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Case Study

# Impact of Situated Learning Approach on Teacher Learning: Physical Education Teacher Trainees' Perception of Disability and Inclusion

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**Received:** 9 December 2021; **Revised:** 14 May 2022; **Accepted:** 17 May 2022

**Abstract:** Globally, educational inclusion for Students with Disabilities (SWDs) has been a rising movement since the 1990s. However, discourses on professional development processes that prepare teachers to become inclusive practitioners for SWDs are still limited. This qualitative case study examined the learning experiences of Physical Education Teacher Trainees (PETTs) in an introductory adapted physical education course designed with a situated learning framework to explore its influences on their understanding of disability and inclusion in physical education. The course was re-designed incorporating three interrelated dimensions-*context*, *learner*, and *activity*-of the situated learning. A qualitative intrinsic case study design driven by an interpretive perspective was undertaken to describe and understand the PETTs' experiences. Four PETTs' (3 females, 1 male) perceptions were gathered through a semi-structured interview, reflections on learning activities, photos, a pre-course survey, and field notes. Three themes emerged from the thematic analysis are: (1) The power of authenticity in learning, (2) Beyond empathy: accepting individual differences, and (3) Inclusion as an integral part of education. Findings reveal that PETTs have shown perceptual transformation in disability and inclusion. This study discusses the PETTs' conceptualization of disability and inclusion with the notion that direct engagement with practices can deepen their learning within social and cultural contexts, such as adapted/inclusive physical education and social relationships with the Community of Practices (CoPs).

***Keywords*:** instructional design, professional development, qualitative case study, sociocultural perspective, teacher perception

## 1. Introduction

One of the critical issues in teacher education is cultivating teachers who can facilitate active participation in collaborative learning among students with and without disabilities in inclusive settings. However, it has been a challenging issue in the Physical Education Teacher Education (PETE) programs in the United States (US) because of the lack of disability inclusion-related courses that teacher trainees take during their preparation (Jin et al., 2013). Most PETE programs in the US traditionally offered only one course related to disability (e.g., Adapted Physical Education-APE) that comprises lecture and practicum or service-learning experiences (Jin et al., 2013; Piletic & Davis, 2010). Research on inclusion in physical education revealed that taking a one-semester-long APE course with hands-on experiences influenced improvement in teacher trainees' attitudes toward Students with Disabilities (SWDs) and


DOI: https://doi.org/10.37256/ser.3220221280

strengthened their understanding of teaching SWDs (An, 2021; Tant & Watelain, 2016; Wilhelmsen & Sørensen, 2017; Woodruff & Sinelnikov, 2015). Yet, it is inexplicit if it prepares them to become inclusive educators, recognizing and committing educational equity and social justice for SWDs (Erten & Savage, 2012; Kozleski & Waitoller, 2010).

There are limited discourses in PETE research concerning the professional development process nurturing the teacher trainees to understand complex shapes of in/exclusion for SWDs and empowering them to consider sociocultural contexts in which students with and without disabilities work together (Waitoller & Artiles, 2013). Thus, it is essential to design a course that enables the teacher trainees to situate in authentic contexts (i.e., schools, classrooms) so that they can acknowledge barriers to learning and participation in school that SWDs may confront. They also need to learn the culture of schooling and practices of teaching SWDs in physical activity contexts to make sense of and position themselves as active agents to remove barriers in the contexts and create a space for collaboration with other professionals to promote student learning (Waitoller & Artiles, 2013).

To better understand teacher learning of disability and inclusive education, this case study examined the PETTs' learning experiences in an introductory APE course designed with a situated learning framework to explore its influences on their conceptualization of disability and inclusion in physical education. The author incorporated the concepts of situated learning that comprise three interrelated dimensions: (a) *context*-authentic activities and cognitive apprenticeship; (b) *learner*-collaboration and reflection and (c) *activity*-coaching and scaffolding (Herrington & Oliver, 1995; Lave & Wenger, 1991) (see Figure 1). The following question guided this study: *How did the situated learning approach affect teacher trainees' perceptions of disability and inclusion in physical education?*

