

INCLUSIVE PHYSICAL EDUCATION IN SECONDARY SCHOOL

INCLUSIVE PHYSICAL EDUCATION IN SECONDARY SCHOOL: AN
EXPLORATION OF CURRICULUM, CURRENT LITERATURE, AND TEACHER
PERSPECTIVES

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Lay Abstract

Inclusive classrooms allow children with different abilities to learn together. Physical education (PE) is a class that may require adaptive teaching strategies and environmental modifications for all students to participate. This thesis explores how we can support PE teachers in delivering inclusive PE for secondary school students. The first study looks at how the Ontario Secondary School PE curriculum uses language to support inclusion. The second study identifies recent literature that explores how Universal Design for Learning, as a teaching approach, is used in PE classes to support inclusion. The third study examines physical educators' views on what they need to create inclusive classes so that diverse students can participate fully. Findings from all studies suggest that PE teachers may benefit from collaboration with health professionals with expertise in development, movement science, and inclusion.

Abstract

Inclusive education involves the participation of all children, including those with disabilities, as an expectation within mainstream education. The goal of inclusive education in Ontario, Canada is for all students, regardless of differences, to have equitable access to curriculum instruction with their typically developing peers. Physical education (PE) involves curriculum delivery in unique settings. While inclusive practice in PE has been studied in elementary schools, less research has focused on secondary school. In this dissertation, I explore how curriculum, resources, and educational practices support or create barriers for provision of inclusive PE in secondary schools.

The first manuscript describes a critical discourse analysis of the 2015 Ontario Physical Education Curriculum, Grades 9-12. Analysis considers how language is used and reflected within curricular text to represent inclusion. The analysis highlights that teachers require support beyond policy to practice inclusion, and advocates for teacher and student voices to be represented in curricular documents.

The second manuscript presents a rapid review of current literature to overview resources for Universal Design for Learning (UDL) available to support implementation in PE settings. Findings show that literature available to encourage professional development in universal design in PE is limited but growing. Physical educators still require support to facilitate implementation of UDL in practice.

The third manuscript uses interpretive description to explore the perspectives of Ontario secondary school PE teachers implementing inclusive PE. Physical educators express a need for professional development opportunities and in-situ resources that provide informed knowledge about inclusive practices.

The discussion chapter reflects on the exploratory findings of this research. Collaboration with school-based rehabilitation health professionals, such as occupational therapists and physical therapists, may provide a novel approach to support physical educators. Future research, policy, and practice initiatives should consider teacher agency within the context of system-based barriers that exist and influence inclusive PE.

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*“To get through the hardest journey, we need take only one step at a time, but we must keep on stepping.”
(Chinese Proverb)*

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List of Abbreviations and Symbols

APE = adapted physical educator

CAST = Centre for Applied Special Technology

CDA = Critical Discourse Analysis

Code = Ontario Human Rights Code

CPD = collaborative professional development

DCD = Developmental Coordination Disorder

DI = differentiated instruction

HALE = Healthy Active Living Education

HPE = Health and Physical Education

IE = inclusive education

IEP = individual education plan

IPE = inclusive physical education

IPRC = Identification, Placement, and Review Committee

NI = normalized instruction

ON = Ontario

OHRC = Ontario Human Rights Commission

OPHEA = Ontario Physical and Health Education Association

OT = occupational therapist

P4C = Partnering for Change

PE = physical education

PETE = physical education teacher education

PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses

PT = physical therapist

RHP = rehabilitation health professionals

TBI = traumatic brain injuries

UDL = Universal Design for Learning

UNESCO = United Nations Educational, Scientific and Cultural Organization

Declaration of Academic Achievement

This manuscript-style dissertation presents original work completed by the doctoral candidate, consisting of three independent research studies (Chapter 2-4) with a common focus on inclusive physical education. The doctoral student designed the qualitative studies outlined within, based on knowledge gained about qualitative methods within the PhD program of study. The candidate completed all data collection, analyzed the data, and interpreted findings of the work. Collaboration with the thesis supervisor and thesis advisory committee offered considerations and insights for methods, analysis, and interpretations. The doctoral candidate is the sole author of this work and incorporated revisions based on the review and feedback from thesis advisors. Chapter 2 has been published in the *Journal for Teaching in Physical Education*. Chapter 3 has been submitted for peer review with feedback received and Chapter 4 has been drafted for submission to a peer-reviewed journal.

This section summarizes all author contributions to each manuscript found in this dissertation.

1. For the manuscript entitled “Inclusive physical education: A critical discourse analysis of the Ontario secondary school health and physical education curriculum”:

I conceptualized the idea for this study, formulated the research question and established the methods as appropriate for the chosen qualitative methodological approach with guidance and feedback from Dr. Sandra Moll. I completed coding, analyzed and interpreted the data, as well as prepared the manuscript, with feedback from Drs. Cheryl Missiuna and Sandra Moll. Additional editorial assistance was provided by Drs. Peter Rosenbaum and Wenonah Campbell.

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2. For the manuscripts entitled “A rapid scoping review exploring the use of universal design for learning in physical education”:

I conceptualized the idea for this study and then chose the appropriate study design and formulated the research questions with consultation with Dr. Wenonah Campbell. Following librarian consultation and methodological discussions with Dr. Wenonah Campbell, I designed the search strategy and completed a scoping review search for relevant literature. I conducted data collection and screened articles, with assistance from Dr. Lisa Rivard as a second reviewer. I led the data extraction, analysis and interpretation, with discussion and feedback provided by Dr. Lisa Rivard. I prepared the manuscript, with both feedback and editorial assistance provided by Drs. Lisa Rivard, Cheryl Missiuna and Wenonah Campbell. Additional editorial assistance from Drs. Peter Rosenbaum and Sandra Moll was provided on the final draft of the manuscript.

3. For the manuscript entitled “Perspectives of secondary school physical educators on implementing inclusive physical education: An interpretative description study”:

I conceptualized the idea and purpose for this study, as well as the research question, with feedback from Drs. Cheryl Missiuna and Wenonah Campbell. I determined the most appropriate research design, designed the study, developed the study protocol, and completed the ethics approval process. I designed the interview schedule with feedback from Drs. Cheryl Missiuna, Wenonah Campbell and Sandra Moll, recruited participants and scheduled and completed interviews. Transcription services were provided by e-Transcription Services. I coded, analyzed, and interpreted the data, followed by manuscript preparation, with feedback provided by Drs. Cheryl Missiuna, Wenonah Campbell and Sandra Moll. Additional editorial assistance from Dr. Peter Rosenbaum was provided on the final draft of the manuscript.

Chapter 1: Introduction

In 1994, the Salamanca Statement became a signed international agreement across 92 countries and 25 international organizations that supported the inclusion of children with disabilities as an expectation within education (Alzahrani, 2020). Disability can be viewed as socially constructed in that an individual's impairment, and what it means to be 'disabled', is defined relative to how one can live within a society that is built according to a 'normality' of physical function (Oliver, 1998). Inclusive educational programming is founded on this social model of disability, which instills a social responsibility to remove barriers that prevent equitable access based on one's impairment (Ontario Ministry of Education, 2015). This perspective of disability has taken prominence within education to challenge medical models of disability that view one's impairment as a deficiency that must be 'fixed' to meet societal standards of normality (Haegele & Hodge, 2016). Internationally, policy reforms to support inclusive education have resulted in differing implementation outcomes (De Bruin, 2019), with reports of both benefits and challenges persisting across countries (Alzahrani, 2020; Van Mieghem et al., 2020). In a recent review of literature, Alzahrani (2020) documented a lack of consensus about how inclusive education (IE) should be implemented, as well as variable definitions and conceptualizations of the term. Alzahrani (2020) further identified mixed reports among teachers and parents regarding the numerous factors reported to act as both facilitators and barriers of inclusion. Additionally, Alzahrani (2020) reported that teachers' attitudes towards IE were more negative than both parents and peers, and that positive attitudes towards IE among parents, teachers and peers were most influenced by their knowledge of disabilities and respective experiences with inclusion. Some variability in the findings across studies has been attributed to methodological challenges in researching students with special education needs, including

whether groups compared between studies had similar levels of ability or disability or how different education settings invite different reported experiences of inclusion (Alzahrani, 2020).

