High School General Physical Education Teachers' Behaviors and Beliefs Associated with Inclusion

SAMUEL R. HODGE, a JONATHON O. A. AMMAH, b KEVIN CASEBOLT, c KATHRYN LAMASTER d & MARY O'SULLIVAN a

a Ohio State University, USA; b University of Education, Winneba, Ghana, Africa; c East Stroudsburg University of Pennsylvania, USA; d San Diego State University, USA

ABSTRACT The purpose of this study was to describe the behaviors and beliefs of secondary general physical education (GPE) teachers relative to inclusion and teaching of students with disabilities. Participants were nine experienced high school GPE teachers from suburban school districts in California, Ohio, and Pennsylvania. The research method was naturalistic inquiry. Qualitative data were collected using observer field notes and interview schedules. Findings were presented using descriptive summaries and thematic narratives. These teachers regularly verbally interacted with and expressed mostly favorable beliefs about teaching students with disabilities. Teacher interviews revealed three recurring themes: (a) teachers were positively disposed to inclusion as an educational philosophy, (b) teachers had differential efficacy in achieving successful inclusion, and (c) teachers encountered challenges to establishing inclusive practice. Despite their mostly favorable beliefs about inclusion, several teachers felt inadequately prepared or lacked support and resources to effectively teach students with more severe disabilities.

Inclusion is ever more advocated globally as 'a philosophical approach to implementing social justice in our schools and our society so that all persons are valued as unique contributing members of society and included' (DePauw & Doll-Tepper, 2000, p. 139). Increasingly in Japan, for example, koryu kyoiku (i.e. interactive education) is advocated, which means that students with and without disabilities are educated together (Kusano & Chosokabe, 2001). In the United States of America's schools, inclusion is thought of as programs that educate both students with and without disabilities together, including general physical education (GPE) programs (Block, 2000). Debates on inclusion in GPE have centered mostly on its definition, implementation, and the efficacy of teaching students with disabilities (Block, 1999; DePauw & Doll-Tepper, 2000).

To date, there is a dearth of literature in understanding how GPE teachers view the impact of inclusion (LaMaster et al., 1998; Lienert et al., 2001). LaMaster et al. (1998) examined GPE teachers' views of inclusion practices and perceived outcomes and cautioned that scholars 'can no longer afford to ignore the impact that inclusion is having on how classes are conducted and how teachers are responding to the new demands and opportunities that inclusion provides' (p. 66). They studied six effective elementary GPE teachers' beliefs about inclusion practices and student outcomes. Findings revealed four recurring themes: (a) multiple teaching styles, (b) teachers' concerns about student outcomes, (c) teachers' frustrations, and (d) differences in these teachers' inclusion practices. LaMaster et al. (1998) also reported that schools provided little support for inclusion and teachers felt inadequately prepared to teach inclusive GPE classes.
Importantly, teachers must believe they are adequately prepared to teach students with mild to severe disabilities and have a belief in their own efficacy (Siedentop & Tannehill, 2000). The literature on effective teaching describes specific teacher behaviors related to achievement outcomes of students with and without disabilities (Berliner, 1995). Recently, Siedentop and Tannehill (2000) described important characteristics of effective teachers. The following listing represents these characteristics: (a) belief in their own efficacy; (b) allocates sufficient time and opportunity to learn, and covers appropriate content; (c) communicates high, realistic expectations and students receive adequate instruction and practice time to learn their roles; (d) establishes positive approaches to class management and student engagement; (e) designs meaningful, success-oriented tasks; (f) creates and sustains a brisk pace and maintains momentum; (g) communicates content with clear, brief demonstrations and explanations, followed with sufficient guided practice, and provides feedback and checks for understanding; (h) actively supervises students progress and practice; (i) holds students accountable for appropriate participation; (j) communicates with clarity and enthusiasm, and exhibits equitable support of all students; and (k) uses student input and ongoing assessment to inform their practice (Siedentop & Tannehill, 2000). Empirical data also suggest that effective teachers reflect to inform their practice (Tsangaridou & O’Sullivan, 1997).

Moreover, to acquire efficacy in teaching students with disabilities requires professional preparation and experience teaching such students (Hodge et al., 2002). Research indicates that a teacher’s ability to adapt and modify instruction, equipment, and activities (Sherrill et al., 1994) including the effective use of supports are especially important in teaching students with varied disabilities (Houston-Wilson et al., 1997).

**Theoretical Framework and Purpose**

Teaching and learning is a reciprocal process. That is, the teaching–learning process results in changes to both students and teachers (Kiphard, 1983; Sherrill, 1998). Adaptation theory posits that knowledgeable professionals match student abilities, needs and interests with content and teaching style to create optimal learning opportunities for all learners (Kiphard, 1983; Sherrill, 1998). In physical education, adaptation theory denotes the process by which teachers, students and the environment reciprocally can change one another in dynamic and multidirectional ways (Sherrill, 1998). A responsibility of GPE teachers is to facilitate learning that result in behavior change (Sherrill, 1998). Research is needed to examine teacher and student behaviors in GPE contexts to better understand the complex dynamics of inclusive practice and how best to facilitate teaching and learning.

It is also important to examine the beliefs that serve as precursors to teachers’ behaviors. The theory of planned behavior postulates that attitudes toward the behavior, subjective norms, and perceived behavioral control are the underlying aggregates of behavioral intention. In sequence, intention is the immediate antecedent of a particular behavior (Ajzen, 1985, 1991, 2001a, b). When given sufficient control over the behavior, individuals are likely to carry out their intentions when presented with opportunities to do so (e.g. teacher uses adaptive equipment to include a student with severe disabilities in planned activities) (Ajzen, 2001a, b). More specifically, intentions are proposed 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’ (Ajzen, 1991, p. 181). Ajzen (1991) stated that, generally, ‘the stronger the intention to engage in a behavior, the more likely should be its performance’ (p. 181). This intent to exhibit a specific behavior assumes that the behavior in question is under volitional control (i.e. individual can decide at will to
Behaviors and Beliefs Associated with Inclusion

perform or not perform the behavior). Thus, perceived behavioral control refers to an individual's perception of the ease or difficulty of performing the behavior of interest, of which is partially dependent upon resources and opportunities available to the individual to carry out the act (Ajzen, 1991).

How teachers experience and are prepared for teaching students with disabilities are very important educational and attitudinal variables for study (Lienert et al., 2001; Hodge et al., 2003b). We know little, however, about the behaviors of practicing GPE teachers who teach students with mild to severe disabilities in their classes. The purpose of this study was to describe the behaviors and beliefs of secondary GPE teachers relative to inclusion practices and teaching of students with disabilities. Adaptation (Kiphard, 1983; Sherrill, 1998) and planned behavior (Ajzen, 1991) theories were used to interpret and explain our findings relative to GPE teachers' beliefs and behaviors toward students with disabilities. Two research questions guided this study:

1. What were the behaviors of secondary GPE teachers relative to teaching students with varied disabilities in their classes?
2. What were the beliefs of secondary GPE teachers about inclusion practice and teaching students with varied disabilities in their classes?

For purposes of this study, beliefs refer to accessible beliefs (Ajzen, 2001a, b) expressed by GPE teachers about teaching students with mild to severe disabilities based on their knowledge and experiences with such students in their classes.

Method

Research Method

Naturalistic inquiry (Patton, 1990) was the methodological approach taken in this study. This approach allowed the researchers to detail the behaviors and beliefs of selected GPE teachers regarding their inclusion practices. In conducting naturalistic inquiry, the researcher seeks to describe and understand real-world situations as they naturally develop without manipulation, obtrusion, or control by the researcher(s) (Patton, 1990). Our intent was to understand and document the day-to-day reality of the settings under study. We used teacher questionnaires to gather demographic data; and qualitative data were gathered using live observations and interviews of teachers who were responsible for teaching students with mild to severe disabilities in secondary GPE programs across several school districts in the United States (USA).

