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Including Students with Disabilities in a Physical Education Teacher Preparation Program: An Institutional Perspective

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Abstract

The increasing number of students with disabilities who have the goal of becoming a teacher in either elementary or high school is one of the challenges we are currently facing at the academic colleges of education in Israel. In this chapter, we address the inclusion challenge, namely how we have taken up the challenge to modify one existing teacher preparation program (TPP) in physical education (PE) to enable students with disabilities to study at the same level as the other students who are enrolled in the program. The chapter is composed of four sections. In the first section, we introduce the term *inclusive education*, elaborate upon its concepts, and highlight a number of developmental phases associated with this term. In the second section, we present the theoretical background and the practical frameworks of an inclusive pedagogy. In the third section, we describe a number of actions taken in one college that enabled students with disabilities to enroll in a PE TPP. In the fourth section, we conclude our discussion and provide a number of ideas for future research, in order to strengthen the understanding of how to integrate students with disabilities in PE TPP.

Keywords: inclusion, students with disabilities, teacher preparation programs, physical education

1. Introduction

Inclusive education is based on the fundamental right of all learners to quality education that meets their basic learning needs, encourages their personal development to the fullest extent, and considers the diversity of backgrounds and abilities to be a learning opportunity rather than a barrier [1]. Inclusion as conceptualized today has its roots in the “Normalization” movement of the late 1960s and early 1970s, which advocated community inclusion primarily for individuals with intellectual disability [2, 3]) and their subsequent “mainstreaming” or “integration” into the general education systems. The main disadvantage of “integration” was that the physical placement was not accompanied by organizational support within the general schools or by significant changes in its content and teaching practices. The term “special education” was replaced by the term “special needs,” but another gap had yet to be bridged—that is, of the philosophical change from welfare to human rights-centered services [4].

The development of inclusive education was highlighted by the Salamanca Declaration on Education for Children with Special Needs [5], which asserted that inclusion in regular schools is the most effective means of combating discrimination, supporting education for all, and building an inclusive society. More recently, the United Nations Convention on Rights of Persons with Disabilities (CRPD) [6], where in Article 30.5 the rights of children with disabilities to be provided with PE as well as informal sport activities are clearly articulated, has been mandated and as of 2017 signed and ratified by 175 nations [7]. Specifically, Article 30.5 of the CRPD mandates (a) facilitating participation of individuals with disability in mainstream (inclusive) sport events; (b) ensuring the development, training for and participation in disability-specific sporting and recreational activities; (c) ensuring access of individuals with disability to sport and recreation venues; (d) ensuring that children with disabilities have equal access with other children to participation in play, recreation and leisure, and sporting activities, including those activities in the school system; and (e) ensuring the provision of (mainstream or specific) sport and leisure services to individuals with a disability.

In adhering to these specifications, the CRPD is very clear about ensuring participation in both inclusive and separate types of physical activities across the life span, with a particular emphasis on schoolchildren. More recently, the UNESCO published a statement acknowledging that inclusive, adapted, and safe opportunities to participate in PE must be provided to children with disabilities [8].

The knowledge base for including children with disabilities in adapted PE, where children with disabilities are educated within regular or separate classes utilizing adapted frameworks of curriculum development and teachers' practice, has evolved since the 1950s, mostly in the United States [9]. Based on the experience gained among teachers and scholars, theoretical and practical recommendations have been developed and practiced in many schools across the United States and Canada, leading to the establishment of the International Federation of Adapted Physical Activity (IFAPA) in the mid-1970s [10, 11] and the research journal *Adapted Physical Activity Quarterly* (APAQ) in the mid-1980s. With this support of international governing bodies, and the formation of a theoretical knowledge base (e.g., [12–14]) and practical guidelines (e.g., [15, 16]), the trend toward inclusive education has increasingly been advocated by educators and scholars worldwide (e.g., [17]).

Inclusive pedagogy is understood in this regard as enabling all children to participate in school and to follow normative goals [18]. Moreover, according to Loreman and Deppeler [19], it is not enough to accept children with disabilities in a general class; they are expected to be welcomed and wanted by their peers and the staff, including the teachers and administrators. This makes the issue of staff attitudes extremely important, and the training of teachers toward inclusion an essential and mandatory practice.

