THE EFFECT OF THE TEACHING PRACTICUM SETTING ON THE BELIEFS OF
PRE-SERVICE PHYSICAL EDUCATORS ABOUT INCLUSION IN PHYSICAL
EDUCATION

By

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A Thesis Presented to
The Faculty of Humboldt State University
In Partial Fulfillment of the Requirements for the Degree
Master of Science in Kinesiology: Teaching/Coaching

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July 2017
ABSTRACT

THE EFFECT OF THE TEACHING PRACTICUM SETTING ON THE BELIEFS OF PRE-SERVICE PHYSICAL EDUCATORS ABOUT INCLUSION IN PHYSICAL EDUCATION

Jacob Cheek

BACKGROUND: In order for students with disabilities to be successful in physical education, pre-service physical educators need to gain experience in applying the necessary skills and knowledge. PURPOSE: The purpose of this study is to determine the effect of placement experience on the beliefs of pre-service physical educators about inclusion and teaching students with disabilities in physical education. METHODS: The ‘Physical Educator’s Judgments on Inclusion’ (PEJI) instrument was completed prior to, and after, involvement in a practicum experience (inclusive setting or one-to-one setting), or a control condition. RESULTS: Pre-service physical educators teaching in the inclusive setting showed to improve to a greater degree than those in the Adapted Physical Education and control condition, regarding beliefs about inclusion. Conversely, Pre-service physical educators teaching in the APE setting showed to improve to a greater degree than those in the inclusive setting, regarding acceptance of students with disabilities. Implications for teacher preparation programs are discussed.
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INTRODUCTION

Inclusion and Challenges

The individuals with Disabilities Act (IDEA), enacted in 1975, mandates that children and youth ages 3-21 with disabilities be provided a Free and Appropriate Public Education (FAPE) and this should occur in the Least Restrictive Environment (LRE). As of 2011, 13% of the total student population enrolled in public school were served by federally supported special education programs (US Department of Education, 2013), equating to 6,419,000 students receiving special education and related services under IDEA (US Department of Education, 2013). In addition, as of fall 2010, 95% of children and youth with disabilities in the US received their education in general education schools. IDEA states that physical education is a required service for children and youth between the ages of 3-21 who qualify for special education services because of a specific disability or developmental delay (IDEA, 2004). According to the Governmental Accountability Office (2010), for the majority of students with disabilities (92% at elementary level and 88% at the secondary level), this results in participation in General Physical Education.

Adapted Physical Education and Pre-Service Teacher Preparation

Adapted Physical Education (APE) is physical education which has been adapted or modified, so that it is as appropriate for the person with a disability as it is for a person
without a disability” (APENS, 2008), with physical education defined as the development of; physical and motor skills; locomotor and object control skills; and participating in aquatics, dance, and team concepts (APENS, 2008). Under federal law, physical education is mandated for all students with disabilities (IDEA, 2004). In order to prepare preservice teachers to effectively include students with disabilities in their physical education classes, their training must include preparation to teach students with disabilities. Piletic (2010) recently examined the nature of this training. Piletic involved 136 faculty members who taught APE from 129 different college and universities (Piletic, 2010). The research revealed that in the U.S, 69% of preservice physical educator’s preparation to teach students with disabilities involved receiving one course in APE; typically titled “Introduction to Adapted Physical Education”. Through this course, students learn the laws and rights related to schools and programs for children and students with disabilities and content such as, characteristics of various disabilities, modifications for inclusion, and instruction and motivational strategies, (Piletic, 2010). Along with this content, the class typically includes a practicum experience.