The Growth of Inclusive Education in Ontario

Given the diverse explanations of IE in the literature, it is important that researchers outline their own particular use of definitions and conceptualizations of IE that may influence findings. The current dissertation work is set in the Canadian province of Ontario, and thus, will be explored within this contextual understanding of IE. The Ontario Ministry of Education defines inclusive education as ‘education that is based on the principles of acceptance and inclusion of all’. The research is framed within current Ontario educational policies that incorporate a broad definition of inclusion — encompassing sex, race, disability, ethnicity, gender identity, sociocultural variation, and other types of diversity. Students see themselves reflected in their curriculum, their physical surroundings and the broader environment, in which diversity is honoured and all individuals are respected (Ontario Ministry of Education, n.d., p. 2). Within the current research, inclusive practices will refer to ‘any strategies/behaviours that teachers use to ensure that students with diverse abilities can learn in regular classrooms’ (Finkelstein et al., 2019, p. 3).

Following the implementation of Ontario's Equity and Inclusive Education policy in 2009, many government documents have been published to support the direction and implementation of inclusive education in Ontario (see Table 1). In September 2012, Bill 13, the Accepting Schools Act, amended the Education Act and “set out expectations for all school boards to provide safe, inclusive, and accepting learning environments in which every student can succeed” (Ontario Ministry of Education, n.d., p. 2). The goal of inclusive education in Ontario is for all students, regardless of differences, to have access to equitable education and curriculum

instruction within the same classroom as similar-aged peers (Ontario Ministry of Education, 2015). This may involve a student placement process whereby students requiring special education programs and services are referred to an Identification, Placement, and Review Committee (IPRC) (Ontario Ministry of Education, 2021a). The IPRC recommends appropriate educational placements depending on students' needs, with special education classes recommended only if a student's needs cannot be met within the regular classroom with additional supports. Specifically, in Ontario, an Individual Education Plan (Ontario Ministry of Education, 2021b) is developed for students who have or have not been identified as exceptional by an IPRC, but who require additional supports to be able to access the curriculum fully. The IEP is a document that "identifies the student's specific learning expectations and outlines how the school will address these expectations"(Ontario Ministry of Education, 2021b, para. 1).

According to a national survey completed by the Canadian Teachers' Federation, approximately 16.3% of students in each surveyed classroom were "formally identified as having behavioural challenges, mental or physical disabilities, gifted students, and English or French language learners" (Towle, 2015, p. 12). Of classrooms surveyed, 28% had five or more students with disabilities and 80% of classrooms "had at least one student who was formally identified as having a disability" (Towle, 2015, p. 12). This number is a low estimate of the variability within Canadian classrooms as it did not include students waiting to be identified, or those with developmental, cognitive, or motor challenges to learning that are not formally identified or recognized by the education system. A current report suggests that, within Ontario, approximately "17% of students per elementary school and 27% of students per secondary school receives some special education support" (People for Education, 2018), the equivalence of approximately 1 in 5 and 1 in 4 students, respectively.

However, despite the efforts across school boards to implement inclusive policies, the Ontario Human Rights Commission report (OHRC) acknowledges that students with disabilities in Ontario continue to face challenges when accessing educational services (OHRC, 2018).

Examples of these challenges include:

- inadequate training for education providers on disability-related issues, and the duty to accommodate students with disabilities;
- insufficient resources and supports in the classroom;
- negative attitudes and stereotypes;
- physical inaccessibility; and
- outright denial of disability-related accommodations (OHRC, 2018, pp. 4-5).

The Ontario Human Rights Code (Code) has primacy over all other legislation, including the Education Act. The right to equal treatment in education ‘without discrimination on the ground of disability’ (OHRC, 2018, p. 4) is the primary statute of the Code as it pertains to the provision of education across all public and private settings within the province of Ontario. It states that:

Education providers have a legal duty to accommodate the disability-related needs of students to the point of undue hardship. This legal duty exists whether or not a student with a disability falls within the Ministry's definition of exceptional pupil, and whether or not the student has gone through a formal IPRC process or has an IEP (OHRC, 2018, p. 13)

The OHRC published a policy document in March 2018 entitled *Accessible Education for Students with Disabilities* (OHRC, 2018). This document is a recent interpretation of the Code that outlines the Code’s premises in educational contexts and offers guidance for implementation

(OHRC, 2018). It is the intention of the OHRC that this document “will help education providers recognize and fulfil their obligations under the Code, design their facilities, policies and procedures more inclusively” (OHRC, 2018, p. 10).

Inclusive Physical Education in Ontario

The expectations outlined by the Code extend to all areas of study in ON schools. This includes the academic subject of physical and health education in both primary and secondary school. The Ontario Physical and Health Education Association (OPHEA) issued a statement in June 2018, the *Student’s Right to Physical Activity*, stating that ‘the practice of daily physical education, physical activity, and sport is a fundamental right for all students in Ontario’ (OPHEA, 2018, p. 1). The supporting rationale for the statement is cited in several documents (see Table 2). Recognizing physical activity as a fundamental right for all students includes the explicit view that ‘each education system...must ensure that quality and inclusive physical education classes are included...as a mandatory part of primary and secondary education...’ (UNESCO, 2015, p. 3).

Qi and Ha (2012) completed a literature review of empirical studies examining inclusion in PE over the past 20 years. The review included a content analysis that identified three consistent themes within the empirical literature: stakeholder (e.g., teachers and parents) perspectives of inclusive PE, effective inclusive practices, and the impacts of inclusion on students with and without disabilities. Qi and Ha concluded that both benefits and concerns persist for students with disabilities when examining inclusion in PE:

...students with disabilities experienced less motor engagement than their peers without disabilities...[and] that although students with disabilities can gain

benefits from social interactions in inclusive PE, social isolation of students with disabilities also exists. (Qi & Ha, 2012, p. 257)

Recent research shows that diverse groups of students continue to experience challenges within physical education (PE), including students who are: visually-impaired (Ball et al., 2021), deaf and hard of hearing (Tanure Alves et al., 2021); diagnosed with neuro-developmental disorders (Thoren et al., 2020), including Developmental Coordination Disorder (DCD) (Zimmer et al., 2020), as well as students with disabilities (Haegele & Sutherland, 2015) or special needs (Wang et al., 2015), girls (Hortigüela-Alcalá et al., 2021), or boys who may be less athletically inclined (Jachyra, 2016).

Current reviews have explored growing research on inclusive PE (Block & Obrusnikova, 2007; Qi & Ha, 2012; Rekaa et al., 2019; Tant & Watelain, 2016; Wilhelmsen & Sørensen, 2017) and collectively suggests that PE teachers: 1) may be unaware of conditions that affect motor coordination and PE participation (Zimmer & Dunn, 2020); 2) receive minimal training related to inclusive education strategies for teaching PE (Barber, 2018; Coates, 2012; Maher, 2016; Tant & Watelain, 2016); and 3) perceive instructional and environmental barriers to facilitating inclusive PE (Haegele et al., 2018; Haegele et al., 2020; Qi et al., 2017).

Specific to Ontario, Barber (2018) identified that, despite mandated policies of inclusion within Ontario PE, discrepancies are observed within practice, suggesting that challenges remain to the successful implementation of policy. These findings infer that there is room for improvement in assisting teachers to provide inclusive PE. Qi and Ha (2012) highlighted that teachers will require curricula, training, and support that ‘encourage and assist them to develop inclusive and accessible programs of physical activity for those less-advantaged in PE participation’ (p.523). More recently, VanMieghem (2020) completed a systematic and meta

review and concluded that evidence-based professional development about inclusive practice is essential for teachers' successful implementation of IE.

The Importance of Studying Inclusive PE in Secondary School

Researchers have shown that student enrollment in PE courses decreases in Ontario as student grade levels increase (Hobin et al., 2010). In particular, Hobin et al. (2010) completed an analysis of Ontario Secondary Schools and reported that student enrollment in PE courses declined from 73.4% to 51.3% between Grade 9 and Grade 12. Many researchers have attempted to explain the decrease in student enrollment in PE classes in secondary school. Hobin et al. (2010b) found that student enrollment in PE in Ontario was related to gender, body mass index, smoking status, parental encouragement and having active friends, as well as school-level characteristics (p. 449). In addition, research documents that girls and boys are less likely to enjoy PE classes if they have low self-efficacy (Dishman et al., 2005), low perceived competence (Cairney et al., 2012), lowered self-concept (Barr-Anderson et al., 2008), or lack motivation (Sallis et al., 1999). Further, students who are unhappy participating in PE classes are more likely to stop participating after grade 9 once curriculum requirements are fulfilled (Jachyra, 2016).