Indeed, even if teachers demonstrate good intentions, they often feel inadequately trained to meet the demands of an inclusive classroom. PE teachers have been documented as being particularly vulnerable to safety and control issues associated with including students with disability in their classes (see [20]) and have been reported to exhibit less favorable attitudes toward the inclusion of students with physical, sensory, or intellectual disabilities (see [21–25]). No specific frameworks for promoting inclusive education within the PE domain have been proposed, but the general principles for teachers' empowerment proposed by the European Agency for Special Needs and Inclusive Education [26], and based on a multinational European Union's Teacher Education for Inclusion (TE4I) project, provide good starting points. The TE4I report [27] on challenges and opportunities of inclusive education states that "the vision of a more equitable education system requires teachers equipped with the competences needed to meet diverse needs" (p. 78).

2. Theoretical background and practical frameworks of an inclusive pedagogy

To facilitate better groundwork and commitment of the educational staff, a number of frameworks have been proposed for structuring the main pillars of the inclusive approach. For example, Downs [28] utilized a Delphi approach, and semi-structured conversations with a range of practitioners and policymakers, in looking for common words that were used across participants responding to questions such as “What does inclusion mean to you?” Downs generated seven pillars of inclusion, access, attitudes, choice, partnerships, communication, policy, and opportunity, and provided an online webinar-type resource and associated checklist for the use of organizational stakeholders specified for each pillar.

Downs’ framework was adopted by Woods [29] for introducing an inclusive swimming framework. While Downs’ seven pillars may be very helpful for community organizers, club managers, and sport association officers, they are less applicable to the educational framework. However, some of Downs’ pillar descriptors are also presented within one of the most cited models—Loreman’s seven pillars of support for inclusive education [30]. In the following part, we describe these and additional pillars and their relevance to inclusion in PE.

2.1 Loreman’s pillars

Loreman’s seven pillars [30] are an example of how successful inclusion should be implemented. The analogy of “pillars” has been selected to reflect different contributing factors, which are interdependent and essential, for securing effective inclusive education. In the following sections, these pillars are outlined, with an emphasis placed on their implementation in PE. The seven pillars are as follows:

2.1.1 Positive attitudes

Negative attitudes toward inclusion are associated with reduced achievement expectations from participants with disabilities and, particularly in PE, a tendency to facilitate their absenteeism, leading to a significant number of students with disability who partially or even completely avoid participation in PE [20]. Changing the negative attitudes of PE teachers toward inclusion is challenging due to a number of reasons, including but not limited to a lack of knowledge on disability, an apparent conflict between the wish to increase performance of the whole class and to support the individual with disabilities, the environmental constraints on attention when teaching in an open space, and the need to provide additional safety precautions to reduce injury risk [31].

2.1.2 Supportive policy

The international supportive policies with regard to inclusive physical activity have been discussed earlier. However, in the United States it is up to every state—and sometimes even the educational region—to specify the regulations supporting the development of inclusive frameworks and enabling increased participation of youth and adults with a disability in physical activity. The case of a high school wheelchair athlete, McFadden versus the Howard County (Maryland) Public School System, is an example of a struggle for a human rights supportive policy led by a student with a disability and her mother, requesting that she be entitled to compete against athletes without a disability on the same track and at the same time. The success of this case led to changes in interscholastic sports regulations in many regions in the United States [32].

2.1.3 Evidence-based school and classroom processes

A range of supportive and adaptive processes exist that facilitate teaching and training students with disabilities within inclusive physical activity conditions. Such processes have been labeled with acronyms, for example, TREE, teaching style, rules, equipment, and environments modification [33]; SEMA, Systematic Ecological Modification Approach [34]; ETAT, Ecological Task Analytic Teaching in the United States [35]; and STEP, space, task, equipment, and people [36], and are used to support knowledge-based rather than intuitive decision-making when planning and performing inclusive activities.

However, only limited research has been conducted thus far on the abovementioned processes in support of one or another adaptation process and/or modality. One of the very few examples of such research is the study of Kalyvas and Reid [37], who measured performance and satisfaction of different groups in school-aged children, with and without disability, who participated in Newcomb volleyball with and without additional adaptations (e.g., using a large balloon-type ball or serving from a shorter distance), and found that adaptation improved performance in both groups of children—those with and without a disability—and that satisfaction of the children without a disability was related to their age. The older children were less satisfied with the adapted conditions. Further research is warranted to address evidence-based adaptation practices.