Practicum Placement Experiences

The teaching practicum experience is a critical part of the pre-service teacher’s training as it is often the teacher’s first experience in a real school setting (Nonis & Jernice, 2011). According to research by Piletic (2010), for physical education teacher education programs, practicum experiences related to APE were done onsite (23%), offsite (48%), and a combination of both onsite and offsite (30%). Along with practicing amongst their
peers, students participate in teaching placements in their neighboring school. This provides these pre-service teachers with experience, and, importantly, it can lead to a changed perception of working with students with disabilities. A number of studies have been completed regarding practicum experiences and the effect on the pre-service physical educator’s attitude to teaching students with disabilities. Research demonstrates that on campus practicum within the school improves attitudes significantly more than off campus practicum (Hodge & Jansma, 1999). These results were similar to Stewart’s (1999) who also found that attitudes changed positively due to structured practicum experience. It is believed that on-campus sites allow for more flexibility regarding selection of students, activities or tasks, equipment use, facilities, and providing reasonable ratios of pre-service teachers to students with disabilities (Hodge & Jansma, 1999). Hodge (2002), however, found that there were no major differences between onsite and offsite practicum experiences.

Future research on this topic is called for (Qi, 2012), specifically, research has yet to examine the differences between pre-service teachers’ attitudes during practicum experience based on involvement an inclusive physical education setting and a one-on-one teaching setting.

Theoretical Framework

Two theories underpin the potential for practical experience to be beneficial for changing attitudes of the participants:
Self-Efficacy Theory

Self-efficacy (S-E) refers to one’s belief in one’s ability to succeed in situations or accomplish a certain task (Bandura, 1995). According to Bandura, S-E theory is based on four components: performance or mastery accomplishments, vicarious experiences, social participation or interaction, and the physiological nature of subjects (Bandura, 1977). Individuals who experience positive or successful accomplishments or interactions, will have a higher S-E. Individuals who experience negative or unsuccessful accomplishments or interactions will have lower S-E. It is hypothesized that both teaching in an inclusive physical education class or a one-on-one adapted physical education will provide opportunities to achieve the four components necessary for developing S-E in relating to including a student with a disability. However, the participants teaching the inclusive physical education class may benefit more, based on the S-E theory as they will experience mastery in teaching an inclusive class, while having vicarious experiences through observing their peers do the same. This research will help examine which teaching setting may be more conducive to developing S-E related to inclusive physical education.

Contact Theory

According to Allport (1954), contact theory is based on the experience and interactions in which contact is made either by the person being contacted or the person making the contact. Contact theory is based on six key components; opportunities for contact, equal status relationships, cooperative and competitive factors, causal versus intimate contact, institutional support, and contact with high status representatives (Allport, 1954). For
example, if the experience of the pre-service teacher is positive or successful it leads to positive judgment for the pre-service teacher. This contact can also lead to a negative judgment based on the contact experience. If an individual had negative judgements towards students with disabilities prior to contact, the individual can develop positive judgements if contact is successful. For preservice physical educators, they could avoid contact with someone who has a disability based on their preconceived judgment (Sherrill, 1998). Their prejudgment is based on their beliefs or lack of preparation. It is hypothesized that both teaching in an inclusive physical education class or a one-on-one adapted physical education class may develop positive perceptions of teaching students with disabilities based on contact theory. However, with more continuous contact, the one-on-one setting may allow the pre-service educator to develop a more positive attitude toward accepting students with disabilities in their physical education class.

Purpose

The purpose of this study is to determine the effect of placement experience on the beliefs of pre-service physical educators about inclusion and teaching students with disabilities in physical education.

Hypotheses

Null:

There is no difference in effect on teachers’ judgments about inclusion in physical education between general physical education practicum setting and one-on-one adapted
physical education practicum setting.

**Research:**

There is a difference in effect on teachers’ judgments about inclusion in physical education between general physical education practicum setting and one-on-one adapted physical education practicum setting.

**Methods**

This project was approved by the Institute Review Board with the IRB # 15-146.

**Subjects**

Students from three kinesiology courses were invited to participate in the study: Adapted Physical Education (APE), Elementary Physical Education (Elementary PE), and Motor Development and Learning (Motor DL). All courses comprised of Freshman, Sophomore, Juniors and Senior standing students. The primary researcher made an announcement in all courses, informing the class of the study purposes and what involvement entailed. Students were reminded that participation, or declining to participate, would not affect their course grade. Interested participants provided written consent to participate.

**Procedures**

First, interested students were invited to complete a pre-test survey – The Physical Educator’s Judgments about Inclusion Instrument (PEJI) survey (Hodge, 2002) – which
evaluated their beliefs about inclusion and teaching students with disabilities in physical education.