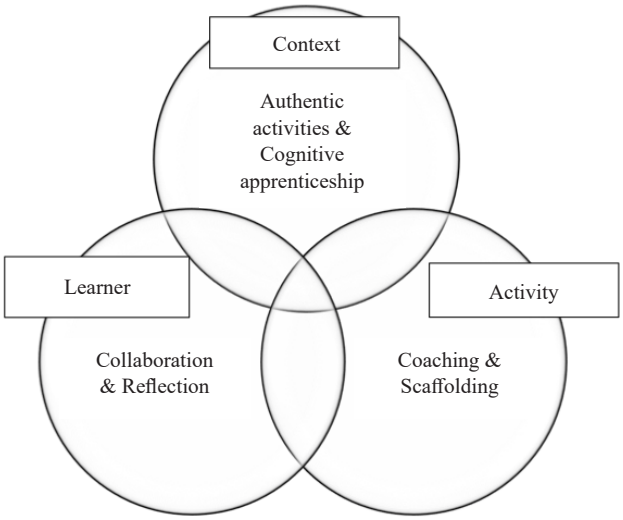


**Figure 1.** Three interrelated dimensions of situated learning (Herrington & Oliver, 1995)

## 2. Theoretical perspectives

This case study builds on three theoretical perspectives to restructure an existing course and to conceptualize the teacher trainees' experiences in learning of disability and inclusion: *situated learning theory* (Lave & Wenger, 1991), *community service-learning* (Cooks et al., 2004), and *critical reflection* (Brookfield, 2017). According to Brown et al. (1989), "knowledge is situated, being in part a product of the activity, context, and culture in which it is developed and used" (p. 32). Namely, learning should be embedded in the sociocultural context within which it will be used (Herrington & Oliver, 1995). It refers to the acquisition and construction of an individual's knowledge (e.g., disability, teaching, and inclusive education) through their active engagement in sociocultural contexts (i.e., social interaction with community members, teaching SWDs in a public school) (Lave & Wenger, 1991; Rogoff, 1995). Situated learning perspective views learning as a process of participation in social practice that is "knowing as an activity that is situated with regard

to an individual's position in the world of the social affair" (p. 5) rather than knowledge as an entity transmitted from one task setting to another (Cobb & Bowers, 1999; Korthagen, 2010).

Wenger (1998) further illustrated that participation is "the process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities" (p. 4) rather than the engagement in certain activities with certain people. The teacher trainees configure their identities (e.g., a teacher, activist) when they gain new knowledge through mutual understandings and interactions with the experts (e.g., in-service teachers) in interconnected sociocultural settings (e.g., school, classroom, community) (Rogoff, 1995; Wenger, 1998). In this sense, six critical elements of situated learning to represent the three interrelated dimensions-*context*, *learner*, and *activity* were incorporated to the design of the course as shown in Figure 2 (Herrington & Oliver, 1995).

Service-learning is a well-grounded pedagogical approach employed in higher education to promote student learning (Butin, 2010). Service-learning pedagogy integrates experiential learning and community service benefiting students, faculty, and community members and emphasizes engagement in the community with a clear learning purpose aligned with the course (Carrington et al., 2015). Community Service-Learning (CSL), according to Cooks et al. (2004), promotes an "understanding of learning as communal, relational, cultural, and critical while providing a context for applying and challenging course concepts and curricular" (p. 45). It is a meaningful context where relational or engaged learning occurs, so the CSL participants should be in their social, political, cultural, and moral contexts to examine the possibilities and constraints of the practices as well as to understand the strengths and weaknesses of their learners in the settings (Cooks et al., 2004). Service-learning experiences enable teacher trainees to engage in socially situated activities-teaching SWDs in physical education-that support community needs and reflect on the experiences with their learning of course contents (Bringle & Hatcher, 1996). The targeted course in this study adopts the CSL pedagogy that embeds learning in the context of experience, espousing the concepts of *engagement* (roles to be played, rules of interaction)*, identity* (learning about ourselves and others), and *community* (social positioning within and through interactions) (Cooks et al., 2004; Cooks & Scharrer, 2006). A school-based service-learning program was implemented as social practice and participation.