2.1.4 Flexible curriculum and pedagogy

Contemporary educational institutions have been criticized for presenting too much teacher-centered instruction and for striving to demonstrate norm-referenced “outcomes” rather than educational processes [38]. Within this frame of reference, providing support and adaptation coming from the flexible knowledge base of practitioners specializing in teaching students with disabilities can contribute to the class climate and benefit educational processes within the class, such as engaging with small groups and peer tutoring [39]. The specific practice of opening supportive and adaptive practices for all has been acknowledged as the universal design-for-learning approach [40], which has been developed as an adaptation of the universal design approach in architecture [41], and has been recommended for inclusive PE [42]. Basically, this approach requires (a) providing multiple representations of content, for example, utilizing visual teaching aids in addition to verbally explaining and physically demonstrating; (b) providing multiple options for expression and control, such as using self-determined goals and performance criteria in addition to normative criteria; and (c) providing multiple modalities for engagement and motivation, such as peer modeling and cooperative play, in addition to competition.

2.1.5 Community involvement

Schools are a societal instrument; they provide knowledge, competencies, and skills required for later community involvement and for engaging in a productive lifestyle. For this purpose, schools are expected to connect with the community and embrace cross-lateral links [43]. Parents of children with disability, athletes representing sport clubs for individuals with disabilities, and additional community stakeholders may contribute to children’s understanding of and attitudes toward inclusion. The Paralympic School Day activity or Special Olympics School demonstrations are good examples of such community involvement and were found to have a positive impact on attitudes (see [44, 45]).

2.1.6 Meaningful reflection

Reflective practices are among the most important tools for teachers' self-development and include writing journals and portfolios and using systematic observations and field notes [46]. However, there are very limited means for utilizing such tools within the inclusion framework, particularly in the PE domain where disabilities are not limited to learning and/or behavioral deficiencies but rather to a broad range of physical, sensory, and mental issues that may significantly change performance goals, patterns, and contexts. For example, a student with a neurologic impairment of the lower limbs, who may be able to walk with crutches, might need a racing wheelchair in order to conform with both the developing aerobic endurance goals and rules for participating in school track competitions. Therefore, the teacher's reflections should consider such individualized activity and participation modification options.

The Systematic Ecological Modification Approach (SEMA; [34]) is a task-analytical teacher's reflection tool, providing guidance throughout the journey of inclusive practice. This approach (a) considers goal-setting with regard to the three domains of the World Health Organization's [47] International Classification of Function and Disability, (1) functioning (having the capacity to perform movement tasks), (2) activity performance, and (3) participation (in the activity tasks); (b) analyzes expected performance criteria for the typical student; (c) estimates the differences observed in the included student's performance and the potential reasons for the observed gaps, which may be considered as both personal and environmental barriers; and (d) proposes adaptations of the task performance patterns, environmental conditions, equipment used, rules of the activity, and/or instruction modalities. Utilizing such a systematic reflective tool has been found to reduce the likelihood of the biased intuitive decision-making often utilized by teachers and administrators to reduce complexity during the inclusion practice [48].

2.1.7 Necessary training and resources

Due to the high variability and specificity of different students with disability, many teachers feel inadequately trained and not competent enough to meet the demands of inclusive education [19, 49]. This is common also in the case of PE [50], and therefore pre-service or in-service training is necessary. Such training requires not only delivering factual information and knowledge about students with disabilities but also being focused on developing a positive attitude toward the inclusion process.

According to social learning theory, attitudes are strongly related to self-efficacy—that is, the perception of control and competence with regard to pursuing an activity toward a phenomenon—and therefore inclusion training should develop a sense of either physically or virtually experiencing inclusion contexts and controlling their outcome. In a recent article, Block and associates [50] reviewed and summarized a number of teacher preparation processes, including (a) providing simulations of disability conditions while attempting to perform various physical activities; (b) infusing disability-related contents across core curriculum studies; (c) participating in on-campus and off-campus practicum sessions; (d) obtaining online courses for those who lack the time to attend frontal classes; and (e) confronting participants with decision-making situations while in group settings, rating potential responses, and discussing the choices for reducing bias and facilitating informed decision-making.

2.2 Inclusive assessment

In addition to the seven pillars postulated by Loreman [30], an additional context of teachers' practice appears to be of significant importance—students'

assessment [51]. Assessment is important for the school system as a way of screening students' performance at different schooling levels and as a buffer for moving between systems [52]. However, assessment also provides a measure for self-evaluation, supporting the student's motivation for learning [53]. School assessment typically includes both quantitative and norm-referenced data, which are not helpful in the case of inclusive education, where individualized motor patterns of the students with disabilities are not expected to conform to the quality criteria expected in the normative population. For example, quality criteria recognized in the test of gross motor development are based on patterns which may not be meaningful for children with impaired or amputated limbs [54]. Furthermore, normative scores utilized for assessing physical fitness criteria are not applicable to individuals who may not even have the capability to propel cycling equipment or move their legs on a treadmill. Therefore, teachers are challenged with the task of developing individualized baseline-referenced tools which can be utilized for students with and without disabilities, as well as for teachers.