Second, students in each class were automatically assigned to one of three conditions; the students of APE participated in a teaching placement working one-on-one with a child with a disability over a span of six weeks; the students of Elementary PE participated in a placement that involved working with a group of students, which included one or two students with a disability, in an inclusive general physical education class over a span of six weeks. The location for the teaching placement was a local elementary school. The same students with disabilities were a part of both the one-on-one setting and the inclusive general physical education class. The students of Motor DL – the control group – did not participate in any teaching placement. After the teaching placement concluded, all participants once again completed the PEJI survey.

Measure

The PEJI is a questionnaire based on three subscales. Subscale 1 is based on students’ ‘Judgements About Inclusion versus Exclusion’, subscale 2 is based on students’ ‘Judgments on Acceptance’, and subscale 3 is based on students’ ‘Judgements Based on Teacher Training Needs’. For use of the PEJI, Hodge (2002) recommends using the scores of the three subscales separately, rather than the total score. Each subscale is based on a 5 point Likert scale. Participants can choose between 5 separate answers; strongly disagree, disagree, undecided, agree, and strongly agree. Each question was given a score between 1 and 5. For questions that were negatively phrased, scores were reversed. The
PEJI has established validity regarding pre-service teachers’ judgements relating to the inclusion in general physical education settings (Hodge, 2002).

Data Analysis

Descriptive statistics (i.e., means, standard deviations, frequency counts) were used to understand the participants' demographic characteristics (for example, age, major of study, prior experience of working with individuals with disabilities). An ANOVA was used to examine the changes in the groups’ beliefs about inclusion and teaching students with disabilities in physical education. This helped determine whether or not there was a difference between the groups and their judgement about teaching students with disabilities in physical education. SPSS version 22 statistical software was used for the data analyses in this study.
RESULTS

Demographics

Data was collected, from seventy-four students from three separate undergraduate classes; Adapted Physical Education (APE), Elementary Physical Education (Elementary PE), and Motor Development and Learning (Motor DL). The data was collected from both males ($N = 32$) and females ($N = 42$). The students ranged from Freshman to Senior standing and were in various degree backgrounds such as; Kinesiology, Liberal Studies Elementary Education (LSEE), Child Development and Dance. There was a significant difference between groups in terms of prior experience of working with a child with a disability, $X^2 (2, N = 74) = 11.89$, $p = .003$. APE students had nineteen students with prior experience working with a child who has a disability while Elementary PE and Motor DL had ten and six students, respectively, with prior experience. In regards to the student's' major, there was a significant difference between the three groups $X^2 (6, N = 74) = 70.65$, $p < .001$. APE and Motor DL had twenty-seven and twenty-five Kinesiology majors in the class while Elementary PE only had one kinesiology major. There was no significant difference between groups on age, gender, and education. See table 1 for an overview of group characteristics.
Table 1. Overview of group characteristics