We used purposeful sampling (Patton, 1990) in selecting nine GPE teachers across three states. Selection of these teachers was based on five criteria. First, the individual teachers taught in school districts located within a 50-mile radius of at least one of the researchers. This criterion ensured the feasibility of data collection. Second, these teachers had experience teaching GPE at the secondary level. Third, they had established reputations as effective teachers within their respective school districts and with local teacher education faculty who worked with them. Fourth, all teachers had at least five years of experience teaching in their schools. This criterion was used to ensure that the teachers had progressed to the maturity stage of development (Katz, 1972). At this stage 'teachers begin to ask questions of themselves and their teaching that focus on their insights, perspectives, and beliefs regarding teaching and children’ (Stroot, 1996, p. 342). We sampled teachers to reflect meaningfully on their beliefs about inclusion practice. Lastly, the teachers taught classes containing students without disabilities and at least one
or more students with mild to severe disabilities. A review of school records including available individualized educational programs (IEPs) and input from the GPE teachers confirmed that one or more students with mild to severe disabilities were included in each of the classes observed. These students are described under Participants and Settings, as part of the classes we observed. Plus, Appendix A provides descriptions of disability types for students identified in this study.

The sampling logic used was a combination of operational construct and intensity sampling (Patton, 1990). Operational construct sampling indicates that the researcher(s) 'samples for study real-world examples (i.e. operational examples) of the constructs in which one is interested' (Patton, 1990, p. 178). The logic of intensity sampling is to seek exemplars of the phenomenon of interest (e.g. teachers who teach students with disabilities in GPE), but not unusual cases (Patton, 1990). For this study, effective teachers and GPE programs were selected who taught in GPE programs where students with mild to severe disabilities were included on a regular basis.

Participants and Setting

Participants were nine White American GPE teachers (seven males, two females) teaching in suburban school districts in California (n = 4), Ohio (n = 2), and Pennsylvania (n = 3). Table 1 presents demographic data specific to the research locations, teachers, and students with disabilities. Pseudonyms are used throughout this article to protect the privacy of all participants.
Behaviors and Beliefs Associated with Inclusion

Research location 1: teachers, students, and school contexts. Two high school GPE teachers, Mr. Simms and Mr. Will, from two school districts in Ohio (research location 1) agreed to participate in this study. Mr. Simms taught in a school where 70% of the 1,700 students were White American. Mr. Simms was responsible for teaching five GPE classes each day. We studied his combined class of 24 9th and 10th graders including three students with multiple disabilities (i.e. developmental delays, severe mental retardation) and a fourth student; Tamar had muscular sclerosis and used a wheelchair. Three of the classes taught by Mr. Simms, including the class under study, had the services of Mrs. Carter, a teacher's aide.

Mr. Simms had graduated from a nearby physical education teacher education (PETE) program. He had seven years of teaching experience and was working toward a master’s degree in GPE. He had one adapted physical education (APE) course at the undergraduate level and had no practicum or in-service training on inclusion or teaching students with disabilities.

Mr. Will taught in a school with 1800 (87%) predominantly White American students. He had taught high school GPE for 26 years. He taught six classes each day with a total of 148 students. Mr. Will had earned a master’s degree in GPE, but had only one course in APE during his undergraduate PETE preparation and had had no in-service training with regard to inclusion practice. We studied his 9th grade 7th period class. A total of 17 students were in this 50-minute class, including six students with disabilities (i.e. developmental delays, learning disabilities, and severe emotional disabilities). No support services were provided to these classes.

Research location 2: teachers, students, and school contexts. Four GPE teachers (one female, three males) at three high schools in one suburban school district in California (research location 2) agreed to participate. Mr. Kirk taught in a school with 40% of the students from Hispanic backgrounds. Mr. Kirk taught four classes in a block schedule. He had taken an APE course in his undergraduate preparation but had no additional training and no APE specialists were available for consultation.

Mr. Smith taught in a school with 1,560 students and the two largest populations were Hispanic (42%) and White Americans (27.4%). Mr. Smith taught four classes encompassing grades 9 to 12. He had never taken an APE course or received any training to work with students with disabilities. An APE specialist was available for consultation within the school district. Students were included in his classes who were a part of the STARS (Successful Transition Achieved with Responsive Support) program, a peer-assistance program for supporting students with special needs.

Mr. Bell and Ms. Price taught in a school where 82% of the 1900 students were White American. Mr. Bell taught three GPE classes daily. He had never taken an APE course or received any training to work with students with disabilities. Ms. Price taught one GPE class comprised of girls only and she had no training to work with individuals with disabilities. An APE specialist was available for consultation within the school district and would visit the site up to five days per year.

Research location 3: teachers, students, and school contexts. Three GPE teachers (two males, one female) at three high schools from two suburban school districts in Pennsylvania (research location 3) agreed to participate. These teachers had between five and 25 years of teaching experience. Mr. Hall taught in a school where 85% of the 1,200 students were White American. During the conduct of this study, he taught one APE class, one health class,
and two GPE classes each day. Mr. Hall was certified in GPE and held an APE certification.

Mrs. Evans taught in a school where most of the 900 students (85%) were White American. She taught three GPE classes and one APE class during this study. Mrs. Evans held teaching certification in GPE and had taken one course in APE during her PETE preparation.

Mr. Lee had taught in public schools for 25 years. He taught in a school where 1,000 students (85% White American) attended. Mr. Lee held a teaching certificate in GPE, but had had no course work in APE. However, Mr. Lee indicated that he kept current with APE practices by attending conferences and workshops. Mr. Lee taught five GPE classes daily.

All GPE classes under study were co-educational with one exception, Mr. Price's girls-only class (research location 2).

**Instruments**

One data collector at each of the respective research locations (California, Ohio, and Pennsylvania) collected demographic data using teacher questionnaires, nonparticipant observer field notes, and completed interviews of the teachers. Data collectors were two PETE graduate students (research locations 1 and 2, respectively) and an APE professor (i.e. known as on-site researcher 3 at research location 3). These data collectors were familiar with conducting nonparticipant observations and semistructured interviews. Data collectors at research locations 1 and 2 each had guidance from a PETE professor (i.e. on-site researchers 1 and 2, respectively), who was knowledgeable in qualitative research methodology. In collaboration with the lead researcher (an experienced PETE/APE teacher educator), the three on-site researchers (experienced PETE/APE teacher educators) were responsible for data analysis and general oversight in the conduct of this study.

**Teacher questionnaires.** To secure demographic information about these teachers, two forms (developed by LaMaster et al., 1998) were used. Form A sought information concerning the makeup of the teachers' classes (e.g. grade level, class size, number of students with special needs). Form B gathered information concerning the teachers' educational background in APE, access to services, and additional teacher responsibilities for students with disabilities such as physical lifting and medical assistance.

**Nonparticipant observations.** Nonparticipant observer field notes were taken during observations of 43 lessons (i.e. 18, 16, and 9 lessons at research locations 1, 2, and 3, respectively). For research location 3, data collection was hindered by time conflicts with faculty responsibilities. Importantly, data collection at each location focused on instructional and behavioral interactions between the teachers and students. Notes were also taken regarding teachers and students' personalities, lesson context, and critical incidences within the classes.

**Interview.** At each research location, the data collector conducted separate interviews with the teachers using a semistructured protocol (Patton, 1990). Teachers discussed their beliefs on and experiences of inclusion and teaching students with disabilities. In each case, interviews were conducted in schools where teachers taught and were supplemented by observations.
The teacher interviews were conducted at the end of the first (research location 3) or last (research locations 1 and 2) class observation. Interview questions were given to the teachers several days prior to the interview to allow them time to reflect on their beliefs, knowledge and experiences about inclusion. According to the theory of planned behavior, beliefs are the product of past experiences, knowledge, and newly acquired information (Ajzen, 1991, 2001b). Although we did not assess teachers' knowledge and experience directly, they were probed on their positive and negative experiences teaching students with disabilities, the impact of inclusion on their teaching styles and strategies, their efficacy with teaching in an inclusive environment, and ideas to facilitate inclusion practice. Eight open-ended questions formed the basis for the formal interview (Appendix B). These questions were created in accord with planned behavior (Ajzen, 2001a) and adaptation (Kiphard, 1983; Sherrill, 1998) theories. All interview sessions lasted between 20 and 25 minutes, were audiotaped with the teachers' permission, and transcribed verbatim.