Current research confirms that Canadian children and youth aged 5-17 years are not active enough to meet evidence-informed guidelines recommended by the Canadian 24-Hour Movement Guidelines for Children and Youth, potentially leading to negative physical health outcomes in youth, such as a decrease in cardiorespiratory fitness as well as psychosocial concerns or increases in levels of obesity (Tremblay et al., 2018). This risk is potentially even greater for students with disabilities who may be at a heightened risk for increased concerns related to a lack of physical activity. One prevalent example is students with a

neurodevelopmental condition called Developmental Coordination Disorder (DCD), which presents with motor coordination difficulties apparent at a young age and persisting into adulthood (Cairney, 2015). Participation, achievement, and enjoyment in PE classes is extremely difficult for students with DCD due to the focus on fine and gross motor skills (Caçola & Romero, 2015) and PE classes are a primary source of stress (Foulder-Hughes & Prior, 2014; Zimmer et al., 2020). For a child with DCD, decreased participation in physical activity and increased psychosocial distress, including anxiety and depression, represent challenges that affect physical, social, and personal growth and development that emerge secondary to motor coordination concerns (Cairney et al., 2013).

Secondary school PE represents a pivotal moment to engage all students in a positive, inclusive PE environment that encourages them to pursue additional PE classes and engage in increased physical activity. Research that explores inclusive PE in secondary school and invites both advocacy and change is essential to ensure that all students have the opportunity to feel included, to be included, and to gain the benefits of physical activity through curricular expectations and participation.

Physical Education Curriculum in Canada and Ontario

Research highlights that shifting international perspectives regarding physical activity, including the meaning of PE and alternative pedagogical approaches within curriculum, affect how inclusion is conceived and implemented by PE teachers in curricula (Barber, 2018; Beni et al., 2017; Croston & Hills, 2017; Kilborn et al., 2016; Svennberg, 2017).

Kilborn et al. (2016) completed a document analysis of the Canadian PE curricula to explore “the aim statements, curriculum organizing categories, and the learning outcome statements of the Grades 1 to 9 Anglophone physical education curricula that were

provincially/territorially mandated for official use as of January 2014” (p. 26). This review represents the most recent curricular analysis of Canadian PE documents and provides an enhanced understanding of PE in Canada. Kilborn et al. (2016) found that the overall aim statements focused on healthy active living. However, closer inspection of the curriculum learning outcomes (i.e., course content) showed that movement skills, games, and sport techniques remained the primary learning foci, with only a slight shift in trend being noted by Grade 9 (Kilborn et al., 2016). The authors concluded that, based on their findings, the current state of physical education in Canada was similar to Europe and other countries (Kilborn et al., 2016): PE curricula continue to have a strong focus on movement skills (Kilborn et al., 2016) as well as on performance and excellence (Haycock & Smith, 2011, p. 507). Barber (2018) highlights that curriculum is a primary means by which to promote effective implementation of inclusive programming; however, it is not known whether secondary Ontario physical education teachers are supported by current curriculum and policy documents in their efforts to implement IE.

In Canada, the Ministry of Education within each province and territory is required to develop and regulate their own education curricula, since each administers its own education system (Kilborn et al., 2016). Just prior to the publication of Kilborn et al. (2016), Ontario revised its 1999 (Grade 9-10) and 2011 (Grade 12) physical and health education curricula into one comprehensive document published in 2015 (Grade 9-12). In Ontario, the secondary PE curriculum requires that all students participate in one PE credit (Ontario Ministry of Education, 2015). Credit options depend on the available course offerings at any particular school; however, the specific expectations of the curriculum are the same across courses at each grade level (Ontario Ministry of Education, 2015) and emphasize building physical literacy through goals of

lifelong participation. Physical literacy has been defined within the Canadian Physical Literacy Consensus Statement (2015) as:

a life-long endeavor that starts with the understanding and learning of motor skills at a young age thereby creating the proper conditions to encourage habits of health and physical activity for life (Roetert et al., 2017, p. 58)

Barber (2018) advocates for inclusion in PE through a curriculum that centralizes on the construct of physical literacy: “the opportunity to develop physical literacy, as it relates to achieving individual potential, can be made available to all students in PE, regardless of body size, shape, ability or skill” (p. 526). According to Roetert et al. (2017), school physical educators play a prominent role in helping students develop all components of physical literacy and ‘reach [their] maximum potential for success’ (p.58). Thus, secondary school physical educators are essential stakeholders in providing an inclusive environment that promotes the possibility of physical literacy for all students who engage in secondary school PE.

Exploring Inclusive Secondary School PE in Ontario: Inviting qualitative methods

The overarching **purpose of this thesis** is to explore how current curriculum, resources, and educational practices support or create barriers for the provision of inclusive PE in secondary schools within Ontario. This purpose will be pursued using **qualitative research methods**.

Qualitative research is supported by the philosophical tenets of social constructionism, which sit within an interpretivist framework and a belief in the existence of multiple realities (Guba & Lincoln, 1994). It is this ontological belief that gives credence to a hermeneutical approach to the textual analysis of data that is gathered from documents and transcripts. Qualitative methodological approaches allow for in-depth exploration of social processes and lived experiences that enable the researcher to gain a rich understanding of a phenomenon (Creswell,

2013).

Qualitative research requires the primary researcher to consider the influence of their positionality on the research process, analysis, and interpretation. Respective to the current thesis work, I offer transparency in my role as a doctoral candidate in Rehabilitation Sciences, with postsecondary degrees in Health and Physical Education and prior experience as a varsity athlete and coach of recreational children's sport. My experiences within sport, upheld by traditional ideologies of normative PE, place me in a privileged position, as insider and outsider, to adopt a critical stance within the field. I am experienced in various qualitative approaches and methods yet I have no prior experience working or completing research within a secondary school education setting.

In this qualitative work, I acknowledge the discourse that surrounds the culture of PE by considering the sociocultural forces affecting change – both visible and invisible. Tripp et al. (2007) emphasize that ensuring an inclusive environment for all students in PE “involves rethinking taken-for-granted ideas about how physical education is organized, how students are grouped, how resources are utilized, how decisions are made, and what constitutes appropriate or meaningful physical education” (p.36), while prioritizing healthy, active living for life – for all. To date, little is known about how inclusion is reflected in the revised Ontario secondary PE curriculum, how it has affected pedagogical practice or how secondary physical educators are supported in providing inclusive PE to ensure that inclusion recognizes student diversity in all forms.

In this dissertation, I will present an exploration of curriculum, pedagogical philosophy, evidence-based resources, and secondary school physical educator perspectives about inclusive PE in Ontario. It will provide an opportunity for evidence to guide best practice in the expanding

field of IE and, with a deepened critical understanding, contribute to the growing international discussion about its implementation within PE.

The following paragraphs provide an overview of **how each thesis chapter contributes** to the purpose of this dissertation:

Chapter 1 presents the **foundation, rationale, and background** for this research.

Chapter 2 presents a **critical discourse analysis** of the revised Ontario Secondary School PE Curriculum (2015). This chapter was published in 2021 (Selkirk et al., 2021) and reflects on how the Ontario PE curriculum provides support or creates challenges to physical educators' implementation of inclusive education. **Critical discourse analysis** allows for consideration of the ways in which a curriculum's use of language and representations of discourse are interwoven within social relations and interconnections of power and ideology (Fairclough, 1992).

Chapter 3 presents a **rapid scoping review** that maps the current body of literature exploring physical education and universal design for learning. This chapter offers insight into the availability of evidence-based resources for physical educators to support inclusive practices using recommended pedagogy cited within the Ontario PE curriculum. **Rapid scoping review methods** allowed for a timely knowledge synthesis that addressed broad, conceptual topics, and allowed researchers to map and explore available evidence, identify knowledge gaps, and describe key concepts that underlie the field of research (Peters et al., 2020).

Chapter 4 presents findings from an **interpretive description study** that explores Ontario secondary school teachers' experiences in providing inclusive PE. The chapter gives voice to teachers to highlight facilitators and barriers related to implementing inclusive secondary school

PE in Ontario and discusses steps forward for helping physical educators to adopt inclusive practice. **Interpretive description methods** allowed for an inductive analysis to explore the perspectives of educator experience while simultaneously gaining contextual understanding within an applied setting to address questions in the field of education (Thorne, 2016).

Chapter 5 presents key implications of the thesis findings regarding the delivery of inclusive physical education in secondary school settings. The findings challenge current assumptions about resources to support inclusion and explore the potential for rehabilitation health professionals (RHPs) to collaborate with physical educators as they strive to implement inclusive practice.