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Adapted Physical Education (APE) (n = 27)</th>
<th>Elementary Physical Education (Elementary PE) (n = 21)</th>
<th>Motor Development and Learning (Motor DL) (n = 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>13 (48.1%)</td>
<td>5 (23.8%)</td>
<td>14 (53.8%)</td>
</tr>
<tr>
<td>Female</td>
<td>14 (51.9%)</td>
<td>16 (76.2%)</td>
<td>12 (46.2%)</td>
</tr>
<tr>
<td>Major (n):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinesiology</td>
<td>27 (100%)</td>
<td>1 (4.8%)</td>
<td>25 (96.2%)</td>
</tr>
<tr>
<td>LSEE</td>
<td>0</td>
<td>18 (85.7%)</td>
<td>0</td>
</tr>
<tr>
<td>Child Development</td>
<td>0</td>
<td>2 (9.5%)</td>
<td>0</td>
</tr>
<tr>
<td>Dance</td>
<td>0</td>
<td>0</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>1 (3.7%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sophomore</td>
<td>1 (3.7%)</td>
<td>1 (4.8%)</td>
<td>3 (11.5%)</td>
</tr>
<tr>
<td>Junior</td>
<td>11 (40.7%)</td>
<td>14 (66.7%)</td>
<td>8 (30.8%)</td>
</tr>
<tr>
<td>Senior</td>
<td>14 (51.9%)</td>
<td>6 (28.6%)</td>
<td>15 (57.7%)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>5 (11.5%)</td>
<td>4 (19%)</td>
<td>4 (15.4%)</td>
</tr>
<tr>
<td>21-23</td>
<td>13 (48.1%)</td>
<td>10 (47.6%)</td>
<td>13 (50%)</td>
</tr>
<tr>
<td>24-26</td>
<td>6 (22.2%)</td>
<td>5 (23.8%)</td>
<td>9 (34.6%)</td>
</tr>
<tr>
<td>27-29</td>
<td>2 (7.4%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>30+</td>
<td>1 (3.7%)</td>
<td>2 (9.5%)</td>
<td>0</td>
</tr>
<tr>
<td>Prior experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>19 (70.4%)</td>
<td>10 (47.6%)</td>
<td>6 (23.1%)</td>
</tr>
<tr>
<td>NO</td>
<td>8 (29.6%)</td>
<td>11 (52.4%)</td>
<td>20 (76.9%)</td>
</tr>
</tbody>
</table>
Physical Educators Judgments’ about Inclusion: Total Score

Examining the total scores on the PEJI, there was revealed to be no significant
differences at pre-test between the three groups; APE \( (M = 11.43) \), Elementary PE \( (M = 11.89) \), and Motor DL \( (M = 11.49) \); \( F(2,71) = 1.37, p = .26 \). At post-test, a significant
difference between groups was observed; \( F(2,71) = 5.40, p = .007 \). A post hoc Tukey test
revealed a significant difference to exist between the APE group \( (M = 10.80) \) and
Elementary PE group \( (M = 11.41) \), \( p = .004 \).

Judgments about Inclusion versus Exclusion: Subscale 1

The subscale Judgments about Inclusion versus Exclusion refers to the perception of
students regarding inclusion. In this subscale, a significant difference was seen at pre-test
between groups; APE \( (M = 3.08) \), Elementary PE \( (M = 3.40) \), and Motor DL \( (M = 3.10) \);
\( F(2,71) = 3.24, p = .045 \). At post-test, a significant difference was also seen between
groups; \( F(2,71) = 7.14, p = .001 \). A factorial ANOVA demonstrated there to be a
significant change between groups, from pre-test to post-test, \( F(2,71) = 6.44, p = .003 \).
Follow-up Bonferroni tests showed significant differences to exist between APE \( (M = 2.96) \) and Elementary PE \( (M = 3.32) \), \( p = .002 \) and between Elementary PE \( (M = 3.32) \)
and Motor DL \( (M = 3.06) \), \( p = .039 \).
Judgments on Acceptance Subscale: Subscale 2

Examining the subscale ‘Judgments on Acceptance’, it was revealed there was no significant difference between the three groups at pre-test; APE ($M = 4.39$), Elementary PE ($M = 4.44$), and Motor DL ($M = 4.29$), $p = .763$. In the post test, a one-way ANOVA demonstrated that there was a significant difference between the three groups; APE ($M = 4.63$), Elementary PE ($M = 4.36$), and Motor DL ($M = 3.91$), $F(2,71) = 7.32$, $p = .001$. A post hoc Bonferroni test revealed there was a significant difference between APE ($M = 4.63$) and Motor DL ($M = 3.91$), $p = .001$.

Judgments Based on Teacher Training Needs: Subscale 3

Examining the subscale ‘Judgments Based on Teacher Training Needs’, it was determined that there was no significant between the groups at pre-test; APE ($M = 3.96$), Elementary PE ($M = 4.05$), and Motor DL ($M = 4.10$), $F(2,71) = 1.57$, $p = .215$. At post-test, a one-way ANOVA shown there was no significant difference between the groups; APE ($M = 4.00$), Elementary PE ($M = 4.13$), and Motor DL ($M = 3.95$), $F(2,71) = 1.60$, $p = .209$. See table 2 for an overview of group subscale scores.
Table 2. Differences between groups on the PEJI subscales (pre to post-test)