Learning is also a socially interactive and communicative process (Cooks & Scharrer, 2006), so teacher trainees need to engage in a reflective activity to objectify their knowledge of disability and inclusion (Huntley, 2008). A critical approach to reflection is essential to raise their consciousness of their beliefs or assumptions about the meaning of disability and educational issues (e.g., segregation vs. inclusion) for SWDs (Brookfield, 2017; Fook, 2007; Shandomo, 2010). Students' beliefs or social position can influence how they construct and act upon knowledge in professional practices (e.g., including children with disabilities in general physical education). Moreover, it assists them further in viewing teaching as a complex act. Finally, it enables them to look for more innovative methods to resolve educational issues they confronted during their social practices (Kim, 2013).

## 3. Methods

A qualitative intrinsic case study design guided by an interpretive perspective was undertaken in this study. Stake (1995) categorized it into intrinsic-to learn about a particular phenomenon; instrumental-to foster broader recognition of an issue; and collective-to study multiple cases simultaneously or sequentially. Since this study focused on understanding a particular phenomenon, namely how PETTs understood and constructed the meaning of disability and inclusion in the course designed by a situated learning approach, the intrinsic case design was appropriate to explore their perceptions (Baxter & Jack, 2008).

### 3.1 *Context and participants*

The researcher, who was the introductory APE course instructor, re-designed the course with a series of situated learning experiences. The teacher trainees took part in a series of sequential situated activities, such as disability simulation, media analysis, book reflection, CSL, panel discussion, and disability presentation, to gain knowledge of disability and inclusion in physical education. At the end of each situated activity, they examined their assumptions on disability and inclusion through in-class discussion and reflective writing (see Table 1).

The author invited students who took the course at the end of Fall 2016, and four trainees (all Caucasians) agreed

to involve in this case study. Hope (age 24, Female) and Faith (age 32, Female) enrolled in the post-bachelor teaching licensure program. Kevin (age 21, Male) and Rose (age 21, Female) were in the final year of initial teacher preparation. Hope, Faith, and Kevin took the method course of elementary (primary) physical education concurrently, whereas Rose completed it the previous semester. All of them practiced teaching elementary physical education (Kindergarten to year 5) at a local school district when they took the course elementary physical education (i.e., inclusive classroom) and the introductory APE course (i.e., segregated classroom). All participants read and signed an informed consent form with prior approval from the institutional review board. The author assigned a pseudonym to all participants to protect their identity and confidentiality.

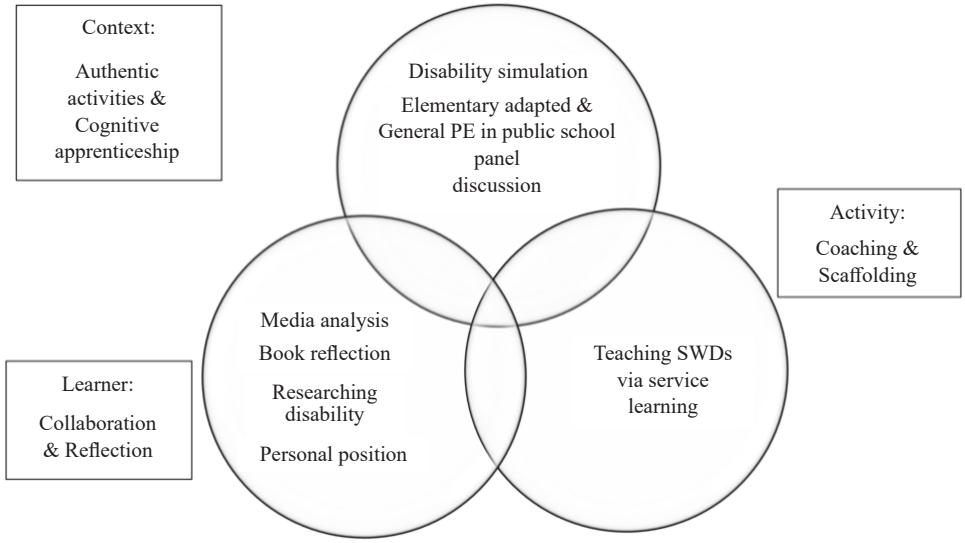


**Figure 2.** Application to adapted physical education course

## 3.2 *Data collection*

Multiple data sources were gathered, including semi-structured interviews (30-60 minutes, one session), trainees' reflections (book, media analysis, CSL weekly journals, and simulation exercise), a pre-course survey with participant's profiles, photos, and field notes. The primary data source was a face-to-face interview conducted with each participant at the end of the course. All interview sessions were audio-recorded and transcribed verbatim. The interview questions were developed by referring to existing literature, theoretical frameworks, and research questions.