While developing an assessment framework, educators need to be aware of the following recommendations for policymakers and practitioners [55]: (a) assessment procedures should be relevant and adapted to accommodate students' special needs; (b) resource allocation should not only be based on initial assessment but also on ongoing assessment; (c) assessment should not only measure deficits, but also strengths, and should encourage service provision within the general framework; and (d) curricula and programs should encourage learning process-based goals and needs rather than content-led and/or driven goals.

2.3 Mentoring

One way to cope with the uncertainty about curricula and practice created through the inclusion process is to receive supervision or mentoring from experienced professionals. Processes of this kind may include dialog sessions, reviews of situations, decision-making scenarios, and work plans, providing the supervised or mentored teacher with guidance, advice, and sharing of responsibility [56]. Typically, mentors could be experienced teachers with hands-on experience, who can answer questions, suggest alternatives, and evaluate choices together with the mentee and support his or her reflexive process. However, in most countries the number of such professionals is very limited. Furthermore, research from Turkey, where an inclusion reform has occurred in education services during the last two decades, reported a negative correlation between attitudes toward inclusion and age or time teaching [57]. This has been suggested as reflecting the lack of administrative and societal support for inclusion prior to the reform. Therefore, another source for mentors is warranted—this could be individuals with a disability who provide their life experiences from an expert position—and therefore in addition to coping with a lack of knowledge, they also support reframing attitudes [58].

2.4 TPPs in PE

While teacher education for inclusion is a “hot topic,” instigating various projects, reports, and discussions (e.g., [26]), very little has been documented thus far about inclusion of teachers with disability within TPPs and particularly in PE TPPs [59, 60]. A content analysis of the literature on inclusion processes of students with special needs in TPPs indicated that most studies have focused mainly on two aspects—attitudes toward inclusion and the changes/modifications required in TPPs so that the special needs of the students are considered. For example, in one study [61], 125 pre-service elementary, secondary, and special education teachers

were interviewed in order to identify aspects of university coursework and assigned field experiences that contribute to their ability to implement inclusion. One of the main findings of this study revealed a lack of consistency across TPPs within one university and a disconnectedness between the knowledge of inclusion as presented through the university coursework and the students' real-world field-experience observations of inclusion.

In another study [62], one TPP that prepared both single- and dual-certification master's students to teach in inclusive classrooms was reviewed. The researcher reviewed the context of the program in which, and for which, the program was designed, explained how the program was developed, and provided a description of the program.

Unfortunately, only very limited evidence exists thus far for examining aspects of inclusion processes of students with disabilities in TPPs aimed at preparing these students to be PE teachers. Furthermore, in spite of considerable research and a number of recent systematic reviews on attitudes and perspectives of PE students and teachers toward inclusion [63–68], “there is a need to bridge the intention/behavior gap that still exists in the research on inclusion of children with disabilities in PE” ([68], p. 330).

3. Inclusion in a PE TPP

The development of TPPs began in Israel more than a hundred years ago, with a gradually increasing volume and content of teachers' education, instructional skills, and competency. TPPs in PE were established in the mid-1940s as a 1-year program and gradually developed into a 4-year preparation program.

3.1 Teacher education in Israel: a dual system of preparation/training

TPPs are offered by Israel in two types of higher-education institutions—universities and academic colleges of education. That is to say, a dual system of TPPs exists in the country. In TPPs offered by the universities, students are required to study at least one major discipline (but no more than two) and only then complete their teaching certification studies. The students typically complete their undergraduate disciplinary studies in 3 years, earning a Bachelor of Arts (B.A.) or a Bachelor of Science (B.Sc.), and then take part in the pedagogical/teaching program for an additional 1 or 2 years of study. Upon completion of the pedagogical/teaching program, the students are awarded a teaching certificate, which enables them to teach their discipline/s in high schools. There is no link between the disciplinary studies and the TPP.