Procedures

The teachers were contacted by telephone and/or via electronic mail (research locations 1 and 2) or visited at their schools (research location 3) to request their participation in the study. Each teacher participant signed and dated the informed consent form provided.

Research location 1. Mr. Simms and Mr. Will had daily GPE classes. The data collector observed Mr. Simms’ GPE classes over nine consecutive weekdays and all nine lessons were from a four-week table tennis unit. Mr. Will’s classes were observed on Monday, Wednesday, and Friday for three consecutive weeks, and he taught soccer, tennis, and flag football (two, six, and one lesson, respectively). Mr. Simms’ and Mr. Will’s classes were allocated 45 and 35 minutes each.

Research location 2. Mr. Kirk, Mr. Smith, Mr. Bell, and Ms. Price were each observed four times for 30 minutes each lesson (i.e. 16 lessons). Their GPE classes were held daily. Mr. Kirk was visited once a week for three weeks with two observations occurring on the same day of the final week. Content for his courses included badminton and paddleball. Mr. Smith, Mr. Bell, and Ms. Price were visited two times per week for two weeks. Mr. Smith’s classes participated in conditioning and basketball, Ms. Price’s classes focused on conditioning, and Mr. Bell’s classes were all involved in a swimming unit.

Research location 3. Mr. Hall, Mrs. Evans, and Mr. Lee were each observed three times during an afternoon class. Their classes met daily. Mr. Hall was observed at the start of the fall semester once, four weeks later, and again two weeks afterwards. Mrs. Evans was observed once at the start of the semester, a week later, and again three weeks later. Mr. Lee was observed once at the start of the semester, two and half weeks later, and three weeks after that. Mr. Hall was observed teaching one softball and two weight-training lessons. Mrs. Evans was observed teaching a whiffle ball and two basketball lessons. Ms. Lee was observed teaching volleyball and two floor hockey lessons. All lessons lasted 45 minutes and the typical class had 25 students.
Data Analysis and Triangulation

Reducing data and developing categories. Field notes and interview transcripts were categorized and summarized into recurring themes by location and then across locations using a constant comparative method (Maykut & Morehouse, 1994). Specifically, each on-site researcher used constant comparative method to analyze interview data from their research location in order to extract common themes. First, data were prepared by transcribing the audio taped interviews. Second, the on-site researcher listened to each audio taped interview while reading along with the written transcription to check for accuracy; corrections were made as needed. Third, the transcripts and field notes were examined for units of meaning, a process originally described by Lincoln and Guba (1985). Units of meaning representing similar themes were grouped together in categories.

At the next stage, all interview data and field notes from each research location were shared with each of the researchers and they were then asked to identify and analyze common themes across research locations. In doing so, pieces of evidence were compared and cross-checked with other kinds of evidence (i.e. comparing field notes with interview data) across locations. This allowed for data triangulation (Patton, 1990). The researchers independent of one another examined all data and later they converged to ensure verifiability of the findings (i.e. established agreement among researchers) (Lincoln & Guba, 1985; Huberman & Miles, 1998). From this process, thematic narratives were developed (Manning & Cullum-Swan, 1994) and agreed upon with direct quotes of teachers used to illustrate the themes (Patton, 1990).

Trustworthiness of the data. Member checking was used to reduce the impact of subjective bias, while establishing trustworthiness (Lincoln & Guba, 1985; Patton, 1990). For this study, each on-site researcher used two types of member checks. First, the interview transcripts and field notes were returned to the teachers for their review to ensure correctness of content, and they were encouraged to comment, clarify, elaborate, or suggest changes that would accurately represent their behaviors and beliefs. Some minor edits were suggested and made. All nine teachers agreed with the accuracy of the data.

A second layer of member checks involved asking peer debriefers to evaluate the data (Schwandt, 2000). For this study, two PETE scholars and an APE scholar served as peer debriefers. Their role was to question the themes and issues the researchers pulled, or potentially overlooked, from the field notes and transcribed interview data. In terms of recurring themes, agreement was reached between all researchers and the peer debriefers.

Findings

Findings are reported using descriptive summaries and narratives that aligned with the two research questions. First, the nine teachers' typical teaching behaviors are summarized and presented collectively and then individually within the context of their GPE programs. Next, three recurring themes associated with these teachers' beliefs are presented and the extracted themes and subthemes are highlighted with direct quotes from the teachers (Table 2).
Behaviors and Beliefs Associated with Inclusion

<table>
<thead>
<tr>
<th>Table 2. Recurring themes and subthemes reflective of teachers’ beliefs and experiences</th>
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<tbody>
<tr>
<td><strong>Teachers positively disposed to inclusion as an educational philosophy</strong></td>
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<tr>
<td>Teachers expressed both favorable and less than favorable beliefs about inclusion</td>
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<tr>
<td>Comfortable teaching students with disabilities by spending more time with them</td>
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<tr>
<td>Inclusion good but students with disabilities need more teacher time and attention</td>
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<tr>
<td>Students without disabilities helpful and accepting of classmates with disabilities</td>
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<tr>
<td>Social benefits (e.g. appreciation for diversity, enhanced self-esteem) of inclusion</td>
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| **Differential efficacy in achieving successful inclusion** |
| Large classes adversely impacts teachers’ effectiveness |
| Teaching style and strategies may not be adversely impacted with inclusion practice |
| Teachers’ ability to adapt and modify essential to successful inclusion practice |
| Availability of supports (e.g. peer tutors, teacher’s aide, APE specialist) |
| Communication (e.g. communication with IEP Team) enhance teacher’s efficacy |
| Prior notification of the inclusion of students with disabilities would be helpful |
| Successful inclusion requires creativity and knowledge |
| Time demand due to student’s disability type and severity impacts teacher’s efficacy |

| **Challenges to inclusive practice** |
| Teachers not prepared for this role (e.g. lack of knowledge for adapting instruction) |
| Difficulty of not always knowing how best to include students with disabilities |
| Greater demand on teacher’s time in providing individualized attention/instruction |
| Safety of all students |
| Some students with disabilities lacking motivation |
| Class management |
| Students with severe disabilities most challenging to teach; most time demanding |
| Lack of support (e.g. peer tutors, teacher aides) |
| School administration level of support impacts teacher’s efficacy |

**What Teaching Practices Were Observed in these Inclusive Settings?**

The nine teachers routinely monitored class attendance. Typically, these teachers’ lessons were comprised of set induction, warm-up activities, body of the lesson (e.g. practice/game play), and closure. Skill performance criteria were discussed by five of these teachers. Daily, all nine teachers provided explanation and/or demonstrations of skills/tasks to be performed. Most teachers actively supervised \((n = 8)\), gave feedback \((n = 8)\), checked for understanding \((n = 8)\), held students accountable for skill performance \((n = 7)\), and used effective behavior management strategies \((n = 6)\). In contrast, three teachers had difficult behavior management episodes, usually with students who had severe disabilities (e.g. severe emotional disabilities). Daily, most teachers \((n = 8)\) gave verbal instructions to the entire class and interacted with both students with and without disabilities in affirming ways (use of students’ first name, positive reinforcement and praise). Moreover, seven teachers gave direct instructions to students with disabilities in their classes. Similarly, seven teachers used available supports, such as peer partners or STARS advocates, to enhance the learning experience for students with disabilities in their classes. Often, a student without disabilities assisted a classmate with disabilities in the various class activities. Students took turns as peer helpers. Three teachers regularly modified or adapted the learning environment, equipment or activities to ensure students with disabilities were able to participate in planned activities. Two teachers occasionally
Research Location 1

Mr. Simms’ teaching behaviors. Mr. Simms used 13 table tennis tables, 26 paddles and 26 balls for each lesson taught. Students were expected to meet the prescribed table tennis skills (e.g. serve, forehand and backhand drive). Mr. Simms discussed skill performance criteria with his students. He provided demonstrations and explanations of the skills and tasks to be performed. Afterwards, students were routinely asked to pair up with an assigned partner and move to a table of their choice for skill practice.