Sample questions included: 'Tell me about your overall learning experiences in this course', 'What was the most and least meaningful experience to your learning about disability and inclusion or inclusive education?' 'How do you define disability?' 'How do you describe inclusion in physical education?' 'How do you perceive teaching SWDs in GPE?'.

The teacher trainees also engaged in reflective activities on conceptualizing disability and inclusion throughout the course. They all submitted reflection papers at the end of the learning exercise. The author also collected artifacts (e.g., photos, work samples) and field notes as supplementary data to verify participants' accounts during their interviews. The author took descriptive and reflective notes, such as insights/feelings concerning the settings and practices, interpretation of the events that occurred, and program needs, after each session in the field notes (Patton, 2015).

## 3.3 *Data analysis*

The researcher analyzed the data using thematic analysis (Braun & Clarke, 2006; Stake, 1995). First, she

familiarized herself with the data by listening to the audio-recorded interviews and making notes on the transcripts. Second, she re-read the verbatim transcripts, highlighted sentences and phrases, and generated preliminary codes. Next, she organized the participants' narratives according to each code and searched for themes by sorting the codes. Then, she reviewed the data to uncover the meaning and importance of participants' experiences by categorizing the words, phrases, and sentences. Finally, the researcher interpreted the findings and made assumptions about participant perceptions. She also read supplementary data repetitively to verify thematic statements.

**Table 1.** Course design with situated learning approach

| Concepts | Learning activities | Dimension |
|---|---|---|
| Authentic activities and Cognitive apprenticeship | Disability simulation (Week 3 to 4)<br>- Experiencing disability through daily life activities and creating disability awareness activities for K-12 students | Context |
| | Adapted and [†]inclusive physical education for students with and without Autism Spectrum Disorder (ASD) at a local elementary school (Week 6 to 13)<br>- Roles: Teacher and paraeducator<br>- Performance: Observation, assessment, planning & teaching | |
| | Panel discussion<br>- School personnel (special education teacher, general physical education teacher, adapted physical education teacher, and physical therapist) (Week 10)<br>- Parents of children with disabilities (Week 12) | |
| Collaboration and reflection | Media analysis<br>- In-class discussion to examine the meaning of disability and inclusion through *Educating Peter* (Wurzburg, 1992) and *Including Samuel* (Habib, 2007) (Week 2)<br>- Out-of-Class activity: Watch and reflect the issues emerged from the documentary, *Autism: the Musical* (Regan, 2007) (Week 8) | Learner |
| | Book reflection (Week 9)<br>- Read a book, *From disability to possibility: The power of inclusive classrooms* (Schwarz, 2006) and critique own assumptions of disability and inclusion. | |
| | Disability presentation (Week 9, 11, 13, 14, 15)<br>- Researching and presenting a categorical disability to the class | |
| | Service-learning and reflection (Week 6 to 13)<br>- Engage in the process of collaboration by sharing insights and evaluating peer's performance via debriefing session<br>- Journaling SL experiences weekly | |
| Coaching and scaffolding | Teaching a self-contained classroom via service-learning (Week 5 to 13)<br>- Elementary APE class every Wednesday (40-minute lesson)<br>- Observed in-service teachers' practices (week 6), assess students' skill level (week 7), and then students rotate to take the lead teacher role to teach class in each week (week 8-13).<br>- Course instructor and in-service teachers (special educator, adapted physical educator) become a facilitator/mentor to provide a guidance/assistance to plan and teach the class. | Activity |

[†] Teaching practicum offered in the course of *Elementary Physical Education Method and Instruction*.

## 3.4 *Trustworthiness*

The criteria used to evaluate the quality of this study were credibility, reflexivity, and resonance (Tracy, 2010; Zitomer & Goodwin, 2014). Credibility was achieved through member checking with the participants, prolonged engagement in the social context (i.e., teacher education, teaching in public schools), and multiple triangulation (theories, data sources, and methods). In addition, all participants reviewed and verified their interview transcripts. Reflexivity, the researcher's sensitivity to the research context and its process, was addressed by articulating theoretical perspectives

and engaging in self-reflective journaling throughout the research process (field notes) (Zitomer & Goodwin, 2014). Finally, resonance, 'the researcher's ability to reverberate and affect an audience' (Tracy, 2010, p. 844), was ensured by describing situated practices used in the course. Thus, readers can broaden their understanding of teacher trainees' participation in situated activities and learning of disability and inclusion in PE.