In contrast to TPPs studied at the universities, in TPPs offered at the academic colleges of education an emphasis is placed on a strong connection between the disciplinary studies and the pedagogical studies. The students learn their major discipline/s (one or two) as well as the pedagogical studies in each year of the TPP. The length of the TPP at the academic colleges of education is 4 years, and the integration between the discipline/s and the pedagogical/teaching studies already begins in the first year of the program in most of the colleges or in the second year of the program in others. In essence, a strong link between the disciplinary studies and the pedagogical studies can be observed in TPPs offered by the academic colleges of education. In fact, students who choose to study at the academic colleges of education are *required* to take pedagogical/teaching classes, even though some of them do not have an interest in becoming teachers in the educational system in Israel. Upon completing the 4-year programs offered by the academic colleges of

education, the students earn a Bachelor of Education (B.Ed.) degree and receive teaching certification, which enables them to teach in elementary schools in Israel. In a number of disciplines (e.g., the arts, dance, PE), the teaching certification authorizes the students to teach in high schools as well.

The close connection between the disciplinary studies and the pedagogical studies at the colleges of education has a number of advantages but also one major limitation. The following are two advantages for the imposed link between disciplinary and pedagogical studies:

- a. By taking classes in their selected discipline/s and classes in pedagogy across the 4-year program, the students are provided with a unique opportunity to integrate the different types of knowledge emerging from the various classes. Students can use concepts, ideas, and themes learned in the disciplinary classes and apply them in the pedagogical classes. When studying in the disciplinary classes, they can also further develop some of the ideas they learn in the pedagogical classes. It is assumed that the transferability effect across the different classes taught in the TPP will thus be strengthened.
- b. Lecturers in the two types of studies—disciplinary and pedagogical—can together plan some of their classes and provide the students with examples of how information from one class (e.g., a disciplinary class) can be related to elements of information discussed in another class (e.g., a pedagogy class). In addition, in a number of classes a co-teaching model can be used. For example, a class can be taught by an expert in one of the disciplines, and another experienced teacher can provide the students with real-world instructional examples of how knowledge from the specific learned discipline can be effectively implemented in actual classes taught in school settings.

However, there is also one potential limitation in the concept of linking the disciplinary studies to the pedagogical studies. Since the academic colleges of education are teaching-oriented, and their main objective is to prepare students to be capable and effective teachers in schools, a great deal of emphasis is placed on the pedagogical studies, and in turn the disciplinary studies may play a secondary role in the TPPs. In order to achieve the goal of producing good teachers, it appears that the main objective of the great majority of classes taught in TPPs offered by the academic colleges of education is to increase the pedagogical knowledge of the student rather than the knowledge of the specific discipline/s. By placing greater weight on the pedagogical studies, students can become teachers who know “how to teach” but may be lacking in fundamental disciplinary knowledge, namely, “what to teach.” They will probably develop an arsenal of pedagogical devices/tools that they can use when teaching in schools but may lack a deep understanding of the scientific foundations of the selected discipline/s.

3.2 An institutional approach to inclusive teacher’s training

With the increased implementation of inclusive education, teacher educators have also been challenged to make changes in their programs in order to prepare students to educate diverse learners. In this respect, if students with disabilities indeed study in TPPs, then TPPs should also be modified according to the special needs of these students [69]. In Israel, governmental bodies have made a number of attempts to adopt the policy of inclusion. For example, in the year 2002, the Israel Knesset (the unicameral national legislature of Israel) approved the Integration Law (see [70]). One of the implications of this law is that students with disabilities

can be part of any academic/educational program offered by schools and higher-education institutions and must be provided with the requisite learning conditions/environments to enable them to achieve their goals.

From a practical point of view, various adjustments and modifications need to be made in the existing programs in order to create the optimal conditions for effective inclusion. According to the Integration Law, a special committee for inclusion should be created in each academic/educational institution, in order to (a) profile the special needs of these students and (b) assist the faculty members who work at the institution in making the required modifications in the program, based on the profiles of the students with disabilities.

3.3 Pedagogical challenges

When making certain adjustments in the TPPs for those students with disabilities, such as students with physical impairments, vision impairments, or intellectual impairments, two main pedagogical challenges need to be considered: (a) What actions should be taken to prepare the lecturers/instructors to work with these students? and (b) What actions should be taken with the students at large who are required to be part of a learning group that is composed of students with different needs?

In our college, The Academic College at Wingate, a number of students with disabilities have been accepted to the TPP, among them students with various physical disabilities. Our aim was to enable these students to be part of a program that is composed of different types of studies—disciplinary studies (e.g., anatomy, motor learning, statistics), pedagogical studies (e.g., teaching methods/strategies, sport pedagogy, assessment of sport skills), physical activity classes (e.g., basketball, soccer, volleyball), and instructional/teaching practices in schools. We needed to consider what modifications we needed to make in each of these categories.