Mr. Simms assessed students’ skill performance and delivered feedback during the testing. Only those students without disabilities were skill tested. When not testing, Mr. Simms spent some time playing with Tamar (i.e. a student with severe disabilities) and provided her with praise and feedback. He typically provided direct instruction to the students with disabilities, modified game rules, and frequently engaged in one-on-one activity, game play, and/or verbally interacted with Tamar and to a lesser degree with Jesse (i.e. student with severe mental retardation). Typically, Mr. Simms assigned different peer partners to work with those students with severe disabilities.

Mr. Will’s teaching behaviors. All lessons, with the exception of the soccer lessons, were held outside. On average 15 to 20 minutes elapsed between the taking of class attendance in the gym and students transitioning to the tennis courts. Typically, students self-selected groups and practiced the skills for the lesson. Students with and without disabilities were grouped together. Mr. Will periodically engaged in active supervision, gave feedback, checked for understanding, and interacted with both students with and without disabilities in affirming ways. He did not appear enthusiastic about teaching, and seldom held the students accountable for their misbehaviors. This was particularly evident with those students who misbehaved and had severe emotional disabilities. For example, Mr. Will seemed apathetic when a student with severe emotional disabilities walked away from class without permission (data collector 1, field notes).

Research Location 2

Mr. Kirk’s teaching behaviors. Daily, students were assigned areas and spots as they completed a 15-minute warm-up (i.e. calisthenics) in the gym. After warm-ups, Mr. Kirk would give set induction by clarifying the lesson focus and identify teams for the final day of badminton. After the first observation the remaining three observations were paddleball.

During the observations five students with varied disabilities were observed. All began class a little distant from their classmates without disabilities, but with Mr. Kirk’s encouragement they interacted and participated in activity. Modifications were made to games to accommodate the students with disabilities, such as: (a) teacher stating the serve must be past a particular line to be legal and then allowing numerous chances for successful serving; (b) teacher working individually with the student to teach strategies, demonstrate and then describe (e.g. hitting to the weak side of a player or making a player run for a shot); (c) providing a slower pace for the student; (d) hitting against the wall first before moving onto a court; and (e) start a game with a toss rather than a serve. Frequently, Mr. Kirk played a short game of paddleball with the students who had

S. R. Hodge et al.
Behaviors and Beliefs Associated with Inclusion

disabilities to reinforce rules and model appropriate behaviors. Mr. Kirk stated that
Patrick (a student with severe emotional disorder) was the most ‘difficult’ student to
include in activities as he disliked physical activity and preferred to work on a computer
or read.

Mr. Smith's teaching behaviors. Of the lessons observed, two were running and two were
basketball. During the running classes, interactions between Mr. Smith and all students
were minimal. As students would run by they would call out their attendance number
so Mr. Smith could record the lap. During the basketball lessons, Mr. Smith moved from
game to game providing instruction, encouragement, and feedback. Nate (student in the
STARS program) had an advocate, Dave, who accompanied him to class. Dave
commented that Nate rarely needed his help or support. Nate was socially distant from
his classmates (e.g. rarely talked or socialized), but physically interacted with them during
activity in an appropriate manner. He often started class as a competent bystander until
he found a group where he was comfortable participating.

Mr. Bell's teaching behaviors. All four classes observed were of Mr. Bell's swimming unit
with 45 freshmen boys and girls including Laura, a girl with learning difficulties (i.e.
delayed motor skills, cognitive processing difficulties, and language impairments). Laura
had few friends and rarely socialized with her peers. To avoid participating, Laura
typically positioned herself far away from the teacher and was often off-task or acted as
a competent observer. Daily, Mr. Bell began class with a six-lap warm-up and then
divided students into activity groups for instruction. He provided no physical assistance,
rather remained on deck giving instructions. There was no contact between Laura and
Mr. Bell, or Laura and her classmates. Mr. Bell did not hold Laura accountable for her
off-task behaviors.

Ms. Price's teaching behaviors. All four classes observed were of the same GPE weight
training and conditioning class. There were 40 girls and they appeared to have formed
clique, none of whom included Katie (an overweight child with learning disabilities),
who usually sat alone. Typically, classes started with a 24-minute aerobic stepping
activity and then students transitioned into the weight room to complete their individual
programs. Ms. Price paired students in the weight room and this ensured that Katie had
a partner. Modeling by the peer was a strategy incorporated in the weight segment of
the class to assist Katie. Ms. Price provided Katie with verbal and nonverbal encourage-
ment, feedback, and modeling. For example, when Katie needed assistance with exercise
bands, Ms. Price demonstrated and then physically assisted her in the movements. Ms.
Price provided physical assistance to Katie during most weight training segments plus she
provided her with verbal encouragement in the aerobic segments.

Research Location 3

Mr. Hall's teaching behaviors. The data collector observed one volleyball and two floor
hockey lessons. During the volleyball lesson, students completed warm-up progressions of
basic volleyball skills (e.g. passing) with their peer partners; and next again with peer
partners they practiced executing volleyball skills in game situations. Mr. Hall monitored
the students, gave verbal feedback, encouraged on-task behaviors, and instructed them
to focus on cooperation. During the next observation, the students practiced basic floor
hockey skills (e.g. stick-handling, shooting), and offensive and defensive strategies. It
appeared that some of the students were frustrated with the hockey activities. In one instance, a student without disabilities threw a hockey stick at a classmate without disabilities. The teacher ignored this misbehavior. During the third observation, the students again practiced basic hockey skills, and offensive and defensive strategies in game situations. The students interacted appropriately with each other and were mostly on-task. Across lessons observed, Mr. Hall's pedagogy was effective and inclusive of Brandon, a student with attention deficit disorder. Typically, he gave instructions to the group as a whole, plus feedback to individual students throughout the lessons. Mr. Hall maintained close proximity to Brandon, gave verbal prompts telling him to pay attention, to stay on-task, and asked questions as to what would he do in particular situations if the hockey puck came to him.

Mrs. Evans' teaching behaviors. Three lessons were observed, one whiffle ball and two basketball lessons. The goal of the whiffle ball lesson was to improve ball handling and striking skills, temporal awareness, speed, and eye-hand coordination. Mrs. Evans used modifications to games to include Phil, a student who used a wheelchair due to muscular dystrophy that caused limited movement of his extremities, in lesson activities. Game modifications included a five-count rule before a classmate was allowed to retrieve a ball hit by Phil. In the outfield, he was assigned second base and the ball must be placed in Phil's lap by a classmate for an out at second base. Such game modifications and help from his classmates without disabilities allowed Phil to function successfully within the game. He was able to retrieve the ball and wheel around the bases appropriately. Phil's classmates were very receptive to him and the modified game rules. Mrs. Evans stood nearby Phil while monitoring all the students in the class. She repeatedly praised and encouraged Phil throughout the lesson. During the second lesson observed, the goal was to improve basketball ball handling skills, temporal awareness, speed, and eye-hand coordination. Game modifications included a 5-foot radius wherein opponents could not make contact with classmates with disabilities. Also, passes were not allowed to be stolen and shots were not allowed to be blocked of students with disabilities. Mrs. Evans had two games of basketball taking place concurrently. One game included students with disabilities and the other game had only students without disabilities. Students without disabilities had their choice playing in the included game (as she called it) with classmates with disabilities or the regular game that did not include classmates with disabilities. Mrs. Evans stood in the middle of the gym between the two games. She gave verbal feedback, encouraged all students in the class, praised Phil's performance, and kept a watchful eye over his participation. During the last lesson, the students were instructed on lead-up basketball progressions. Greg, a student with mild mental retardation, participated with his assigned peer partner in station work (i.e. dribbling, passing, and shooting tasks). His peer partner spent some time helping him, but occasionally she flirted with boys in the class. Mrs. Evans did not hold this girl accountable for her off-task behaviors. Yet, Greg was mostly on-task and appeared to enjoy the tasks with little assistance.