## 4. Findings

Three major themes emerged from the data: (a) The power of authenticity in learning, (b) Beyond empathy: accepting human differences and (c) Inclusion as an integral part of education.

### 4.1 *The power of authenticity in learning*

The first theme represents the practicality and the influence of authentic activities on teacher learning. The teacher trainees perceived that all course activities worked well together to gain disability knowledge, understanding SWDs, and the meaning of inclusion. They enjoyed teaching and interacting with the SWDs and professionals at a public school. They perceived service-learning in the public school as the most instrumental activity in improving their learning because they could recognize the learner and the context of physical education practices. Hope said, "… getting that hands-on experience was helpful. I need to see it and try it out a couple of times before I get it." Kevin also favored working with the children at a public school to understand the learner's performance and their reactions to the physical education lesson delivered each week.

> I like the fact that we were paired individually with students. That worked well because we could focus and see all the tendencies, how they were, and their reactions to certain situations. We taught as a group; one person led, but everybody else was [paired with a child]. We were almost like teacher assistants, which was nice. When you [course instructor] took over my student the day that I taught the class, I could see how he interacted with you. I could also pay better attention to everybody else and how their students responded to a lesson and vice versa. I thought it was nice to see both sides of that spectrum.

Rose also appreciated the role-playing experiences (i.e., being a teacher and an assistant) at the public schools that facilitated her learning about the learners and the context.

> Because when you teach all of them [SWDs], you do not get to focus on them. That's why I liked to do rotations [role-play]. You got to focus on the lesson you were doing [when teaching the class], and then you got to work with your student [and] get to know them more. So, when I taught, it was scary. But I enjoyed it and learned a lot by doing that.

Faith stated that one-on-one teaching experiences facilitated her to internalize the teacher's role, making students experience success. In addition, she seemed to make sense of the need for adaptation (e.g., changing activities).

> I liked one-person teaching [the lesson], and everybody was working with a student. You got more of the interaction. I felt you got more one-on-one time with a student to learn them. They [SWDs] can do the stuff at a different pace or level. You have to learn how to adjust it [activities]. I always knew that they wouldn't be able to do it like the other kids [would do] but learning how to change [activities] makes them feel successful and know they've been successful.

Kevin also mentioned how he adapted his practice of teaching for SWDs.

> [I am] learning ways to manipulate the environment. Students with autism… they're sensory. Everything's very bright and vivid, and they get overloaded. I've tried to dress down, dark color clothes. I don't use whistles or play music. When necessary, do not allow students to holler and scream.

In the meantime, the teacher trainees believed the CSL led them to confront uncomfortable situations. One common challenge they encountered was a child's unresponsive behavior during the lesson, so they sought help from the classroom teacher or paraprofessional in coping with the situations. Hope stated:

> The challenges I've had were getting Tony to do [participating in the activities] because if he didn't want to do it, he would just sit down and not do it. So, it's trying to figure out and get him to do [activities]. I finally had to get his teacher, Ms. Amanda [and] asked her how I needed to get him to do [activities].

Kevin acknowledged the significance of human resources in class when teaching a lesson in an inclusive setting.

> In the inclusion setting, I had twelve other general education kids I needed to keep engaged while I felt the need to help guide my student with a disability through the lesson. When you don't have that teacher's aide helping you along, stop and take time to talk with the student with a disability. Your other kids are waiting around for further direction. That was the biggest challenge.

The authenticity of learning opportunities in the course seemed to support and expand the teacher trainees' learning beyond practical knowledge (e.g., instructional strategies). After the activities of simulation exercise, media analysis, and book review, they distinguished the struggles of SWDs in physical education programs and how teachers' position and attitudes toward SWDs can influence students' learning. Hope said:

> I think all the movies we've watched have been so helpful because you see the world through their eyes. I feel people don't understand what others are going through. With autism, you have to remember that stimulation can be overwhelming, shutting them down. So, you have to make sure to keep that stimulation under control. With Down Syndrome, you keep refocusing them because they're capable of doing it.