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Table 1. Documents to Support Inclusive Education Initiatives in Ontario

Document	Intention	Citation
Bill 82 – Amendment to the Education Act (1980)	Landmark in special education in Ontario; requires that the publicly funded school system in ON is responsible for the education of all ON students including those with special needs	(Ontario Ministry of Education, 2012)
Ontario's Equity and Inclusive Education policy	Offered principles of equity and inclusion	(Ontario Ministry of Education, 2009)
Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools; First Edition, Covering Grades 1-12	Provides guidelines surrounding policies and frameworks that support assessment, evaluation, and reporting in Ontario schools	(Ontario Ministry of Education, 2010)
Bill 13 – Accepting School Act	Amended the Education Act and “set out expectations for all school boards to provide safe, inclusive, and accepting learning environments in which every student can succeed”	(Ontario Ministry of Education, n.d., p. 2)
Learning for All: A Guide for Effective Assessment and Instruction for All Students, Kindergarten to Grade 12	Outlines evidence-based and research-informed approaches to support the learning of all students	(Ontario Ministry of Education, 2013)
Achieving Excellence: A Renewed Vision for Education in Ontario	Document stating the renewed vision for education in Ontario; includes a focus on student well-being inside and outside of school	(Ontario Ministry of Education, 2014a)
Equity and Inclusive Education in Ontario Schools: Guidelines for Policy Development and Implementation	Provided a framework for school boards to promote inclusive and equitable practices	(Council of Ontario Directors of Education, 2014)
Ontario’s Education Equity Action Plan	Offered four areas for action to help eliminate systematic barriers and discriminatory practices	(Ontario Ministry of Education, 2017)

Table 2. Documents to support children’s right to inclusive physical education

Document	Intention	Citation
Convention on the Rights of the Child	An international human rights treaty that outlines the civil, political, economic, social, health and cultural rights of children	(United Nations Human Rights: Office of the High Commissioner, 1989)
International Charter of Physical Education, Physical Activity and Sport	Supports policy and decision-making in sport to support inclusive access without discrimination	(UNESCO, 2015a)
Quality Physical Education. Guidelines for Policy Makers	Provides guidelines to ensure quality physical education internationally to all young people	(UNESCO, 2015b)
Program/Policy Memorandum No. 138, Daily Physical Activity in Elementary Schools, Grades 1-8	Policy requiring that all elementary students in Ontario have a minimum of 20 minutes of moderate to vigorous physical activity each school day	(Ontario Ministry of Education, 2017)
Student’s Right to Physical Activity	OPHEA’s statement that physical education, physical activity, and sport is a fundamental right for all children in Ontario	(OPHEA, 2018)

Chapter 2

Title of Paper: Inclusive physical education: A critical discourse analysis of the Ontario secondary school health and physical education curriculum

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Abstract

Purpose: Education policies require inclusive practices across student learning environments internationally. In Canada, provinces and territories oversee their own curriculum development. This study presents a critical discourse analysis of how inclusive education is addressed within Ontario’s 2015 Health and Physical Education Curriculum, Grades 9-12. Method: Fairclough and Chouliaraki’s approach to critical discourse analysis, which encompasses structural, linguistic, and interdiscursive analysis, was used to show how language is interwoven within ideologies of physical education to represent inclusivity. Results: Three discourses were identified: (a) the discourse of equity and inclusion, (b) the discourse of opportunity, and (c) the discourse of positive outcomes. The curriculum reflects inclusivity through overt language and intention, holding the possibility for choice and opportunities beyond traditional notions of physical education. Discussion: Concerns included whether ideals presented in the curriculum

reflect the realities of “discourse in action.” Transformative discourses within physical education should emerge from the student voice.

Keywords: high school, PE, inclusion, qualitative

Introduction

The importance of inclusive pedagogy - the provision of education that celebrates and recognizes diversity within classrooms rather than segregating differences – is globally acknowledged (Van Mieghem et al., 2020). Researchers have documented benefits for students who learn within environments upheld by inclusive policies, including both students with special education needs and those who are typically developing (Rekaa et al., 2019; Ruscitti et al., 2017; Van Mieghem et al., 2020). Inclusive education programming is founded on the social model of disability, which views ability as socially-constructed and relative to how one can live within a society that is built according to a “normality” of physical function (Fitzgerald, 2005, p. 44). The school subject of physical education (PE), due to its inherent expectation of physical activity and the acquisition of movement skills, unquestionably places PE at the center of a discussion about inclusive education and normative physical function.

The term “inclusive education” has been described as a “semantic chameleon” (Haeghele et al., 2020; Liasidou, 2012, p. 3) due to its wide-ranging definitions that are variable internationally across settings and context (Krischler et al., 2019). Finkelstein et al. (2019) describe inclusive education as “contextually-bound”: what represents inclusive education is dependent “on the context and specific needs of stakeholders” (p. 3). Thus, what inclusion “looks-like” can be different across varied educational contexts. The context or “space” that represents PE as a school subject must allow for physical movement and activities in environments that differ from classroom-based academic subjects, as represented by gymnasiums, fields, tracks, pools, ice rinks, climbing walls, among a multitude of possibilities. This contextually bound understanding of inclusive education will guide this paper to

acknowledge that how inclusive education is represented in a PE setting is unique to the space that PE occupies.

It has been argued that PE currently exists within a “clear dichotomy between an ethos of performance...and a desired inclusive philosophy” (Griggs & Medcalf, 2015, p. 124). The tension between performance and inclusion may be more prominent in curricula that places an extensive focus on sports, games, competition, and performance. Penney et al. (2018) describe how normative conceptions of physical ability are “legitimized by curriculum”, leading to a “narrowly conceived” PE curriculum through which teachers prioritize certain sports, games, and “movement experiences that are normalised ‘as PE’” (p.7). It is acknowledged that PE curriculum in Canada is deeply-rooted in the history of fitness training, physical activity, and sport (Kilborn et al., 2016). Current research in inclusive PE must consider the historical social production of a normative PE culture, including the characteristics of students who may or may not thrive within the traditional structure of sports, games, and competition (Rekaa et al., 2019).

Several researchers have noted shifting international perspectives regarding physical activity, including the meaning of PE and alternative pedagogical approaches, which affect how inclusion is conceived and implemented via PE curricula (Barber, 2018; Beni et al., 2017; Croston & Hills, 2017; Kilborn et al., 2016). Physical literacy, as a pedagogical underpinning of PE, has been adopted within various PE curriculum documents in several countries (Kilborn et al., 2016; Young et al., 2020), including Canada and Australia (Gleddie & Morgan, 2020). Within Canada, its provinces (including Ontario) and territories are responsible for their own PE curriculum development, with the territories assuming the curriculum of adjacent provinces (Kilborn et al., 2016). The Ontario PE curriculum, as one example, has adopted physical literacy as a vision for realizing lifelong participation in physical activity, and uses the following

definition from PHECanada, the national organization that supports the teaching of Physical Education and Health (PHE) in Canada:

Physically literate individuals consistently develop the motivation and ability to understand, communicate, apply, and analyze different forms of movement. They are able to demonstrate a variety of movements confidently, competently, creatively and strategically across a wide range of health-related physical activities. (PHE Canada, 2020, physical literacy section, para. 2)

Researchers continue to explore the concept of physical literacy and Young et al. (2020) highlight its potential to influence curriculum discourses of inclusion and exclusion. A discourse that favours traditional normative PE may place value on high motor competence, as exemplified through sports, competitive games, and associated skill development (Fitzgerald, 2005). As described by Haegele et al. (2020), PE classes that focus predominantly on competitive sports and games (those that are not modified for student differences) may inherently express ‘specific ideals about what abilities and bodies’ are valued within PE contexts and those that ‘do not match up’ (p. 2). Current research suggests that the Ontario PE curriculum places particular focus on movement skills, games, and sport techniques (Kilborn et al., 2016; Thomson & Robertson, 2014), within its adoption of physical literacy; however, much of this research addresses the elementary level of education and much less is known at the secondary school level.

International researchers report a dearth of literature within PE and health that critically explores curriculum and policy (Philpot, 2019; Rossi et al., 2009; Wilhelmsen & Sørensen, 2017). Only a few studies have attempted a critical review of the PE curricula across Canada (Kilborn et al., 2016; Thomson & Robertson, 2014) or within Ontario (Gard & Kirk, 2007;

Petherick, 2018). In 2015, the Ontario Ministry of Education revised its Health and Physical Education (HPE) Curriculum (Grades 9-12) (Ontario Ministry of Education, 2015); it has been noted that a focused analysis of its content and implementation is still needed (Dargavel et al., 2017). In addition, the Ontario Human Rights Commission (OHRC) released a policy document in March 2018 titled “Accessible Education for Students with Disabilities” (OHRC, 2018), which is a recent interpretation of the Ontario Human Rights Code (the Code), stating that educators have the legal duty to accommodate disability-related student needs, even in the absence of the student having an individual education plan (OHRC, 2018). The Ontario HPE secondary curriculum represents a unique document for study since it has been recently revised within the context of mandated provincial inclusion policies and the pedagogical approach of physical literacy.