<table>
<thead>
<tr>
<th>Subscales</th>
<th>APE (n = 27)</th>
<th>Elementary PE (n = 21)</th>
<th>Motor DL (n = 26)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusion V. Exclusion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>3.08\textsuperscript{a}</td>
<td>3.40\textsuperscript{a}</td>
<td>3.10</td>
<td>( p = .045^* )</td>
</tr>
<tr>
<td>Post</td>
<td>2.96</td>
<td>3.32</td>
<td>3.06</td>
<td>( p = .039^* )</td>
</tr>
<tr>
<td><strong>Acceptance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>4.39</td>
<td>4.44</td>
<td>4.29</td>
<td>( p = .763 )</td>
</tr>
<tr>
<td>Post</td>
<td>4.63\textsuperscript{a}</td>
<td>4.36</td>
<td>3.91</td>
<td>( p = .001^* )</td>
</tr>
<tr>
<td><strong>Training Needs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>3.96</td>
<td>4.05</td>
<td>4.10</td>
<td>( p = .215 )</td>
</tr>
<tr>
<td>Post</td>
<td>4.00</td>
<td>4.13</td>
<td>3.95</td>
<td>( p = .209 )</td>
</tr>
</tbody>
</table>

\*Indicates a significant difference \( p \leq .05 \)
\textsuperscript{a}Indicates group mean revealed, by a post hoc analysis, as being most significantly impacted by teaching placement compared to other group/s
DISCUSSION

Physical Educators Judgments’ about Inclusion

At pre-test, all participants demonstrated a positive perception towards inclusion, as demonstrated by an overall high total PEJI score. This favorable attitude towards inclusion, held by the pre-service physical educators, has been seen in previous research also. For example, Hodge (2002) found that students taking an ‘Introduction to APE’ course with a practicum experience with students with disabilities, will take on more favorable attitudes. Pre-service teachers can gain unfavorable attitudes towards inclusion as well. Pre-service teachers may veer away from teaching students with disabilities if they feel as though they do not have the competence or ability to do so (Harackiewicz, Barron, Pintrich, Elliot & Thrash, 2002). Similar to that, pre-service teachers might have prejudgments in regards to teaching students with disabilities. For example, prior experience in working with individuals with disabilities has been shown to affect perceptions to teaching students with disabilities (Hodge, 2002). The high level of prior experience, held by the majority of students in the current study, may have contributed to a very positive attitude at pre-test. The high score at pre-test contributed to a ceiling effect (Bobrow & Norman, 1976) which made observing significant change at post-test unlikely.
Judgments about Inclusion versus Exclusion

On the subscale ‘Judgment about Inclusion versus Exclusion’ the Elementary PE group had significantly higher scores ($M = 3.32$), than the APE ($M = 2.96$) and Motor DL ($M = 3.06$) groups, following their teaching experience. The reader is reminded that the Elementary PE group were involving in an inclusive PE practicum setting. This supports previous studies that demonstrated how practicum experiences can changes one’s attitude toward inclusion and increase their perceived ability to teach students with a disability (Hodge & Jansma, 1999). This is similar to previous research by Block (2010) regarding perceived competence. Block showed that self-perceived confidence correlates with teaching students with disabilities and participation in preparation courses (Block 2010).

In regards to inclusion, teachers can have a positive attitude towards teaching a student with a disability in an inclusive environment if they have skills such as managing behaviors and individualizing instruction (accommodations and modifications) (Elliot & Hodge, 2013). In the current study, the students in Elementary PE gained, and applied these skills, perhaps explaining their more positive attitude change. This correlates with S-E theory, where individuals who experience positive or successful accomplishments or interactions, will have a higher S-E rating (Bandura, 1977). Conversely the APE students, although teaching a student with a disability, did not do so in an inclusive environment. This may have resulting in them not experiencing inclusive pedagogical strategies, thus not affecting their judgment in this area.
Judgments on Acceptance

