que pode ser feito para melhor preparar futuros e atuais educadores físicos? A educação à distância é um método relativamente novo para fornecer informação sobre a deficiência em geral e, mais especificamente, como incluir estudantes com deficiência nas atividades físicas regulares. O objetivo deste artigo é introduzir a educação à distância e apresentar a pesquisa preliminar baseada no uso de treinamento on-line com os educadores físicos.

PALAVRAS-CHAVE: Inclusão. Educação Física. Formação de Professores.

In 1994 the United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasized the right to inclusive education via the Salamanca Statement and Framework for Action on Special Needs Education. As a result, governments around the world began enacting legislation and policy to ensure children with disabilities were included in one school system (Pecora, Whittaker, Maluccio, & Barth, 2012). This international trend of including students with disabilities in general education can be seen in general Physical Education (GPE) classes all across the globe in

places such as the Czech Republic (Kudlírnek, Vrbík, Sherrill, Myers, & French, 2002), Ireland (Meegan, & MacPhail, 2006), Korea (Jeong & Block, 2011), Greece (Panagiotou, Evaggelinou, Doukeridou, Mouratidou, & Koidou, 2008), Israel (Hutzler & Levi, 2008); Portugal (Campos, Feriera & Block, 2013), and Japan (Sato, Hodge, Murata & Maeda, 2007).

Perhaps the most important factor in successful inclusion in GPE is the attitude and perceived competence of GPE teachers. Not surprisingly, research has revealed that a critical factor in GPE

teachers' perceived competence and confidence when including students with disabilities is having strong academic preparation (Elliot, 2008; Obrusnikova, 2008; Ezer et al., 2013; Tripp & Rizzo, 2006). Quality professional training, positive clinical experiences, and adequate support and teaching conditions are critical in facilitating a teacher's sense of competence and teaching efficacy (Hersman & Hodge, 2010; Sato & Hodge, 2009). Unfortunately, studies suggest GPE teachers do not feel their professional preparation and clinical experiences were adequate to prepare them for inclusion (Fejgin et al., 2005; Hersman & Hodge, 2010; Jerlinder et al., 2010; Sato & Hodge, 2009; Vickerman & Coates, 2009). In the U.S., most physical education teacher education (PETE) programs require one introductory adapted physical education (APE) class (Piletic & Davis, 2010). One introductory APE course is not enough to prepare GPE teachers to accommodate the wide variety of children with disabilities who are being included in GPE class. However, is adding more specialized APE coursework to the PETE curriculum the solution to preparing future physical educators for inclusion?

INFUSION APPROACH TO TEACHER PREPARATION

Dating back to the 1990s some professionals have suggested the best way to prepare future physical educators for inclusion is to restructure PETE programs and infuse information about teaching students with disabilities in other pedagogy-based courses (DePauw, Goc-Karp, 1994; Kowalski, 1995; Tripp & Rizzo, 2006). The infusion approach is a way to systematically introduce knowledge about individuals with disabilities throughout the undergraduate and graduate physical education curricula. It is composed of three levels: additive, inclusion and infusion. The *addictive* level is the stage where specific topic information of individuals with disabilities is added to the course. *Inclusion* is a stage of questioning assumptions and educational goals and allows students to have a learning experience (e.g., practicum experience) through courses. Finally, the *infusion* level suggests that all concepts of disabilities are interconnected throughout the overall curriculum, so that pre-service teachers are likely develop a competence to teach students with disabilities (Hodge et al., 2002) along with a positive attitude (Hodge et al., 2003).

Studies revealed that an infusion-based curriculum model could positively affect students' attitudes toward individuals with disabilities (Barrette, Holland Fiorentino, & Kowalski, 1993; DePauw & Goc Karp, 1994; Lepore & Kowalski, 1992). For example, Kowalski & Rizzo (1996) examined pre-service physical educators' perceived competence and their attitudes (N=133) toward teaching individuals with disabilities who are enrolled in an infusion-based curriculum. Results revealed that students who took more infusion-based courses had more positive attitudes towards teaching and working with individuals with disabilities. Hardin (2005)'s study also showed that a student who experienced an infusion curriculum had a higher amount of confidence in regards to their ability to teach students with disabilities.

Clearly, there are many merits to the infusion approach, most notably providing specific information related to accommodating students with disabilities in GPE. For example, concepts about modifying equipment and rules of games to accommodate children with strength and coordination challenges can be infused into a basketball or soccer course. Such information would be extremely practical and useful to future physical educators and make them more able to accommodate the needs of children with disabilities

in their programs. However, there are barriers to developing an infusion approach, the most prominent being lack of disability-specific knowledge by pedagogy professors, reluctance by pedagogy professors to add more information to their courses, and lack of time or even availability of an APE professor to go into all the pedagogy courses to infuse information on disabilities.

ONLINE APPROACH TO INFUSION

How then can an infusion approach be implemented? Online supplements can be created to infuse critical information about disability in general and more specifically how to accommodate children with various disabilities into GPE classes. Valian & Emami (2013) presented a number of benefits that online education presents. Online education offers greater flexibility than traditional face-to-face teaching. For example, students enrolled in online classes can complete online course readings and assignments to fit their schedules and preferences. Related to this is the fact that online education can save students time and money, particularly practicing physical educators, by eliminating the time and cost of commuting to a university. Moreover, online education provides availability of a wide variety of online learning tools and unlimited accessibility to the class content. Finally, open forums and discussion boards in the online setting support interaction and collaboration between students who may be more reluctant to participate in face-to-face class discussions and activities.