Using critical discourse analysis (CDA) methods, we propose an analysis that is current and critical in scope to consider whether the Ontario HPE curriculum (2015) reflects inclusive practice. The Healthy Active Living Education (HALE) courses (grades 9-12) represent the core PE courses within the Ontario secondary HPE Curriculum (2015) and students in Ontario are required to complete one course credit in PE that is based on the HALE curriculum. This mandatory requirement is the reason for choosing the selected text as the primary focus of analysis for this study. CDA requires a purposeful selection of text and focused analysis since its methods involve an in-depth and close examination of text that facilitates a critical review of key concepts and ideologies (Rossi et al., 2009; Van Dijk, 1993). This study uniquely considers how inclusion is reflected in PE curriculum relative to the need for motor competence. Motor competence is integral to the concept of physical literacy, and thus, is a subject central to the discussion of inclusivity within PE. Researchers have shown that children and adolescents with

lower motor competence, both perceived and actual, are less motivated to participate in physical activity and have more negative experiences with both teachers and peers (Estevan et al., 2020; St. John et al., 2020). Further, St. John et al. (2020) found that perceived adequacy, a concept closely related to perceived motor competence, was the largest predictor of enjoyment of PE, which may have implications for lifelong participation in physical activity, a primary value of physical literacy. Considerations for analysis that addressed inclusion in this manner provided a unique perspective for appraising how physical education curriculum can support or limit inclusive practice.

Our study is framed within current Ontario educational policies that incorporate a broad definition of inclusion — encompassing sex, race, ethnicity, gender identity, sociocultural variation and other types of diversity. Furthermore, we consider inclusive education to represent the inclusion of all children regardless of identified disability or special need, allowing for the consideration of students who have invisible disabilities or who experience challenges in PE, but do not have a formal individualized education plan. Similar to Kilborn et al. (2016), the overall aim of our curriculum-based research is to “contribute to the international discussion on the status of PE” (p. 22); yet our focus contributes specifically to a deepened critical understanding within the developing field of inclusive PE.

Methods

Discourse analysis is a qualitative methodological approach within critical social research that closely examines “language in use” (Taylor, 2001, p. 5). Discourses within text are viewed as representations of social life: products of the semiotic (meaning-making) nature of language that are positioned within social networks of power through theoretical constructs of hegemony and ideology (Fairclough, 1992). Thus, discourses can represent how language upholds and

reflects deeply rooted assumptions and understandings that are enacted or substantiated through given texts.

Critical Discourse Analysis

Critical discourse analysis is an approach to discourse analysis, the theoretical origins of which are drawn from many philosophers, including Gramsci, Althusser, Bakhtin, and Fairclough (Taylor, 2001). The methods used in the current study are drawn from Fairclough and Chouliaraki's (1999) five-step approach to CDA, similar to only a few CDA initiatives in the field of PE (Philpot, 2019; Rossi et al., 2009). Table 1 outlines the five-stage approach and explains how each stage is represented within the current paper. Fairclough's methodological approach shows how language, or its discourse, connects social practices (e.g., education) with the production of social life (Taylor, 2001). When using CDA in this framework, language becomes the object of analysis and "in use" refers to the analysis of the contextual use of language within a socio-theoretical lens at both the micro and macro level (Taylor, 2001). Completing a CDA of curriculum policy allows one to illuminate the non-obvious ways in which a curriculum's use of language and representations of discourse are interwoven within social relations and interconnections of power and ideology. The analysis sheds light on the possibility of social change by initiating a critical consideration of the structure, as well as the linguistic, semiotic, and interdiscursive elements of curriculum text. Within the field of PE, a close look at discourses deeply rooted in traditional ideologies of PE and the normative PE student could offer insight about how inclusion is reflected within curriculum policy.

Methods of Analysis

The Ontario HPE Curriculum, Grades 9 to 12 (2015), was the document of analysis for this research, retrieved from the Ontario Ministry of Education website (Ontario Ministry of

Education, 2015). Multiple documents have been published that support the curriculum's implementation; however, in this paper, the curriculum was analyzed independently to consider the content that physical educators interpret, interact with, and strive to implement within the mandate of inclusive education. The specific sections of the document analyzed included: the introduction that explains the curricular foundations and principles (herein referred to as Curriculum in Context) as well as the Healthy Active Living Education (HALE) course curriculum, including grades 9-12, [Grade 9 (PPL10), Grade 10 (PPL20), Grade 11 (PPL30) and Grade 12 (PPL40)]. The stated overall expectations are identical across grades 9 to 12 for all HALE courses, thus allowing these courses to be analyzed collectively. More specifically, each HALE grade level course comprised three strands of curriculum, with overall and specific expectations for each strand, including: *A – Active Living* (A1. Active Participation; A2. Physical Fitness; A3. Safety); *B – Movement Competence* (B1. Movement Skills and Concepts; B2. Movement Strategies); and *C – Healthy Living* (C1. Understanding Health Concepts; C2. Making Healthy Choices; C3. Making Connections for Healthy Living). The Active Living and Movement Competence strands of the HALE curriculum for all grades were included for analysis. The Healthy Living strand was not included since its expectations pertained to health education and not physical education, which was the focus of this study. The curriculum for the college/university preparation courses within the Ontario secondary HPE Curriculum (2015) was not included in the current analysis since these courses are not required for Ontario secondary school students and remain optional, if available. Of note, the HALE course curriculum strands provide examples of activities that could be used to facilitate curriculum expectations in addition to hypothetical teacher “prompts” and student “responses” to “promote understanding of the intent of the specific expectations” (Ontario Ministry of Education, 2015, p. 25). It was

acknowledged that these prompts and responses did not “set out requirements for student learning” and “they are not written in language that represents the typical parlance or vocabulary of students” (Ontario Ministry of Education, 2015, p. 25). The following is an example of one student response that expresses the benefits of student choice:

Student Response: I’m more committed when I can choose activities that are fun, that interest me, and that suit my strengths. I also like being able to set my own goals and decide how I’m going to do the activities... (PPL30, p. 130)

The structural and linguistic analyses of selected text were completed using the qualitative software NVivo12 (QSR International Pty Ltd, 2018) to support data management, coding, and in-depth analysis. Structural analysis of the curriculum content and initial exploratory coding facilitated analysis decisions. Elements of the HALE curriculum coded for analysis included the overall course expectation, specific course expectations, teacher prompts and student responses, as well as the activity examples used in each element.

Linguistic analysis involved using in vivo coding as an initial coding technique to identify the following: activity examples (e.g., basketball, T’ai Chi, net game); verbs that indicated the expected student action (e.g., perform, demonstrate); as well as key words and concepts present throughout the curriculum (e.g., identifying when the word ‘equity’ was used within the text). Verbs identified within course expectations were then categorized as an action that was motor-skill dependent [e.g., “Perform” locomotor skills (B1.1), manipulation skills (B1.2)] or non-motor-skill dependent [e.g., “Describe” benefits, factors, strategies (A2.2)]. Physical activity examples were identified and categorized as individual or group activities. “In vivo” key words and concepts were further analyzed, grouped, and conceptualized as emergent discourses that were comprehensive in meaning and representation (e.g., the discourse of equity and inclusion).

Discourses were coded within the Curriculum in Context section of the document as well as within the HALE curriculum, grades 9 to 12. This conceptualization of emergent curriculum discourses facilitated an in-depth interdiscursive analysis of how various discourses “worked together” within the curricular policy document (Fairclough, 2001, p. 241).

The lead author offers transparency in her roles as a doctoral candidate in Rehabilitation Sciences, with postsecondary degrees in HPE and prior experience as a varsity athlete and coach of recreational children’s sport. Her experiences within sport, upheld by traditional ideologies of normative PE, place her in a unique position, as insider and outsider, to adopt a critical stance within the field. Reflexivity was embraced through memoing and a journal log in which the lead author documented analysis decisions, explored emergent findings, and considered alternate interpretations following consultation with team members.