In the third subscale, ‘Judgments on Acceptance’, there was no significant difference between groups at pre-test. Although there were no significant differences, as an entire group, all participants rated themselves high regarding their acceptance on working with a child with a disability. The high scores reported by the APE and PE groups may be explained by the participants prior experience of working with students with disabilities. Out of 27 APE students, 19 (70.4%) of students stated they had prior experience with students or individuals with disabilities, and among the Elementary PE students, 10 out of 21 (47.6%) participants had prior experience. Prior research has showed that working directly with students who have disabilities showed positive attitudes towards working with that population (Kowalski & Rizzo, 1996). Pre-service PE teachers with prior experience were more prepared to accept teaching students with disabilities rather than the students without prior experience. (Elliot & Hodge, 2013). Prior experience plays a major role in pre-service PE teachers ability to teach students with disabilities. As teachers gain more experiences, their attitudes become more favorable in teaching students with disabilities (Haegele, 2009). At post-test, the APE group significantly improved on their acceptance of students with disabilities, when compared to the students of Motor DL ($M = 4.63$ versus $M = 3.91$). During their practicum, APE students were placed one-on-one with a student for 6 weeks. Contact theory may help to understand this result. According to Allport (1954), contact theory is based on the experience in which contact is made. In this experience, students in the APE course are coming in contact
with students who have a disability in a one-on-one setting, and thus, according to contact theory, will have increased attitude change in comparison to those with less intimate contact experiences.

Judgments Based on Teacher Training Needs

Participants in the current study did not show any changes in their perceived training needs. This lack of change may have occurred for several reasons; (1) the high score at pre-test meant change was unlikely; (2) the structured, supportive practicum experience provided them with a setting where they could be successful (thus not perceiving that they required further training, or (3) due to the participants inexperience with teaching students with disabilities in ‘real world’ settings were unaware what skills and knowledge they would require. The APE training receiving by the participants of this study was similar to that of] 69% of preservice physical educators’ in the US who receive one course in APE (Pilatec, 2010). During this course or courses alike, pre-service teachers should learn the laws and rights related to schools and programs for children and students with disabilities and content such as, characteristics of various disabilities, modifications for inclusion, and instruction and motivational strategies, (Piletic, 2010). This would allow students to obtain a broad range of skills needed to teach students with disabilities. Within the pre-service teaching practicum, there are two important factors when it comes to teaching students with disabilities which are; perceived competence and academic preparation (Kirkendall & Rizzo, 1995). This applies to pre-service teachers’ beliefs on their ability to teach students with disabilities and the connection it has with their course
work. Further research should study pre-service teacher course training and if it provides pre-service teachers with the abilities to teach students with a disability.

Limitations and Recommendations for Future Research

A number of limitations should be acknowledged. First, a ceiling effect is when performance is at a maximum, and there is no room to improve performance (Bobrow & Norman, 1976). In this case, a ceiling effect happened when the students from the APE, Elementary PE, and Motor DL courses rated their abilities to teach students with disabilities higher than their true capabilities. This may have contributed to the lack of significant differences from pre to post test. Prior experience in the experimental groups factored into the way they perceived their ability to teach students with disabilities. In addition, students may have had other experiences or trainings which would prepare them for inclusion and teaching students with disabilities during the six-week practicum that the researchers were unaware of. Due to purposeful sampling, experimental groups may differ based on their major of study. Effects of this will be examined and mitigated by comparing pre-test scores based on the major of the participants. The results produced a small sample size. Future research using the PEJI should emphasize gathering data from a larger sample size.
CONCLUSIONS

The purpose of this study was to determine the effect of the teaching practicum setting on the beliefs of pre-service physical educators about inclusion in physical education. It was hypothesized that there is no difference in effect on teacher’s judgments about inclusion between general physical education practicum setting and one-on-one adapted physical education practicum setting. Results revealed significant differences in attitude changes based on placement setting; whereby the inclusive PE environment resulted in improved attitudes towards inclusion, in comparison to the one-on-one teaching environment, and the one-on-one setting resulted in improved acceptance in comparison to the inclusive environment. The theory of self-efficacy and contact theory may help us to understand the benefits of both settings. Future pre-service educating programs may want to consider utilizing both teaching options during their pre-service teaching programs.
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