With such benefits, it has become increasingly popular for universities to utilize such a method of instruction to provide courses to pre-service teachers (Radford, 2011). In an array of teacher preparation courses, online education has been used and proved highly effective in preparing teachers. For example, in the area of special education distance education has proved to be an effective solution for a paucity of qualified teachers (Knapczyk, Hew, Frey, & Wall-Marencik, 2005). Such teacher training has also benefited pre-service teachers to learn inclusive teaching practices. Research by Andrews (2002) demonstrated how a web-enhanced, case-based model of instruction proved to be a powerful model for linking theory and knowledge with practice in teacher education. Similarly, research on the effectiveness of a pre-service online course on a technology applications in education course proved to provide the student with independent and individualized learning, enhancing their responsibility and initiative towards learning; all in all, demonstrating the potential of online settings as a place to implement active learning environments (Vonderwell, 2003).

At the University of Virginia we are exploring the use of online supplements as a means of infusing information about how to accommodate children with disabilities in GPE. As noted previously, some of the advantage of online supplements is that they do not require extra time in the physical education pedagogy or sport-specific classes, they do not require time or expertise of an APE professor, they can be viewed at anytime providing flexibility for participants, and they are available for the physical educator to refer to after the course is finished.

For example, Kwon (2014) recently created an online supplement that presented information on how to accommodate children with intellectual disabilities into team sports. An APE supplement was developed based on the Instructional Design Model (Dick, Carey, & Carey, 2005) to specifically strengthen the following three sources of self-efficacy as outlined by Bandura (1997) in his self efficacy theory: *mastery experience* (modifying lesson plans and sharing

ideas with others about modifying team sports to include students with intellectual disabilities and/or writing modification plans), *vicarious experience* (watching others modify team sports to allow the inclusion of students with intellectual disabilities), and *social persuasions* (having others including the online teacher/facilitator and peers provide positive feedback to students on modifying lessons to include students with intellectual disabilities). The online supplement included written information, videos showing how to make accommodations, and an online discussion that allowed participants to share information with each other. Three groups of pre-service teachers ($N=75$) took the same content supplement with different delivery system, E-learning group receiving all information online ($n=25$), traditional group ($n=25$) with printed handout, and control group ($n=25$) without supplement. Two instruments, the Physical Educators' Situation-Specific Self-efficacy and Inclusion Student with Disabilities in Physical Education (SE-PETE-D) and a content knowledge test created especially for this study, were given to all participants twice (i.e., pretest and posttest). A 3x2 mixed effect ANOVA revealed that pre-service teachers' perceived self-efficacy ($p=0.023$) improved in the e-learning supplement group but not the other two groups. However, there was no significant difference in the level of content knowledge in any of the groups ($p=0.248$). A modified Post-Study System Usability Questionnaire (PSSUQ) was employed to measure the level of satisfaction toward the supplement. The result indicated that the e-learning group showed significantly higher satisfaction levels than the traditional group did in usability and content quality.

Similarly, Healy (2015) used a randomized experimental design study to determine the effectiveness of an online professional development (OPD) course to prepare practicing physical educators to develop and implement a peer-tutoring program in their physical education classes. The study involved three elements: (a) pre-test, post-test and retention test that assessed knowledge of peer tutoring, (b) self report on ability to apply the course's lesson to determine their perceived ability to implement peer tutoring, and (c) completion of a survey to assess perceptions of the online environment as a setting for professional development. Results revealed (a) participation in an OPD course resulted in a significant increase in knowledge related to peer control group that did not complete the OPD course; (b) participation in an OPD course resulted in 22% of participants ($n = 8$) implementing all peer tutoring preparation tutoring compared to a control and actually implemented a peer tutoring program in one of their classes, (c) 47% ($n = 17$) completing some of the peer tutoring activities, and (d) physical educators perceived the online environment as a positive setting for PD.

Recently through the support of PE Central (<<http://www.pecentral.com>>), we have created an OPD targeted at practicing physical educators on creating and using visual supports with children with autism. The OPD includes background information on autism including definitions and basic characteristics, which is then followed by detailed information on a rationale for using visual supports, types of visual supports and directions for making visual supports. The OPD concludes with each participant creating three visual supports and implementing them with a student with autism. While not research-focused, early reports from participants (17 participants have signed up and have completed the 10 hour course to date) have been very positive, and all participants have successfully created visual supports they can use with their students with autism. A new OPD course is being created to infuse

information about adapting team sports to pre-service physical educators who are taking a team sports class.

CONCLUSION

Including students with disabilities is clearly the future of educating students with disabilities. Many countries around the world already have established inclusion as the model for educating their children with disabilities, and many more countries are moving towards inclusion. However, research questions how well we are preparing physical educators for inclusion. In the U.S. inclusion has been in place for over twenty years, and most university physical education teacher education programs require at least one introductory adapted physical education course. Yet, too many studies continue to report physical educators do not feel confident in their ability to accommodate students with disabilities. Something needs to change in our teacher education model, and an infusion approach via online supplements may be an effective way to help better prepare physical educators for inclusion.

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