Results

The Ontario HPE curriculum, Grades 9 to 12 (2015) comprised the following sections within 218 pages: Curriculum in Context (83 pages; 38%); HALE Curriculum (72 pages, 33%); Destination Course Curriculum (38 pages, 17%); Appendices and Glossary (18 pages, 8%); and Table of Content and Section Breaks (7 pages, 3%). The introductory section, termed “Curriculum in Context”, included the following subsections: Introduction, Overview of the Program, Considerations for Assessment and Evaluation in HPE, and Considerations for Program Planning in HPE. This section offered conceptual context and understanding of the frameworks, theories, and pedagogical approaches that supported and contributed to the HPE curriculum.

The analysis of language used in the identified curriculum text led to the identification of three discourses reflected within its description, expectations, and examples: (i) the discourse of

equity and inclusion; (ii) the discourse of opportunity; and (iii) the discourse of positive outcomes. These discourses provided insight into how inclusive education was reflected in the revised Ontario secondary HPE Curriculum (2015), with a unique focus given to inclusion as represented by the need for motor competence.

Discourse of Equity and Inclusion

Language used within the curriculum directly and indirectly reflected equity and inclusion. This discourse was evident in textual references within the curriculum that directly used the terms “inclusion” and “equity”, as well as through conceptual terms, such as “individuality”, “diversity”, “accounting for difference”, “accessibility”, “modification”, “adaptation”, and “acceptance”.

The curriculum subsection “Some Considerations for Program Planning in HPE” comprised content that specifically referenced equity and inclusion, including paragraphs about “Instructional Approaches and Teaching Strategies”, “Equity and Inclusive Education in Health”, and “Planning Health and Physical Education for Students with Special Education Needs”. The content of these sections clearly outlined the expectation of all teachers to provide inclusive physical education to all students. It was described that teachers are expected to provide an inclusive environment that respects diversity and difference and is student-centered by providing individualized, strength-based programming:

It is critical that teachers provide a physically and emotionally safe environment for learning by emphasizing the importance of safety in physical activity, treating students with respect at all times, being sensitive to individual differences, following all board safety guidelines, and providing an inclusive learning environment that recognizes and respects the diversity of all students and accommodates individual strengths, needs, and

interests. (Ontario Ministry of Education, 2015, p. 9)

The curriculum further acknowledged the specific differences in motor competence that teachers may see and highlighted the need for individualized programming if necessary:

... it is very important to provide choice and flexibility within activities and to ensure that learning experiences are designed to reflect individual students' developmental levels and adapted to suit learners of all abilities. Modifications should be made as needed to allow students to develop and work towards their own personal level of movement competence.

(Ontario Ministry of Education, 2015, p. 56)

Instructional approaches, such as Differentiated Instruction and Universal Design for Learning, were identified within the curriculum as teaching approaches to support students with diverse needs and abilities. Further, the teacher-student examples highlighted ways in which teachers could engage students in a direct problem-solving discussion about how to tailor an activity to individual student need:

Student Response: We could use a piece of sports equipment when doing fitness activities.

For example, if we didn't have a weighted bar to use while doing waist twists for flexibility, we could hold a hockey stick behind our shoulders instead...Someone in a wheelchair could hold a ringette stick in one hand and do side bends, gradually extending the stick farther away from their body and wheelchair. (PPL20, p. 118)

Linguistic analysis of the verbs used to express course expectations as motor-skill dependent or non-motor-skill dependent was completed across grades 9 to 12. The number of times that non-motor skill-dependent tasks were cited as curriculum requirements (109 examples) was higher than citations for motor skill-dependent tasks (63 examples). This analytic exercise further illuminated the discourse of equity and inclusion since diverse requirements

reflected a holistic view of PE without a predominant focus on motor skill performance. It clearly demonstrated an explicit purpose within the document to outline expectations that facilitated student “achievements” in domains complementary to a physical domain, such as outlining cognitive and social/affective expectations within the Active Living and Movement Competence strands of the curriculum. As examples, non-motor skill-dependent tasks required students to: demonstrate (an understanding), actively participate (in being prepared), describe (factors), explain (how), apply (analytical skills), use skills (planning skills), identify (resources), support (others), show respect (for decisions), plan (strategies), assess (suitability), display (leadership), and encourage (others), as non-exclusive examples. Motor skill-dependent tasks included the requirement to: perform (locomotor skills), actively participate (in activities), refine (skills), and implement (tactical solutions).

Discourse of Opportunity

Language used within the curriculum directly and indirectly reflected a discourse of opportunity. The discourse of opportunity was reflected in textual references that directly used the term “opportunity” as well as those that used concepts, such as “option” and “choice”. The use of the word “opportunity” represented contexts within the curriculum in which the student was presented with personal choice to make decisions best suited to their interests and needs. As an example, this was clear in the introductory sections:

The goal of Ontario secondary schools is to support high-quality learning while giving individual students the opportunity to choose programs that suit their skills and interests.

(p. 3)

The discourse of opportunity was also evident in references that cited the importance of creating options, which characterized students as valuing choice within physical activity participation:

Curriculum in context: To promote lifelong healthy, active living for all, it is important not to restrict students to game and sport activities. Many students prefer activities that do not involve team play, and these can provide ample opportunities for enjoyment and the development of fitness. (p. 36)

Teacher prompts also reflected an expectation that teachers would discuss with students the importance of gaining exposure to new activities:

Teacher prompt: Sometimes everyone does the same activity. Sometimes we have a choice of activities, including some that we haven't tried before. Why is it important to have choices and try new activities? (PPL10, p. 92)

Further, the teacher's role to provide choice within activities to account for differences in movement competence was overtly stated:

...it is very important to provide choice and flexibility...Modifications should be made as needed to allow students to develop and work towards their own personal level of movement competence. (p. 31)

Linguistic analysis of the activity examples used within expectation statements, teacher prompts, and student responses showed the breadth of options recommended for programming PE. In several examples, teachers were provided with an exhaustive list of possibilities within which they could operationalize expectations:

Curriculum in Context: Examples of individual and recreational activities include the following: endurance activities (e.g., long distance running or wheeling, swimming, power walking, orienteering); aquatics (e.g., swimming, synchronized swimming, aqua-fit); dance (creative; modern; folk; cultural; First Nation, Métis, and Inuit dance; ballet; jazz; hip hop); resistance and strength activities (e.g., weightlifting; wrestling; ball training;

yoga; Pilates; exercise bands; wall climbing; rope course activities; Arctic sports such as the Alaskan high kick, one-hand reach, arm pull; Dene games such as the pole push) [excerpt from complete list]. (p. 37)

Collectively, both individual and group activities were used frequently as examples [(n=204) and (n=124), respectively]. This showed a commitment within the curriculum to encourage both individual activities as well as games and team sports as emphasized in its text:

To promote lifelong healthy, active living for all, it is important not to restrict students to game and sport activities. Many students prefer activities that do not involve team play, and these can provide ample opportunities for enjoyment and development of fitness and movement skills related to control of body rhythm, movement aesthetics, creativity, sequencing, composition and stability. (p. 36)

Despite the curriculum's overt expression of opportunities for programming, it also acknowledged the possibility of resource and facility constraints and highlighted the need for teachers to "adapt":

Since equipment and facilities in individual schools across the province will vary, care has been taken to ensure that the expectations of this curriculum can be met in a variety of settings and using a broad range of equipment. The curriculum contains a wide assortment of examples and prompts that illustrate different ways of meeting the expectations.

Teachers can use these as a source of ideas for adapting the delivery of the expectations to meet the particular needs of students. (p. 59)

The curriculum also suggested that teachers may need to demonstrate both "creativity" (p. 59) and "resourcefulness" (p. 60) to fulfill the expectation of opportunity. The means through which

teachers could actualize “creativity” and “resourcefulness” was not overtly clear within the curriculum document.