Mr. Lee's teaching behaviors. Mr. Lee was observed once each during a softball, a weight training, and a soccer lesson. During the softball lesson, students practiced to improve their basic softball skills (i.e. throwing, catching, and hitting). Mr. Lee introduced the lesson, gave students time to practice, and provided them with individual feedback and tips to improve their softball skills. He also spent time interacting with Robert, a student with severe muscular dystrophy, who fatigued easily and used a wheelchair for mobility. Enlarged bats and extra soft balls were used to better include Robert in the softball game.
Students were paired and they took turns hitting the ball off of a cone, with their partner shagging the struck ball and lightly tossing it back to the hitter. During the weight-training lesson, Mr. Lee began the class with stretching exercises and students were instructed to stretch to improve muscular flexibility in their legs, back, and shoulders. Afterwards, the students engaged in circuit training using the universal weight machines. Dan, a student with mild cerebral palsy that affected his right side (he fatigued easily and had poor muscle tone), was included in the stretching exercises. He performed stretching movements with his affected side and strength training exercises with his non-affected side. The weight training movements focused on leg extensions and squats. Students also performed lateral pull-downs and push-ups to engender strength in their shoulders and latissimus dorsi muscles. Mr. Lee spent much more time giving feedback directly to Dan in this lesson compared to the previous lesson. This was likely because this lesson had only 10 students present, whereas during the softball the class size was 24 students. Each student independently performed exercises at each station on a rotating basis. Mr. Lee spent equivalent time circulating around to all of the students helping them with their lifting techniques. He gave verbal praise and encouragement to Dan for his efforts, even when he did not perform the lifts completely. In the soccer lesson, Mr. Lee began the lesson with stretching and strength training exercises in the weight room. Afterwards, students transitioned to the gym where they practiced soccer skills (dribbling, passing, and shooting on net). Julie, an obese student with Prader Willi Syndrome, who had poor hand–eye and foot–eye coordination, and poor muscular strength and endurance, was reluctant to engage in the soccer activities. Mr. Lee became frustrated because of Julie’s reluctance and complaints about participating. Usually, Mr. Lee responded to Julie’s reluctance with a calm demeanor; but on this day he made sarcastic remarks to her. He explained later that this was the second day in a row that Julie was reluctant to participate and this had led to his frustrations.

What Were the Teachers’ Beliefs to Inclusion?

Qualitative data (i.e. field notes and interviews) analysis revealed three recurring themes. First, the teachers were positively disposed to inclusion as an educational philosophy. Second, they identified variables leading to differential efficacy in achieving successful inclusion. Third, these teachers discussed challenges to inclusive practice. These three themes and subthemes are summarized (Table 2) in narrative and highlighted with direct quotes from the teachers.

Recurring Themes

*Teachers positively disposed to inclusion as an educational philosophy.* All nine teachers expressed both favorable and less than favorable beliefs about inclusion. For example, Mr. Simms acknowledged that at the beginning of his career he was uncomfortable teaching such students but now was more comfortable. He still believes, however, that for some students with severe disabilities inclusion is problematic and explained, ‘Obviously there are some students with disabilities who really have a tough time. You see that Tommy [a student with severe mental retardation, who was non ambulatory] has a very, very difficult time with anything we do’ (Mr. Simms, interview transcript). Tommy’s lack of independence, due to the severity of his disabilities, hindered his full participation in activities (data collector 1, field notes).

All nine teachers believed that inclusion was ‘good’ conceptually but students with disabilities need more teacher time and attention. For example, Mr. Will explained, ‘... because all along I’ve thought all students [should] have an opportunity and that they
all have an ability because we try to work from where they are and try to get them to improve. Conversely, Mr. Will stated, 'But some students [those with severe disabilities] ... it wouldn’t work for them just because we can’t give them the attention that they need. I think some students [students with severe disabilities] ... really need more attention. And if ... you had an aide, you can get that aide to work with the individual' (Mr. Will, interview transcript).

The nine teachers believed that students without disabilities were helpful and accepting of their classmates with disabilities. For example, Mr. Kirk stated that the benefits of inclusion included the 'social strengths for other students [students without disabilities] in the classes who actually worked with those students [students with disabilities] too, and to be accepting of individual differences' (Mr. Kirk, interview transcript). From a similar perspective, Mr. Bell identified the social benefits of inclusion as: ‘... the positives come from a twofold part: both the give and take part as far as the class being aware that there is somebody with special needs in your class and making them feel wanted. And the other part is on the ... person [with disabilities], the self-esteem that he/she gets as far as being able to participate with regular students' (Mr. Bell, interview transcript). Ms. Price was also enthusiastic about the social benefits of inclusion and said the "joy in his [male student with a disability] life is being with regular kids and guys that will talk to him about guy stuff" (Ms. Price, interview transcript).

**Differential efficacy in achieving successful inclusion.** The nine teachers believed that not being able to give individualized attention and quality time to students with disabilities, especially with a large class, adversely impacts their effectiveness. 'The negative is the fact that a lot of times you just don’t have time with a large class to give to kids [students with disabilities] who are in inclusion. They need that extra help from you and you really don’t have the time because you have 25 or 30 students and you might only have one person and can’t devote all your time to that one person’ (Mr. Will, interview transcript). Mr. Will pointed out that he had three to six students with disabilities in each of his classes with no supports available.

These nine teachers believed that their teaching styles and strategies had not been adversely affected by the presence of students with disabilities. To which Mr. Will stated that the only difference is the extra attention and time he gives to students with severe disabilities to the neglect of other students. In other words, these teachers believed that their teaching styles and strategies were not adversely affected, but that large classes containing students with severe disabilities had a potential adverse impact on their effectiveness.

All nine teachers believed that their ability to adapt and modify the learning environment was essential to successful inclusion practice. Mr. Kirk’s comments reflect this subtheme.

> If the student is going to fit into an existing curriculum that we believe is important for all students to have. The thing that we try to do is to modify the activity that we are teaching, or modify the equipment that we are using, or modify the rules of a particular game, or modify the field size as an example, or we even modify the number of actual official players on a particular team.

(Mr. Kirk, interview transcript)

Mr. Hall also expressed a need to adapt games and activities when necessary to meet the needs of his students with disabilities. He explained, ‘I use smaller baskets for basketball. I use nerfs instead of leather footballs. I use a whiffle ball bat and play whiffle ball instead of softball. It’s no big deal’ (Mr. Hall, interview transcript). Although all nine teachers
believed that adapting and modifying the learning environment was important, in classes observed five of them did at least once, but only three of them did on a regular basis (data collectors 1, 2, and 3, field notes).

These nine teachers believed that communication between them, the IEP team and school administration was needed to enhance their efficacy. For example, Ms. Price stated that ‘They [IEP team] always come and talk to me before ever placing a special needs child in my class’ (Ms. Price, interview transcript). Lack of such effective communication was viewed as adversely impacting their efficacy in teaching students with disabilities.

Seven teachers believed the availability of supports positively impacted the efficacy of their inclusion practice. For example, Mr. Bell believed inclusion was successful in his classes because of the STARS program. ‘The advocate tells me what their [students with special needs] problems are and what their limitations are, what their handicaps are’ (Mr. Bell, interview transcript) and they would then determine the best units for that student. According to Mr. Smith, the efficacy of his inclusion practice has also been enhanced with the presence of STARS advocates. He explained:

Not that all inclusion students [students with disabilities] have an advocate, but it is so helpful because they work with more than just that inclusion student. The advocates also lend perspective to behaviors, while I might view something as being major he realizes that it is just the way the kids are. (Mr. Smith, interview transcripts)

Further Mr. Smith believed that the efficacy of his inclusion practice would be enhanced if he were notified in advance of the presence of students with disabilities in his classes, ‘because I have from 45 to 60 in a class a lot of times, and we don’t necessarily know who the inclusion kids [students with disabilities] are at first’ (Mr. Smith, interview transcript). He pointed out that prior notification would help with instructional modifications. Mr. Bell was also concerned over the uncertainty of not knowing whether or not students with disabilities were included into his classes. ‘First off, you don’t know it. It is one of those things that you would find out after the fact when there is a problem’ (Mr. Bell, interview transcripts). This issue was especially important to Mr. Bell because he felt students without disabilities need to be talked to by him prior to arrival of students with disabilities to his class, so that they could be successfully incorporated into the lesson activities.