Kevin sensed how individuals with disabilities would feel and need when exercising in public after completing the disability simulation.

> I made the loss of a limb. At first, I was uncomfortable, especially in a public setting, but then that made me realize that's probably how somebody else feels, whether from birth or an accident. I'm sure they [people with disabilities] struggle at first, 'I don't know if I can do this', but they see success, and then it just builds confidence and self-esteem. I had somebody with me while I was doing it, encouraging me. That's the same way somebody with a disability. When they have a teacher, give them encouragement and positive feedback. It makes them feel better about their situation.

In addition, the teacher trainees sense the broader social and institutional issues other than teaching strategies, such as advocacy, patience, problems with labeling, and educational rights. Rose said, "labeling is not right. We should not define anyone by their disability because we want to see who they are as a person." Faith expressed in her book reflection: 'if these students are treated as helpless, how are we expect them to grow up to be well-contributing citizens to our society? Many of these students are very capable of learning…but we are not helping them accomplish.' Kevin also wrote in his book reflection:

> The label has destroyed opportunities and caused segregation. The truth is that all students have their own differences. Even students labeled with the same disability have differences; therefore, they have different needs. Once we get rid of labels and begin to look at the student, we begin to see what each student needs to succeed.

The teacher trainees reflected on real-life situations that helped enrich their understanding of SWDs, the contextual issues (e.g., teacher's roles, expectations) in teaching, and institutional/social issues (i.e., use of a label, advocacy, educational rights). It also enabled them to remark on the whole picture of the practices and think beyond the knowledge attained from readings and lectures in the classroom.

## 4.2 *Beyond empathy: Accepting human differences*

*Beyond empathy: Accepting human differences* illustrates how the teacher trainees understood the term *disability* and shows their transformation conceptualizing the meaning of disability. At the beginning of the course, the teacher trainees portrayed *disability* as one's limitation. Faith is identified, as "limited in their ability to complete everyday skills/activities." Rose stated, "anything that hinders or limits one's abilities physically, cognitively, socially, or emotionally." According to Kevin, it is "any psychological, physiological, or physical impairment that affects performance in everyday life." Hope also defined it as "a physical or mental disability which limits them in their life."

However, as the course progressed, their views seemed to shift away from an individual's deficiency and illustrated it with the word "differences" or "having different needs" when referring to the SWDs. They also addressed it as "one's uniqueness" and "individual learning needs." Kevin said, "the most important lesson I learned is that everybody is different; every disability is different, and you have to be open to new ideas and new ways of doing things." Faith also described,

> That would be anything that keeps someone from doing a job or performance or something the way I guess most people would do or being able to do it the proper way. They just can't do it exactly the way people normally do it.

The teacher trainees even questioned if it is the proper name to call when representing someone with different abilities. Hope disagreed with using the word *disability*.

> [Disability is] something that makes it harder for you to do certain things. Now, I hate it. I don't know if I like the word disability anymore because it's not a disability; it's how their life is. It's the way their mind works, and it's how they're wired. But I just don't like the word disability anymore. It's something that restrains you from having…work a little harder than everybody else. They're different. They look different.

Rose echoed:

> It makes me not like to use the term 'disability' anymore. A lot of the kids don't understand that they're different. They don't see it as a disability. A lot of things… I don't think are a disability because they can still do stuff and are a lot smarter than us in certain ways. I believe they are wired differently.

Kevin even paid attention to environmental variables that might affect a child's learning when explaining disability. He distinguished the learner's needs, not their deficits.

> Now, I truly understand that every child is different. I see things such as the environment and routine are essential. Children with autism have overwhelming senses; therefore, bright lights or loud sounds can inhibit learning. I have learned that students with autism need their routines, or it throws their whole day off. These students need picture cues, short verbal cues, and prompting to learn new skills. These are all things that I knew very little about before I experienced them hands-on. Now I know that these students are like their general education peers.

Initially, the teacher trainees viewed *disability* as an individual's limitation because they paid more attention to one's functioning. However, they discerned SWDs could perform required tasks successfully when they received appropriate support and resources while learning in the programs. It resulted in the teacher trainees' perceptual transformation toward *disability*, believing that it is not about students' deficiency but about accepting one's differences.