Discourse of Positive Outcomes

Language used within the curriculum directly and indirectly reflected a discourse of positive outcomes. This discourse illuminated a diverse range of positive outcomes expected to result from a student’s active engagement in physical activity and achievement of curriculum requirements. This discourse was the essence of the stated vision for the Ontario secondary HPE curriculum (2015):

The revised health and physical education curriculum is based on the vision that the knowledge and skills students acquire in the program will benefit them throughout their lives and enable them to thrive in an ever-changing world by helping them develop physical and health literacy as well as the comprehension, capacity, and commitment they will need to lead healthy, active lives and promote healthy, active living. (p. 6)

Within all sections of the curriculum, there was an inferred expectation that a student who achieves curriculum expectations “to the best of his or her ability” (p. 14) would improve, have fun, get better with more practice, find enjoyment, transfer skills to other activities, be motivated, have increased confidence, and have a desire to participate in additional activities, leading to lifelong participation in physical activity. This expectation was evident in the following text:

Curriculum in context: Participation in physical activity provides students with a variety of opportunities for increasing their self-esteem and self-confidence and developing positive interpersonal skills and attitudes, including practices of fair play and respect for others. (p. 29)

A1.2: demonstrate an understanding of factors that contribute to their personal enjoyment of being active and that can support their participation in physical activity throughout their lives. (PPL20, p. 92)

It was also revealing that the positive outcomes associated with meeting curriculum expectations (e.g., increased confidence and competence) intricately linked the discourse of positive outcomes with the concepts of physical literacy and movement competence:

The Movement Competence strand helps students develop the movement competence needed to participate in physical activities through the development of movement skills and the related application of movement concepts and strategies. As students develop their confidence and competence, they will be developing their physical literacy. (p. 31)

It was further observed that “student responses” at each grade level of the curriculum placed an emphasis on the positive outcomes expected from physical activity participation. As noted previously, student responses within the curriculum were provided as a hypothetical student voice that offered teachers an illustrative ideal of the intent of curriculum expectations:

Student Response: Having the skills gives you the confidence of knowing you can do the things you need to do when you participate in sports, games, and recreation or fitness activities.... That kind of knowledge about an activity builds your confidence and makes it more likely that you will want to take part in the activity or even try new activities.

(PPL10, p. 118)

Student Response: To do something well, you have to work at it, so the harder I try, the more likely I am to improve. (PPL20, p. 112)

Attaining positive outcomes from physical activity was inferred for all students, since the potential of not meeting curriculum expectations was not explicitly described. On

the contrary, both teacher and student roles outlined a responsibility to ensure the “mastery” of course content:

Teacher Role: Teachers reflect on the results of the learning opportunities they provide and make adjustments to them as necessary to help every student achieve the curriculum expectations to the best of his or her ability. (p. 14)

Student Role: Mastering the skills and concepts connected with learning in the health and physical education curriculum requires ongoing practice, an effort to respond to feedback (to the extent possible), personal reflection, and commitment from students. (p. 12)

Discussion

The purpose of this paper was to conduct a CDA to explore how inclusive education is reflected in the revised Ontario secondary HPE Curriculum (2015). Structural, semiotic, linguistic and interdiscursive analysis of the Curriculum in Context and HALE courses, grades 9 to 12, facilitated a critical review of the curriculum, with a unique focus on inclusion as represented by the need for motor competence.

The current analysis reflects that there is a clear, overt discourse of inclusion and equity within the Ontario secondary HPE curriculum (2015) to support the inclusive education mandates established by the Ontario Ministry of Education. The curriculum includes direct statements of inclusion, citing programming for all students “irrespective of sex, gender identity, background or ability” (Ontario Ministry of Education, 2015, p. 31). It also encourages the use of instructional approaches to support varied student abilities and speaks to using a student-centered, skills-based approach to develop a PE program that addresses a diversity of student needs. Further, the curriculum outlines a set of expectations whereby measurable outcomes are based on both non-motor skill abilities and motor-skill abilities. This creates the potential for inclusive programming within which students with varied motor competence can achieve

academic success. Prevailing concerns in the literature that PE curriculum can overrepresent traditional ideologies of normative PE through dominant expectations of sport, performance, and fitness were not found in the Ontario secondary HPE curriculum (2015).

Options, Opportunities, and the Teacher’s Role

There is a clear discourse in the Ontario secondary HPE curriculum (2015) that highlights the multitude of options and opportunities to operationalize curriculum expectations. The curriculum espouses a discourse that suggests that opportunities and choices will be provided in an equitable manner to all students. Further, through choice and opportunity, the discourses present in the Ontario secondary HPE curriculum project an ideal system, whereby all students are included, and teachers can accommodate individual student needs, including variability in motor skills. Within this context, the curriculum supports inclusion by citing an expansive list of individual and group-oriented activities, with examples included in the expectation statements as well as in illustrative teacher prompts and student responses.

It is interesting that while the curriculum hosts an emphasis on choice and opportunity, it offers minimal recognition of system variability and constraints that may limit the choices exercised by student or teacher. For example, it is unknown which PE courses and activities are offered at each Ontario secondary school; schools do not offer the same PE courses or have access to the same resources and facilities. Hence, despite identical curricular expectations, the context of what inclusive education “looks like” in a given PE setting will depend on the opportunities available at the secondary school each student attends.

To determine if curriculum expectations reflect inclusion for students with varied motor skill abilities, an in-depth look at the types of physical activities available and selected within curricular programming as well as their situation-appropriateness may be needed (e.g.,

facilitating strength-based progressions in individual fitness activities versus emphasizing strategy and tactics in team-sport game play). As an example, Morley et al. (2020) recommend that all secondary PE students, including those with special needs, should “experience high-quality individual, self-paced activities, while being appropriately supported in team-based activities” (p. 2) to support PE success and perceived motor competence. Dargavel et al. (2017) found that one individually-based activity course in the Ontario PE curriculum – Personal and Fitness Activity (PAF) – was reported to have a physical activity component that positively influenced students’ post-secondary participation in physical activity, thus potentially contributing towards the curriculum goal of lifelong participation. This specific course can be offered as an optional extension of the Ontario HALE PE curriculum; however, its prominence across grades and schools, as an individually-focused secondary PE course, is unknown.

A notable omission from the Ontario secondary HPE curriculum (2015) is an articulation of solutions to address barriers faced by teachers who try to achieve the expectation of opportunity and choice. Yet existing gaps in implementation is evident in the PE literature. For example, despite mandated policies of inclusion for PE within Ontario, Barber (2018) recently identified discrepancies that are observed in practice, suggesting that challenges remain with the successful implementation of policy. Further, although extensive research explores teacher attitudes, beliefs, and intentions regarding inclusive PE, lack of access to facilities and resources (Qi et al., 2017; Rekaa et al., 2019; Wilhelmsen & Sørensen, 2017), as well as a lack of priority in timetable scheduling (Dwyer et al., 2006), remain factors that challenge the ability of teachers to implement inclusive PE. There is an ongoing scholarly discussion about the marginalization of PE in the school system, which can affect PE courses offered and the scheduling of “PE space” (Barber, 2018; Kilborn et al., 2016).

The Ontario secondary HPE curriculum (2015) clearly identifies a teacher's role to ensure that curriculum expectations are met by all students to the "best of their ability" (p. 93). Current research exploring barriers and facilitators to providing inclusive PE corroborates that the onus for ensuring inclusiveness is often "largely on the shoulders of teachers" (Haegele et al., 2020, p. 1). As stated in the Ontario curriculum, teachers are expected to "seek out" resources, mentors, and professional development to ensure effective delivery of the curriculum (p. 16). Specifically, the curriculum identifies differentiated instruction and universal design for learning as pedagogical approaches to build capacity and ensure that all students have equal opportunities and choice for meeting curriculum expectations. However, some researchers have challenged using the term "capacity building" in isolation when discussing teacher agency to effect change. Work by Priestley et al. (2015) highlights teachers' limits to effect change by "capacity building" alone, bringing attention to the "interplay of what teachers 'bring' to the situation and what the 'situation' brings' to the teacher, that is, inhibits or promotes." (pp. 7-8). To move beyond curriculum discourses of inclusion and opportunity that give policy documents credibility in supporting inclusive PE, recognition of situational factors that limit the provision of inclusive practice must parallel innovative policy and instructional approaches.

Positive Outcomes, Physical Literacy, and the Voice of Students

A third discourse present in the Ontario secondary HPE curriculum (2015) espoused positive outcomes for all students who achieve curriculum expectations, inferring, for example, that all students will improve, have fun, and gain confidence. While it is possible that students with low motor competence can achieve these goals, the curriculum does not acknowledge that these outcomes do not represent PE participation for all students. In considering the Ontario Ministry of Education's definition of inclusive education, "...Students see themselves reflected

in their curriculum, their physical surroundings and the broader environment...”(Ontario Ministry of Education, n.d.), one can question if all students see themselves reflected in the current PE curriculum if the curriculum only describes an ideal experience within PE.

The current analysis brings to light how the curriculum’s founding concept of physical literacy underpins the discourse of expected positive outcomes. This understanding is gained implicitly as the curriculum does not overtly describe how the concept of physical literacy is reflected through all course expectations. The Ontario curriculum does, however, describe physically literate individuals as “able to demonstrate a variety of movements confidently, competently, creatively and strategically” (Ontario Ministry of Education, 2015, p. 7). Yet, the curriculum does not offer an alternative to moving “confidently” and “competently” across diverse activities for a physically literate individual, and it is unclear if the curriculum’s definition of physical literacy accounts for varied abilities along a continuum.