3.4 How did we address the challenge of inclusion?

In order to follow the principles of the leading frameworks of inclusion (e.g., [28, 30]), as well as to effectively deal with the pedagogical challenge of inclusion, a number of actions were taken:

- a. In accordance with national legislation [70] and the International Convention on Rights of Persons with Disabilities [6], as well as following a number of applications submitted to the college, the board of the college has committed to accepting and enabling students with disabilities to participate in the PE TPP. These applications were sent by individuals with various disabilities, among them one blind student, one student with a speech disorder, one student with a physical disability (losing one leg in a terror attack), two students who had suffered a mild stroke, and one student with stunted growth. In addition to the students with these specific disabilities who had applied, the objective of the board was to enable individuals with a larger spectrum of disabilities to apply for the PE TPP. The assumption of the members of the board was that after a number of students with disabilities were accepted to the PE TPP, the word would spread that The Academic College at Wingate accepts students with disabilities to its TPP program.

The decision of the board of the college to apply the Inclusion Law, was made after examining all the pros (e.g., providing the opportunity for students with disabilities to study PE) and cons (e.g., the potential difficulties that would have to be faced, particularly those associated with the performance of the students in

the physical skill-oriented classes) in applying the Inclusion Law. It was decided to assign a specific committee to advance the application of this law:

- b. The recruitment process: a careful recruitment process was conducted by an assigned committee composed of the following staff members: two experts in adapted physical activity, two experts in sport activities (one in individual sport and one in team sport), and one expert in sport pedagogy. A number of steps were taken by the committee: (1) reviewing the medical report provided by a physician about the mental/physical condition of the applicant; (2) meeting with the applicant to discuss the potential challenges he or she would probably have to face in the PE TPP, as well as to listen to the applicants' own requests about being part of a PE TPP, in order to assist him or her in effectively coping with the TPP's challenges; and (3) reaching a decision concerning the discussed applicant.
- c. Bringing the inclusion policy to the forefront: in a number of meetings with other faculty members, the senior faculty members (e.g., heads of schools/ departments at the college) explained the policy of the college to "open the gates" for students with disabilities. In the beginning it was not an easy task to discuss the inclusion issue with the faculty members, due to the fact that the college offers TPPs only in PE, a subject that requires not only "listening to a lecture" activities but also active participation in a variety of skill-oriented physical activity classes. Therefore, the discussions focused mainly on the importance of having students with disabilities in the college but also were centered on how to handle potential reactions—not only among lecturers, particularly those who teach physical activity classes, but also among students. As expected, there were a variety of reactions among both the lecturers and the students, for example, "Is it possible to plan a physical activity class composed of 'regular' and disabled students?"; "How can a blind student play basketball?"; and "How can a physically disabled student teach volleyball to a class of 12-year-olds composed only of 'regular' children?"
- d. Conducting workshops with lecturers and instructors: in order to cope with the abovementioned questions, a number of clinics were conducted. Two experts in the area of adapted physical activity who work at the college planned a number of meetings where major issues associated with inclusion were discussed. In addition, examples of physical activities (e.g., ball games, basic gymnastics, and folk dancing) for both "regular" students and students with disabilities were demonstrated.
- e. Disseminating information about the inclusion policy among the students: at the beginning of the semester, lecturers and instructors provided students with relevant information about the inclusion policy. They emphasized the benefits of this policy but also discussed its potential difficulties. Students were encouraged to share their feelings and perspectives about the policy. No personal information about the students with disabilities was provided.
- f. Making modifications in the PE TPP: in order to address the special needs of the students with disabilities, two main modifications were made: (1) modifications in the classrooms/lecture halls and (2) modifications in the activity classes.

Modifications made in the classrooms in which lectures are given: two main modifications were made: (1) physical modifications—most of the classrooms/

lecture halls in the college were modified and equipped according to the special needs of the students, so that they could have easy access to the classroom/hall and sit comfortably during the lectures. Volunteer students (see the next point in this part—Point g) sat next to the student with disability and provided him or her with assistance, if required; (2) instructional modifications—the lecturers of the classes that the students with disabilities attended were aware of the specific impairments of each of the students and met with them a number of times during the semester at special one-on-one sessions. In these meetings, the lecturer focused on specific issues taught in the class upon the request of the student. If needed, the lecturer utilized specific instructional tools, such as a three-dimensional demonstration of human body movements using a wooden mannequin model, to assist the students and increase their understanding. In most of these meetings the student volunteers attended as well, so that they would be informed and could continue working with these students on the relevant learning material.