At least one teacher (Mrs. Evans) believed that the best way to be successful teaching inclusive GPE classes was to be creative and informed. Mrs. Evans relied on the physical education literature, and attended workshops and conferences to stay informed. She said, ‘I keep current with cutting-edge strategies and ideas I read about’ (Mrs. Evans, interview transcript).

Eight of the teachers believed that a student’s disability type and severity had an impact on their efficacy. For example, Mrs. Evans stated, ‘The best way in overcoming barriers is being creative’. She regularly adapts activities and games, depending upon the student’s disability type and severity, and stated, ‘I give Phil [student with muscular dystrophy] an extra 5 seconds to start toward the bases. I always have a peer helping or I will assist him as well’ (Mrs. Evans, interview transcript).

Challenges of Inclusive Practices

Seven of the teachers believed that they were inadequately prepared to effectively teach some of the students with disabilities. They stressed the need for adequate preparation, for example, in adapting instruction and use of adaptive equipment. To counter this
concern, they relied on students without disabilities to help support their classmates with more severe disabilities (data collector 1, 2, and 3, field notes). For example, Mr. Simms insisted that he typically encouraged students to work with different partners as much as possible. He also emphasized the difficulty of not always knowing how to include students with more severe disabilities into class activities. ‘Obviously if we play a real game she [student with muscular sclerosis] isn’t going to do very well, all because she cannot handle the paddle ... I’m not sure whether or not a bigger paddle will do for her to cover more area because she is not too far from a lot of the hits’ (Mr. Simms, interview transcript).

Another challenge common to the nine teachers, particularly with students who had severe disabilities, was a greater demand on teachers’ time in providing individualized attention. For example, Mr. Kirk stated that he tended to give extra attention to the students with disabilities to assure that they were fitting in and sometimes this takes attention away from other students. To that point, we found that on average 35–40% of Mr. Hall’s class time was spent with him interacting with students with disabilities (data collector 3, field notes).

Ensuring the safety of all students was another challenge for these teachers. Mr. Kirk explained that he had a student who used crutches to ambulate. ‘Well, I had to worry now about the safety of the regular day kids and not necessarily the safety of the inclusion child’ (Mr. Kirk, interview transcript). Safety issues were also a concern whenever competitive activities were engaged in because ‘everything is moving too quickly ... and so they [students with disabilities] really aren’t ready for that and that level is where we really start to see the differences’ (Mr. Kirk, interview transcript). ‘Safety issues, you know that is the biggest thing, you don’t want the inclusion student [student with disabilities] to get hurt and you don’t want anyone else to get hurt either. Just getting a wheelchair around the classroom is hard enough without running into somebody. I mean there would be things we could do. But, with the size of our classes we couldn’t do a decent job of it’ (Ms. Price, interview transcript).

At least two teachers, Mr. Will and Mr. Hall, believed that some students with disabilities lacked motivation to engage in class activities. Mr. Hall appeared frustrated when asked about teaching students with severe disabilities (data collector 3, field notes). He said, ‘I have a separate adapted PE class for the more challenging students. It is very frustrating to get them [students with severe disabilities] motivated and to get much out of them’. He believed that he did not have enough information to effectively deal with some of the students with more severe disabilities. ‘Where do you get information on Prader Willi Syndrome on a moment’s notice? I usually just have her [Julie, a student with Prader Willi Syndrome] go for a walk and that seems to be the best activity she can get. They [students with severe disabilities] are frustrating. They take away from my ability to focus on the needs of the rest of the class’ (Mr. Hall, interview transcript).

Class management was a challenge for at least three teachers. For example, on two separate occasions during Mr. Will’s classes, Emily, a student with severe emotional disabilities, walked away from the class without permission (data collector 1, field notes). When asked to comment on Emily’s behavior, he explained, ‘Emily ... got mad and walked off the field; all because she didn’t have a partner to throw with ... it is a behavioral problem’ (Mr. Will, interview transcript).

For eight of these teachers students with severe disabilities were the most challenging to teach. For example, although Mrs. Evans appeared to be comfortable teaching students with severe disabilities, she stated it was challenging. ‘The more severe disabilities are a safety risk and it is more difficult to make games and activities fair for students without disabilities and students with severe disabilities’ (Mrs. Evans, interview transcript).
For three teachers lack of supports such as student helpers or advocates was also a concern. ‘Sometimes they come with a student helper and sometimes they just drop them off’ (Mr. Bell, interview transcript). Mrs. Evans also believed that the teacher aides, although not trained in the area of physical education, could nonetheless take more of an active role. Further, she felt that the school administration was ‘not supportive of purchasing new equipment [for her program], only replacing old equipment, which is frequently stolen’ (Mrs. Evans, interview transcript).

Discussion

For our purposes, the theories of adaptation (Kiphard, 1983; Sherrill, 1998) and planned behavior (Ajzen, 1985, 1991) provide apposite frameworks for understanding and explaining high school GPE teachers' behaviors associated with their beliefs on inclusion and teaching students with disabilities. Our findings revealed three recurring themes associated with teachers’ beliefs, intentions, and behaviors in teaching students with disabilities in inclusive GPE classes.

First, these teachers were positively disposed to inclusion as an educational philosophy; however, indicated inclusion can be problematic for some students, particularly those with severe disabilities. This finding is in accord with the belief aggregates (behavioral, normative, and control beliefs) of the theory of planned behavior (Ajzen, 2001b) and consistent with related research by Conaster et al. (2002). Specifically, the attitudes of teachers in our study were mostly favorable toward inclusion and teaching students with disabilities in their GPE classes (attitude toward behavior). They were motivated by a sense of professional responsibility and a will to comply with those in their schools (co-workers, school principal) and society at large, who they felt were supportive of inclusion practice as well (subjective norm). But their beliefs were more favorable in teaching students with mild disabilities compared to teaching students with severe disabilities, because these teachers believed that it was more difficult to teach students with severe disabilities, particularly students with severe emotional disabilities, than those students with mild disabilities (perceived behavioral control). Stated differently, it was these teachers’ intentions to teach students with disabilities in their GPE classes due to underlying favorable beliefs (from a personal humanistic perspective) toward inclusion (attitude toward behaviors), and their beliefs that doing so was a professional responsibility that was socially acceptable (subjective norm). Yet they varied in their beliefs about the degree of easiness and difficulty in teaching students with disabilities (perceived behavioral control), due to variables that either facilitated (e.g. teacher’s creativity, informed training and preparedness, availability of supports) or impeded (e.g. inadequate training and/or preparedness, lack of supports, behavioral management difficulties) their teaching efficacy.

Second, these teachers discussed variables leading to differential efficacy in achieving successful inclusion; several teachers attempted to modify games and activities for the success of students with disabilities in their classes, and most attempted to provide direct individualized instruction to those students with disabilities. This theme highlights differential levels of perceived behavioral control in teaching students with disabilities again as a result of variables that either facilitated or impeded these teachers’ efficacy. For example, the availability of supports (e.g. students without disabilities as peer partners) made teaching students with disabilities less difficult and had a positive impact on these teachers’ beliefs about doing so. More specifically, seven teachers used available supports, such as peer partners or STARS advocates, to enhance the learning experience.
for students with disabilities in their classes. That is, typically a student without disabilities assisted a classmate with disabilities in various class activities. Students without disabilities took turns as peer helpers. This finding is consistent with previous research where peers did not develop equal-status relationships, rather mostly exhibited unidirectional helping behaviors (Goodwin & Watkinson, 2000; Goodwin, 2001; Place & Hodge, 2001). Nonetheless, the use of peer partners is a useful strategy for inclusive classes. In our study, lack of supports in large classes made teaching students with disabilities, particularly those students with severe disabilities, more difficult for several teachers. This likely adversely impacted their self-efficacy. On the other hand, teachers’ inclusive pedagogy was facilitated for those who exercised their decision-making control to use peer helpers in their classes. According to Ajzen (2001), the degree that perceived behavioral control is veridical can serve as a proxy for actual control and influence on intentions and behavior. Yet, teachers in our study varied in their efficacy in adapting or modifying lesson content, equipment, or activities. These findings support the notion that the more the attainment of a behavioral goal is considered to be under an individual’s volition, the stronger the association with an intention to perform the behavior (Ajzen, 1985, 2001a, b; Conatser et al., 2002). For example, one teacher we studied believed that the best way to be successful in teaching students with mild to severe disabilities was to be creative and informed. She regularly read articles from the physical education literature, and attended workshops and conferences to stay informed. In accord with planned behavior theory, those teachers who perceived they had volitional control in teaching students with disabilities through such strategies as using peer partners (helpers), adapting or modifying activities, and ensuring they were professionally informed were more likely to carry out their intentions of including students with mild to severe disabilities in planned activities.