### 4.3 *Inclusion as an integral part of education*

The last theme, *inclusion as an integral part of education*, implies the teacher trainees' perception of inclusion and how they position it with teaching SWDs in physical education programs. All but Rose took the method course of elementary physical education in the same semester, and Rose completed the same course in the previous semester. As a result, they were involved in planning and teaching physical education in an inclusive setting at a local public school, which enabled them to learn and practice inclusion in physical education and its culture related to the instructional environment. Rose portrayed inclusion as making everyone partake in the activity, be accepted, and feel a sense of belonging.

> I realize that it makes them [students] feel they're like everyone else, and they can do everything. They do not just want to be included but be doing something. I understand inclusion better. It was hard for me to think of things [before], but now I realize there's so much more you can do than change the texture of the ball or something. You can make different activities easier for them to be included with everyone else.

Faith expressed,

> Inclusion would be finding a way to get the students to participate and do the same activity with modifications. In the beginning, I was like, 'I just don't understand how you can put those students together.' Now I'm okay; you can do it. You need help, but it can be done. Now that being able to see it [in public school], it happened. Don't push anybody to the side just because they are in a wheelchair, autistic, or have Down syndrome; bring them in and treat them like you would do anybody else and help them where they need help.

The teacher trainees also considered that more benefits are offered in an inclusive environment than in a segregated program concerning everyone's learning and development. Rose recognized students' cognitive and social benefits in inclusive programs. In addition, she spoke, "it helps everyone's understanding of people with disabilities and gives these students more interaction." In Hope's view, having SWDs in an inclusive environment not only helps SWDs but also supports everyone's learning, including teachers.

> Inclusion is making sure everybody feels warm and welcomed in a group. I think the benefits of inclusion are so much better. It's not just the exceptional children [children with disabilities] that benefit; the general education kids benefit too because they learn patience. I think inclusion so outweighs self-contained because it helps both sides. The exceptional children get a little more out of it because they develop friendships with the

general education kids. I used to think that self-contained was the way to go, but now I'm not. Inclusion is the way to go.

Kevin also believed that everyone, including teachers, could have a better learning opportunity through inclusion.

I perceive it as a challenge and a pleasure to have those kids in [general physical education] because you're making them better students, but they're making you a better teacher. I felt like it benefits the student more in the inclusion setting far as self-esteem and self-perception and assimilating the other students to know what it's like to have a peer with a disability. When teachers and students accept having peers with disabilities, the learning environment improves. The short amount of time I worked with students with disabilities changed me. Back then, I did not understand the damage to their future.

The teacher trainees corresponded to the concern that teaching SWDs in an inclusive setting was challenging because of the environmental (e.g., class size, music, lack of space), personal (e.g., different levels of performance), and social factors (e.g., administrators' support). However, they acknowledged that SWDs have a right to learn in an inclusive setting, so it should not be a privilege to be earned to get into the general physical education program. Teachers should be the ones who make inclusion possible in physical education, not the students. They also considered that inclusion would afford better learning opportunities for everyone to develop their knowledge and skills.

## 5. Discussion

This qualitative case study investigated physical education teacher trainees' learning experiences in the introductory adapted physical education course designed with a situated learning approach. Specifically, it focused on describing the influences of situated activities on their conceptualization of disability and inclusion. Teacher trainees deepened their understanding of disability and inclusion in physical education through participating in social practices, which are sequential situated activities (e.g., disability simulation, media analysis, book reflection, CSL, panel discussion, and disability presentation). In addition, a re-designed course with interconnected dimensions-context, the learner, and activity-facilitated broadening and transforming their learning of disability and inclusion. They used discourses of differences when referring to individuals with disabilities, acknowledged the possibility of student learning in an inclusive program with the teachers' support, and valued the inclusive setting as the context for students' socialization (Gabel & Connor, 2014; Grenier, 2010; Schwarz, 2006).

The CSL was perceived as the most meaningful experience in teacher learning compared to other activities. The teacher trainees appreciated the opportunity to interact with SWDs in real-life situations by instructing the lesson (being a teacher) and teaching the child (being a paraeducator). Particularly, role-play experience during the CSL was valued as similar to the findings of An (2021). It enabled building a child-teacher relationship, which improved student learning and recognizing the significance of paraeducators' roles in a classroom to make inclusion successful (Cooks et al., 2004). The PETTs were pleased to have it in the rotation because it helped lessen their emotional tension as newcomers to the Community of Practices (CoPs). In addition, the role-play facilitated them to gain related aspects of teaching (i.e., the learner, environment, and task) and share ideas and insights with their peers and school personnel, becoming a full participant in the CoP (An, 2021; Leaman & Flanagan, 2013; Wolfson & Willinsky, 1998).