Modifications made in the activity classes: the instructors who taught the activity classes (e.g., basketball, soccer, track and field) were also aware of the special needs of the students. In cases where the students with disabilities could not practice the drills with the entire class due to their limitations, the instructors prepared a special set of drills for them in advance, allowing these students to practice these drills with the volunteer students separately from the class. The preparation of the extra drills was time-consuming, but this procedure was necessary in order to allow the students with the disabilities to effectively practice the learned motor skills. The modified drills were developed in cooperation with experts in adapted physical activity who were staff members at the college. Sport instructional aids (e.g., balls of different sizes) were used in these classes in order to help the students with the disabilities to successfully practice the motor tasks.

g. Recruiting students: a number of students were recruited to help the students with disabilities. These students were studying adapted physical activity as a minor field in their program and were willing to help the students with the disabilities in various activities—on-campus (e.g., studying with them at the library or at the special learning zones at the college, working with them in the physical activity classes in order to help them acquire the learned drills/skills) and off-campus (e.g., studying for exams together at home, giving them a ride home at the end of the day). These students volunteered to assist the students with disabilities; however the college covered their transportation expenses since we did not want their availability to be limited.

The volunteer students met regularly with a number of the members of the committee that was responsible for the recruitment process. These meetings were held twice during each semester (the academic year is composed of two semesters). In these meetings, the students provided a verbal report of their experiences helping the students with disabilities. They outlined the main actions they performed with these students, in and out of class. They reported about their challenges and difficulties and how they approached them. For example, when the volunteers accompanied the students with disabilities to their teaching assignments in the schools, they did not know how much “freedom” they should provide them—to enable the students with disabilities to teach alone or to occasionally intervene in the teaching process in order to help them bring across their message to the children. They also presented a number of issues that they wanted to discuss with the members of the committee, such as how to enable the students with disabilities to be more independent in their studies.

All the volunteer students reported that helping students with disabilities was a constructive experience. A possible contributor to the positive experience of the

volunteer students might be the knowledge and skills they acquired during their adapted physical activity training as part of the PE TPP. Indeed, they were trained in their PE TPP to work with children with disabilities. However, following the time they spent with the students with disabilities, they also felt ready to work with adults with disabilities. It appears that they appreciated being given the opportunity to work with the students with disabilities.

h. Meetings with the students with disabilities: once in a semester, typically at the end of the semester, a meeting of the students with disabilities and the other key figures was arranged. These meetings were composed of the student with the disability, a number of the members of the committee that was responsible for the recruitment process of the student, and the volunteer students who helped the student with disabilities. The main purpose of these meetings was to listen to the “story” of the students with disabilities, in order to understand how they actually felt in the PE TPP. To achieve this, the students with disabilities shared their feelings, perceptions, and thoughts about their involvement in the program, in and out of class. They reported about the challenges and difficulties they encountered in the classes they took, as well as about their personal and academic achievements, and talked about how they viewed the modifications made in the TPP. They also provided their own personal report on how they felt about teaching in schools and what help they needed in order to improve their teaching skills. As with any other student who studies in the PE TPP, the students with disabilities had some “moments of success” and “moments of failure” in teaching PE in schools. These experiences were elaborated upon in the meetings, in an attempt to increase the number and frequency of the “moments of success.”

i. Members of the college staff responsible for the inclusion program met with key figures from the Ministry of Education: a series of meetings were conducted with a number of key figures from the Ministry of Education (e.g., the principle supervisor of PE) in order to (1) provide these individuals with an updated report on the inclusion of the students with disabilities in our TPP; (2) consult with them on how to improve the inclusion process; and (3) discuss future teaching opportunities for the students with disabilities in schools, be it elementary, junior high, or high school.

Some of the lecturers’ and instructors’ pedagogical concerns associated with the students with the disabilities were discussed in these meetings. For example, the students with disabilities are required, as are all the students in the TPP, to teach instructional units in schools during the second and third years of the program. We were not sure how to help the students with the disabilities to benefit most from their practical work in the schools. Should we let them teach only a small portion of the class? Should we allow them to teach only with the assistance of a fellow student? Or, should they serve only as assistants to the PE teacher who works at the school? Since there is more than one relevant answer to each of these questions, it was important for us to discuss them with key figures from the Ministry of Education.