A third theme discussed by teachers in our study emphasized the challenges associated with inclusive practice for students with disabilities, particularly those students with severe disabilities. At least seven of the teachers did not believe that they had had adequate PETE preparation to effectively teach students with severe disabilities in their classes. This theme emphasizes two important findings. First, these teachers’ self-efficacy in teaching students with disabilities in inclusive classes, particularly students with severe disabilities, was adversely impacted by their perceived inadequate PETE preparation. This finding is consistent with LaMaster et al.’s (1998) finding that GPE teachers felt inadequately prepared to teach in inclusive GPE classes. Second, teachers we studied perceived behavioral control toward teaching inclusive GPE classes was much more favorable for students with mild disabilities compared to students with severe disabilities. Similarly, Conatser et al. (2002) reported that aquatics instructors’ perceived behavioral control toward teaching inclusive swim classes was much more favorable for students with mild disabilities compared to students with severe disabilities. Also supported with our findings, we agree with Conatser et al.’s (2002) position that the theory of planned behavior accommodates plausible difficulties associated with teaching inclusive classes. Additionally, we observed GPE teachers at work in inclusive classes to gather data on what they actually do compared to what they say they believe and intend to do.

To varying degrees, all of these teachers did attempt to engage students with and without disabilities in planned activities. In doing so, they varied in the time they provided direct instruction to students with disabilities. These findings can be well explained within the framework of the theory of planned behavior. According to these teachers, their intentions were to teach students with disabilities in their inclusive GPE classes. Our findings suggest that their intentions were a result of these teachers’ mostly
Behaviors and Beliefs Associated with Inclusion

positive attitudes toward teaching students with disabilities (behavioral beliefs) and motivation to do so (normative beliefs). But they varied in their self-efficacy relative to perceived degrees of easiness or difficulty to do so (control belief) in association with variables that either facilitated or impeded their teaching efficacy. For at least three teachers, difficulties encountered in teaching their classes appeared to be related to the nature and severity of the students' disabilities, their level of professional preparedness (impacting self-efficacy), and classroom management skills, which likely infringed on their perceived behavioral control. However, while most of the teachers actively supervised the students their level of enthusiasm for teaching and interacting with students varied. For most of these teachers, feedback was more often provided to individual students than the class at large. Routinely, most of these teachers provided praise, positive reinforcement, and corrective feedback to students with and without disabilities. In fact, most interactions with students who had disabilities were verbal (i.e. give feedback, praise, and instruction) and less physical or social (e.g. pat on the back, physical assistance). Only three teachers regularly made appropriate adaptations or modifications to instruction, equipment, or activities. Plus, two additional teachers occasionally adapted the learning environment. It is plausible that the failure for most of these teachers to regularly adapt and modify rules, instruction and equipment was related to the severity and type of student disability, their level of professional preparedness (self-efficacy), and their perceived behavioral control (casiness or difficulty) to do so effectively.

The classes taught by these teachers varied in terms of class size (Table 1). Sherrill (1998) noted that class sizes larger than 30 when working with students with disabilities contributes to teacher burn out, intensifies discipline problems, and is a barrier to individualizing physical education instruction. We're unsure whether or not disciplinary problems encountered by three of these teachers, most notably in Mr. Will's case, were related to class size, student disability type and severity, ineffective class management and/or his inadequate professional preparation (i.e. he had taken only one APE course some 26 years earlier as an undergraduate PETE student; and he had had no in-service training on inclusion practice during his 26 years of teaching GPE). All of which would impact his control beliefs and volition. It was students with severe emotional disorders who most often engaged in off-task and inappropriate behaviors. Additional research would be required to determine which variables are most influential in such cases.

Although all teachers in our study expressed a positive belief about inclusion, some struggled with adapting instruction for effective inclusive practice. Again, only a third of these teachers regularly modified or adapted their instruction to meet the needs, interests, and abilities of students with disabilities in their classes. This may have been related to a lack of prior notification that a student with disabilities had been included in their classes as it takes thoughtful planning to make the inclusion of students with disabilities in GPE a beneficial experience (Solomon & Lee, 1991). But a more plausible explanation for our findings is that these teachers felt inadequately prepared (as they stated as much); and therefore, they perceived it as too difficult to regularly modify or adapt their instruction to meet the needs, interests, and abilities of students with disabilities, particularly for students with severe emotional disabilities (unfavorable control beliefs). Adaptation theory posits that well-prepared professionals match student abilities, needs and interests with content and teaching style to create optimal learning opportunities for all learners (Kiphard, 1983; Sherrill, 1998). But GPE programs that lack adequate planning, and where students are included without supports, can become a negative experience for teachers and students (Grosse, 1991).
In a GPE context it is important that teachers model appropriate interaction with students who have disabilities. On a regular basis, most teachers in this study verbally interacted with students with disabilities in their classes, but varied to the degree they placed emphasis on cooperative interaction between students with and without disabilities. For example, Laura (a girl with learning disabilities and language impairments in Mr. Bell's swim class), and Katie (an overweight girl with learning disabilities) were often socially isolated from classmates. Chamberlin (1999), and Place and Hodge (2001) called this tendency of students with and without disabilities to coexist separately from one another within the same GPE classes segregated inclusion. Social inclusion emphasizing cooperative social interaction between students with and without disabilities is considered an important benefit of inclusion that does not necessarily occur without endorsement by the teacher (Place & Hodge, 2001; Butler & Hodge, 2004). According to adaptation theory, teachers, students and the environment reciprocally can change one another in dynamic and multidirectional ways (Kiphard, 1983; Sherrill, 1998). Scholars suggest that this will best occur in inclusive GPE classes where cooperative interactions are emphasized by the teacher in building equal-status relationships between and among students with and without disabilities (Sherrill et al., 1994).

Further, we found that despite the availability of modern facilities, multiple resources, and sport and physical activity equipment, no adaptive equipment was used or available for most teachers in this study. One should not underestimate the importance of supports such as specialized equipment, special instruction, and personnel such as volunteers, teacher aides, peer tutors, and education specialists to promote successful inclusion practice (Houston-Wilson et al., 1997), and favorably impacting teachers' perceived behavioral control in teaching students with mild to severe disabilities. Dunn et al. (1980) noted that such support is rarely given to GPE teachers, and in some cases, they do not even request support. GPE teachers who work with students with disabilities must be proactive in requesting supports. In our study, most teachers used students without disabilities as peer partners to assist their classmates with disabilities in class activities. This likely favorably impacted these teachers' control beliefs toward inclusive practices. A next step is to encourage equal-status relationships between and among students with and without disabilities (Sherrill et al., 1994).