Besides, active participation in authentic activities supported the teacher trainees to increase their understanding of the institutional and social issues affecting the lives of individuals with disabilities, particularly the problem of using a label, advocacy to include in school, and student development (Rogoff, 1995). It further helped them recognize the teacher's qualities and roles (e.g., patience, professionalism, motivator, advocator), which implies constructing their identity (An, 2021; Wenger, 1998). Listening to the stories from the teachers and the parents of children with disabilities (panel discussion) also helped them understand the need of building parent-teacher partnerships to improve student learning. They also considered documentaries regarding inclusion or disability as helpful resources to expand their learning to social and cultural dimensions because it shows the struggles and achievement of individuals with disabilities through their eyes and narratives (McKay et al., 2020).

The teacher trainees' initial view of disability was limitation and impairment, representing a deficit perspective (Grenier, 2010). As the semester progressed, they continuously used the word-*difference* more instead of *restriction*. They rejected the notion of an individual's incapacity or deficiency. Rather, they understood and accepted it as a natural

phenomenon that everybody has different needs to learn. SWDs can perform and achieve if they receive proper support to accommodate their learning needs (Gabel & Connor, 2014; Grenier, 2010). The teacher trainees further criticized disability as an unfitting language to use. Their accounts support the previous literature that implies disability as a concept constructed by societal norms or values (Grenier, 2010; Zitzelsberger & Leo, 2016).

Lave and Wenger (1991) stated that 'learning is an integral part of general social practice in the lived-in world' (p. 35). The teacher trainees' view of inclusion has transformed through their engagement in real-life situations. For example, they taught SWDs in the segregated and inclusive programs, interacted with professionals and parents of children with disabilities in the panel discussion, experienced disability in public places (i.e., disability simulation), and learned inclusion through media (i.e., documentary films), book and elementary method course. They did not consider disability as a factor to determine whether it should include students in the GPE program, similar to the findings from the previous literature (An, 2021; Grenier, 2010). Instead, they described inclusion as accepting everyone to the program and allowing them to take part in the activities with the support of their peers to learn and develop. They all agreed on the notion illustrated by Schwarz (2006) that it is not a privilege to be earned by one's ability. The teacher trainees perceived that teaching SWDs in an inclusive setting is crucial for their development and other members of the program-students without disabilities and teachers (e.g., patience, friendship, self-esteem, role modeling awareness of SWDs).

In conclusion, findings revealed that the teacher trainees' conceptualization of disability and inclusion has evolved through their engagement in socially situated activities. They developed their view into consideration of social relationships and cultural influences. They perceived the utilization of multiple forms of active learning, including the CoPs, as the most enjoyable and meaningful experiences to widen their knowledge and skills. Reflections on a book, media, simulation, and CSL were the most demanding but fulfilling experiences concerning their learning. It kept their interest in learning and facilitated them to articulate their view. This finding highlights the importance of linking situated learning when preparing teacher trainees. Without having the chance to construct their understanding of disability and inclusion within sociocultural contexts (i.e., public schools), the learning of teacher trainees may limit to getting technical knowledge, such as symptoms and attributes of impairments and teaching techniques for SWDs.

This case study has two limitations. First, the sample in this study only included four teacher trainees representing 50% of course enrollment and one racial group (Caucasian) which may limit to capture of broader and more diverse perspectives. Second, it only exposed teacher trainees to elementary-level children with ASD during the CSL experience and practicum because of the institutional organization of the special education program at a local school district. The school district adopted a continuum of instructional placement, so students' diagnosis was used to group a self-contained classroom (e.g., ASD, moderate intellectual disability, severe intellectual disability). Therefore, further investigation is required to include secondary level students and a wide range of disabilities to broaden our understanding of the teacher trainees' learning for disability and inclusion.

## Funding

This work was supported by the Society of Health and Physical Educators (SHAPE America Research Grant), U.S.A.

## Conflict of interest

The author has no conflict of interest to declare.

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