Future teaching opportunities in the schools for our students with disabilities were also discussed in the meetings with the key figures from the Ministry of Education. The students with disabilities who enrolled in the PE TPP at The Academic College at Wingate have as yet not completed their 4-year program (some of them are classified as part-time students; they preferred to take fewer classes in each year of the 4-year program in order to effectively cope with the TPP’s requirements, and

therefore by doing so, they extended their studies to 5 or 6 years instead of the usual 4). However, knowing that these students, namely, our future PE teachers, might need some kind of assistance also while working in the schools (in and out of class), we felt that an early discussion on how to enable an effective inclusion process of teachers with disabilities into the schools should be conducted with those individuals who would be responsible for hiring them (e.g., key figures from the Ministry of Education). Our aim in these discussions was also to develop an understanding of how to enable the inclusion of physical educators with disabilities into the schools. In fact, additional discussions should be held in order to generate ideas on how to ensure that students with disabilities will be hired as PE teachers. For example, school principals who highly value the inclusion process and who are responsible for recruiting teachers to their schools should also be invited to these discussions.

4. Conclusions and future perspectives. Was the curriculum-pedagogical effort worth it?

Given the development and establishment of the inclusive pedagogy in recent decades, it is unfortunate that until now very few studies, and only those of a qualitative case study design, have been conducted to examine the multifaceted aspects associated with the inclusion processes of students with disabilities studying in PE TPPs. Every inclusion process should be carefully evaluated to determine whether its educational objectives are being achieved. Presumably, each process of inclusion has educational merit but also a number of limitations (e.g., allocating a portion of the college's budget to address the challenge) that need to be analyzed and assessed. In our chapter, we demonstrated a unique approach to adapting a PE TPP for the inclusion process. We discussed a number of procedures necessary for the successful implementation of such a TPP. Furthermore, we highlighted some of the challenges encountered while maintaining an inclusion program.

Those who are involved in inclusion processes, policymakers, lecturers, and in this case those students with disabilities who were enrolled in the PE TPP, should be able to answer the following question—*Was the curriculum-pedagogical effort worth it?* In other words, did all the changes/modifications made in the TPP contribute to helping the students with disabilities achieve their goals? In order to assess how we have addressed the inclusion challenge in our college, we plan to adopt a number of research approaches combining both quantitative and qualitative designs (see [71]). Among these approaches are:

- a. A survey design (a procedure in which researchers administer a survey to a sample or to an entire population of people in order to assess the attitudes, opinions, behaviors, and/or characteristics of the sample/population)
- b. A grounded theory design (a systematic, qualitative procedure used to generate a theory that explains, on a broad conceptual level, a process, an action, or an interaction concerning a substantive issue)
- c. An ethnographic design (a qualitative procedure for describing, analyzing, and interpreting culture-sharing groups' shared patterns of behavior, beliefs, and language that develop over time)
- d. A narrative research design (describing the lives of individuals, collecting and telling stories about the individuals' lives, and writing narratives of individual experiences)

In another optional design—a mixed-methods research design—researchers collect, analyze, and “mix” both quantitative and qualitative methods in a single study or a series of studies in order to understand the research problem.

The use of the abovementioned designs can assist researchers in collecting data on various aspects of PE TPPs in which students with disabilities study with regular students. Data that can be collected from faculty members, board and committees members, and students at large can assist in evaluating the strengths of the inclusion process (e.g., political, educational, pedagogical), how the program helped students with disabilities develop their disciplinary/pedagogical knowledge, and what aspects of the program need to be improved upon. In addition, these designs can help researchers collect data from those individuals who work with students with disabilities in the field (i.e., school settings), namely, the teachers who supervise them in their teaching practices, the regional PE supervisors, and the principals of the schools. The data obtained from external sources (e.g., teachers who supervise the students in their teaching practices in schools) can complement the data collected from internal sources (e.g., the students) and provide the researcher with a full picture of the changes/modifications made in the TPP, so that the needs of students with disabilities can be met.

The inclusion challenge has attracted a great deal of attention at The Academic College at Wingate during the last few years. In this modern/postmodern era, we feel that to address such a challenge is a kind of cultural-social mission. By gathering and analyzing quantitative and particularly qualitative data, we will be able to increase our understanding of how we have addressed the inclusion challenge and, more importantly, how we will be able to enhance some aspects of the TPP so that students with disabilities will be able to gain the greatest benefit from the preparation program.

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