Interestingly, teachers in the present study believed that including students with disabilities in their classes did not alter their teaching style and strategies. These nine teachers believed that their teaching styles and strategies were not adversely affected, but that large classes containing students with severe disabilities had a potential adverse impact on their effectiveness. Yet, although all nine teachers indicated that they believed it was important to adapt and/or modify instruction, equipment, and/or activities, five teachers did so occasionally but only three of them did so regularly. It is plausible that these teachers' behavioral and normative beliefs were hampered by their control beliefs creating some degree of tension resulting in inconsistencies between their beliefs, aggregates, intentions, and behaviors. Adaptation theory was not supported in some classes observed in this study. Simply stated, these teachers varied in their efficacy at adapting instruction to facilitate active and meaningful participation of all students, particularly those with severe disabilities. According to adaptation theory, teachers should be cognizant of those students with disabilities in their classes and provide them with access to meaningful and appropriate learning opportunities by way of planned adaptations (where needed) to lesson content, equipment, and activities (Sherrill, 1998).
Implications and Recommendations

Taken collectively, our findings imply that these GPE teachers were positively disposed to inclusion as an educational philosophy. Their intentions were to practice effective and inclusive pedagogy. Also, lending support to adaptation theory, these teachers agreed that adapting and modifying the learning environment is requisite for successful inclusive practice. However, in accord with the theory of planned behavior, teachers' perceived behavioral control in teaching students with disabilities was impacted by such variables as large class sizes, increased time demands, heightened safety concerns, and behavior management difficulties. Further, seven of these teachers believed they were inadequately prepared to effectively teach students with severe disabilities. This finding is consistent with other studies (LaMaster et al., 1998; Lienert et al., 2001) and raises the issue of curriculum priorities of PETE programs in preparing physical educators for teaching students with disabilities. How teachers are prepared, and what happens during their PETE programs in terms of teaching individuals with disabilities are important questions to be addressed. Teachers in this study indicated they needed more training to teach students with severe disabilities more effectively. Hodge et al. (2003b) reported that providing novice teachers multiple teaching and interacting opportunities in structured, well supervised and success-oriented (e.g. planned, one-on-one and/or small group teaching opportunities) physical activity contexts led to favorable attitudes and behaviors toward a diversity of learners with and without disabilities. Moreover, they claimed that providing opportunities for novice teachers to reflect (via journaling) on such experiences was beneficial in the delivery of instruction. Research suggests that acquiring adequate PETE training enhances teachers’ perceived competence toward inclusive practices (Hodge et al., 2002). Therefore, PETE programs should ensure novice teachers are exposed to various curricular and instructional strategies to enhance inclusion (Sherrill, 1998; Hodge et al., 2003a).

Conclusions

It is reasonable to suggest that GPE teachers who are considered effective teachers may not necessarily demonstrate effective inclusive practices. The full potential of today’s inclusion practices may not be realized if teachers believe they have little volitional control in teaching students with mild to severe disabilities, particularly if they are not adequately prepared and/or lack supports in their classes. PETE faculty must prioritize curricular offerings to ensure adequate teacher preparation for effective inclusive practice. Further, school districts and school administrators must ensure that GPE teachers have reasonably small classes, appropriate (adapted) equipment, and supports (e.g. teacher assistant) to facilitate inclusive practices.

Correspondence: Samuel R. Hodge, Associate Professor and Associate Dean, the Ohio State University, School of PAES, 212 Pomerene Hall, 1760 Neil Avenue, Columbus, OH 43210-1297, USA; e-mail: (hodge.14@osu.edu).

Notes

[1] Ajzen (1985, 1991, 2001a, b) provides an excellent discussion and schematic representation of the aggregates comprising the theory of planned behavior. Ajzen's theoretical paradigm postulates three conceptually independent determinants of intention: (a) attitude toward the behavior, which refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question; (b) subjective norm, which refers to the
perceived social pressure to perform or not to perform the behavior; and (c) perceived behavioral control, which refers to the perceived ease or difficulty of performing the behavior. These determinants of intention are assumed to be a product of three accessible belief systems: (a) behavioral beliefs, which are posited to influence attitudes toward the behavior; (b) normative beliefs, which constitute the underlying determinants of subjective norms; and (c) control beliefs, which provide the basis for perceptions of behavioral control (Ajzen, 1991).

[2] Tousignant and Siedentop (1983) describe and define competent observers (bystanders) in terms of task structures in physical education and accountability. In short, they suggest that when accountability is lacking, performance outcomes are based only on the student’s motivation to engage or not engage in activity.

References


Behaviors and Beliefs Associated with Inclusion


Appendix A. Description of Disability Types

**Attention deficit disorder.** A student with attention deficits exhibits inattention, impulsivity, and excessive activity; and finds difficulty distinguishing between activities that require more focus and planning, and activities where quick, impulsive actions are needed (Craft, 2000).

**Cerebral palsy.** Cerebral palsy is an inclusive term used to describe a group of nonprogressive conditions brought about as a result of damage, or malformation, of part of the brain, which manifests itself in a student’s loss or impairment of control over voluntary musculature. Depending on location and severity, a student’s condition ranges from mild (e.g. slight speech impairment) to severe (e.g. inability to control bodily movements) (Porretta, 2000b).

**Developmental delays.** This generic term refers to a student who exhibits performance significantly below average (performs at 75% or less below same age/sex peers). In this study, students with developmental delays exhibited below average motor performance and significant subaverage function in one or more additional areas: cognitive, physical, language and speech, psychosocial or emotional, and self-help (Sherrill, 1998).

**Learning disabilities.** This student has normal or better intelligence, but has a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written; may be hyperactive, exhibit perceptual-motor problems, emotionally immature, have attention deficits; and need help developing appropriate play behaviors (Sherrill, 1998).

**Mental retardation (mild).** This student has an IQ score in the range of 50–80 on standardized tests, will develop basic social and communication skills; but will lag two to four years behind peers without disabilities in most motor performances; and may have difficulty learning motor skills due to inattentiveness and low comprehension (Rizzo et al., 1997).

**Mental retardation (severe).** A student with severe mental retardation has significantly subaverage intellectual functioning; has an IQ score below 50 on standardized tests; may or may not be able to verbally communicate; and has little socialization or interaction skills. The student is mostly to totally dependent on others for self-care (Rizzo, 1993).

**Muscular dystrophy.** A student with muscular dystrophy has a genetic hereditary disease resulting in a progressive wasting away of muscle, which is replaced by fibrous tissue and fat. This condition primarily affects the trunk, shoulders, hips, calves, neck, and face muscles with weakness of the affected muscles. Due to weakness in affected muscles, this student may experience constant falling, great difficulty in rising from a lying or sitting position, limited strength and endurance, and low energy levels (Porretta, 2000a).

**Muscular sclerosis.** A student with muscular sclerosis has a progressive neurological disorder that may eventually result in total incapacitation. He/she may experience numbness, general weakness, double vision, slurred speech, staggering gait, and partial or complete paralysis (Porretta, 2000a).

**Prader Willi Syndrome.** The student with Prader Willi Syndrome in this study was obese with an insatiable appetite. She had poor hand–eye and foot–eye coordination, and poor muscular strength and endurance, but had normal range intelligence (Auxter et al., 1993).

**Severe emotional disabilities.** A student with severe emotional disturbance has a chronic disabling condition, which causes substantial functional limits in building or maintaining satisfactory interpersonal relationships, or exhibiting stable or appropriate types of behaviors or feelings under normal circumstances. He or she may also exhibit a general pervasive mood of unhappiness or depression (Sherrill, 1998; Jansma, 1999).
Appendix B. Interview Questions

1. What are your overall beliefs about inclusion and teaching students with various types of mild to severe disabilities? In that regard, provide examples of positive and negative experiences encountered by you and/or your students in your GPE classes.

2. To what degree, if any, has the inclusion of students with disabilities changed your lesson planning, teaching behaviors or style, and effectiveness?

3. To what degree, if any, has the inclusion of students with disabilities changed the learning environment (social interactions of students, lesson plan adaptations, game modifications) for students with and without disabilities in your PE classes?

4. To what degree, if any, are you motivated to comply with inclusion practices given how others (e.g. parents, your school principal, co-workers) feel about including students with disabilities in physical education classes?

5. How confident are you in your abilities to be effective in teaching students with various with mild disabilities? What about students with severe disabilities?

6. What strategies (e.g. use of peer teaching) have or intent to use in teaching students with mild to severe disabilities? What challenges hinder you from implementing these strategies? What is most critical for you to implement these strategies?

7. Do you believe students with mild disabilities learn best if taught in physical education with classmates without disabilities or in specialized APE classes? What about students with severe disabilities?

8. How easy or difficult is it for you to teach students with mild disabilities? How easy or difficult is it for you to teach students with severe disabilities?