Within current literature, physical literacy, as envisioned by its founder Margaret Whitehead (2001), is viewed as a progressive “theoretical perspective to underpin alternative physical education curricula” (Kilborn et al., 2016, p. 35) that challenges traditional ideologies of PE. In this transformative context, it is proposed that students of all abilities can achieve physical literacy, with the appropriate instruction and opportunities, which aligns with Whitehead’s (2010) original vision (*italics added for emphasis*):

As appropriate to each individual’s endowment, physical literacy can be described as a disposition in which individuals have: the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the lifecourse. (p.5)

The definition of physical literacy, adapted within the Ontario secondary HPE curriculum (2015) does not include essential words from Whitehead's (2001, 2010) original definition that clearly outlines physical literacy as accessible for all. For example, the simplicity of the phrase "*as appropriate to each individual's endowment*" was missing in the curricular document, which is surprising, given that the document purposively espouses a discourse of inclusiveness.

In a recent analysis, Young et al. (2020) suggested that a curriculum's representation of who can be defined as physically literate may be reflected in the assessment tools used to determine if students meet curricular expectations. According to Young et al. (2020), common measures of physical literacy are "less aligned" with Whitehead's (2010) more holistic definition of the term. The current analysis did not address the Ontario PE curriculum's outline for assessment and evaluation within the context of how physical literacy is defined. Such an exercise may shed light on the intended conceptual understanding of physical literacy in the Ontario secondary HPE curriculum.

Despite the recent publication of Canada's Physical Literacy Consensus Statement (Tremblay et al., 2018), research that considers varied conceptualizations of the term physical literacy is ongoing. For example, Canadian researchers found that perceived competence, motivation, and enjoyment are more strongly related to physical literacy than motor abilities (Cairney et al., 2019). International researchers have proposed that physical literacy is "individualized and non-contextual", which facilitates its application across diverse populations. Further, recent research proposes that physical literacy concepts, such as physical competence and confidence, may be determinants or outcomes of physical literacy rather than its defining elements (Shortt et al., 2019). Future revisions of the Ontario curriculum need to address more fully how physical literacy is conceptualized within the curricular document, how it represents

all student abilities within PE, and how assessment of physical literacy aligns with curriculum expectations. This missing link could influence how the current curricular discourses reflect inclusion. Of note, Gleddie and Morgan (2020) recently published an evidence-informed theoretical framework, the “Physical Literacy Praxis”, which may support future PE curriculum-building initiatives that integrate students’ development of physical literacy.

When considering if all students are reflected within the dominant discourses of the Ontario secondary HPE curriculum (2015), it is interesting that the only “representative” student voice in the document is hypothetical in nature. In advocating for curricular change, Penney et al. (2018) proposed the need to co-construct PE curriculum with students, a proposal that is supported by the current curriculum analysis. Discourses surrounding the normative PE student, one who achieves positive outcomes and is assumed to have a level of motor competence to facilitate success, need to be challenged and new discourses need to emerge from the student voice. Current research promotes student voice and agency by positioning students as partners through sharing their “opinions, experiences, and knowledge of schooling to improve learning outcomes and create inclusive relationships” (Robertson, 2017, p. 41). If inclusion is to be reflected in PE curriculum in a way that can create actionable change for students’ experience of PE, then future curriculum revisions must be rooted in the student voice – a voice that represents students with varied motor abilities and interests and expresses diverse needs within illustrations for teachers to encourage their understanding.

Limitations

Limitations of the current analysis include its finite focus of topic and document, which reflects a historical moment in time for one school system within one province. Yet, to the authors’ knowledge, no research or resource document is available that addresses implementing

inclusion within Ontario secondary PE. The present analysis offers a reflection that is both current and critical in scope. Further, the Ontario secondary HPE curriculum (2015) represents a unique document of focus since it has been recently revised both within the context of mandated provincial inclusion and equity policies as well as the pedagogical approach of physical literacy.

Conclusion

International calls for inclusive education to ensure equitable opportunities for all students are reflected in current policies and pedagogical approaches. Further to this, however, curriculum analysis is required to demonstrate whether inclusive education policy is represented in curriculum text. This paper offers an exemplar analysis to consider whether inclusiveness is reflected through discourse in the revised Ontario secondary HPE curriculum (2015). Overall, the curriculum reflected inclusivity through overt language and intention and, as such, holds the possibility for actionable change by emphasizing expectations that offer choice and opportunities beyond traditional notions of normative PE. Concerns were identified about the extent to which these ideals reflect the realities of the diverse educational contexts across the province. This concern may be similar in educational contexts beyond the scope of this study. Future research in inclusive PE is needed to explore “discourse in action”, considering both educator and student perspectives on how ideals of diversity and inclusion are (or are not) reflected in day-to-day practice. Similar CDA approaches could also address how varied elements of inclusion are represented through discourse in PE curriculum. The current analysis suggests that “building capacity” to facilitate inclusive PE requires support beyond policy — especially given the “space” that PE occupies. Further, conceptual clarification of physical literacy is needed within PE curricula that presents physical literacy as a holistic pedagogical approach and accessible to all.

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Table 1. An Analytical Framework for Critical Discourse Analysis (adapted from Fairclough, 2001, p. 236)

Stage		Explanation	Manuscript Section that Addresses
1	Focus on a social problem that has a semiotic aspect*	Begin with a social problem rather than a 'research question' to facilitate CDA's methodological aim of producing knowledge which can lead to emancipatory change	Introduction: <ul style="list-style-type: none"> Identifies the social problem to provide justification for the current research Identifies the purpose of the paper which is rooted in the social problem addressed
2	Identify obstacles to the social problem being tackled*	Analysis of the social problem can involve an analysis of the network of practices that the 'problem' is located within, interrelated elements of semiosis, as well as analysis of the discourse itself (structural analysis, interactional analysis, interdiscursive analysis, linguistic/semiotic analysis)	Methods & Results: <ul style="list-style-type: none"> Corpus: ON Secondary PE Curriculum (2015) Structural Analysis: Full document Linguistic Analysis: Verb use (motor-skill dependent/non motor-skill dependent); Activity examples (individual/group activity) Semiotic Analysis: identification of in vivo discourses within the text Interdiscursive Analysis: conceptualization of curriculum discourses present within the text
3	Consider whether the social order (network of practices) 'needs' the problem*	Ask whether those who benefit most from the way social life is organized have an interest in the problem not being resolved	Discussion: <ul style="list-style-type: none"> Through a presentation of discourses present within the ON PE Curriculum, the discussion considers how traditional ideologies of normative PE and the normative PE student persist and highlights that facilitating inclusive PE requires an operationalization of choice and opportunity that may be limited by current resources, facilities, and course programming
4	Identify possible ways past the obstacles*	Look for unrealized possibilities for change in the way social life is currently organized	Discussion: <ul style="list-style-type: none"> Reflection of possibilities within current curriculum document that reflect options for inclusive physical education
5	Reflect critically on the analysis*	Requires the analyst to reflect on where she is coming from and her own social positioning	Methods, Results & Discussion: <ul style="list-style-type: none"> The importance of reflexivity in qualitative methods is highlighted and addressed by the primary author

* Fairclough's 5 Stages of Critical Discourse Analysis (Fairclough, 2001, p. 236)

Chapter 3

Title of Paper: A rapid scoping review exploring the use of universal design for learning in physical education

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Abstract

Purpose: Universal design for learning (UDL) is an inclusive educational model that promotes proactive curriculum design, accessible for all students. Resources rarely apply the UDL principles in physical education settings, leaving teachers with insufficient information. This study aimed to map and describe literature that highlights UDL and physical education to support inclusive physical education.

Method: We followed current recommendations for rapid scoping review methods and searched four databases: Physical Education Index, Eric, Web of Science, and Sport Discus. Grey literature was searched in Google.

Results: There is a small but growing literature base exploring UDL in a physical education setting. Few articles met inclusion criteria related to key definitions, principles of the UDL framework, or applied examples to promote understanding and implementation.

Discussion: Research needs to explore the application of UDL in physical education. Outcomes-based studies may offer guidelines across curriculum and grade levels to support policy and implementation recommendations.

Keywords: education, high school, PE, inclusion, qualitative

Introduction

Inclusive education policies outline teachers' need to create a classroom environment in which all students feel that they belong, can engage equally, and have access to the same curriculum regardless of levels of functioning or differences (Finkelstein et al., 2019; Tripp et al., 2007). Following international legislation, such as the Salamanca Statement (1994) and UNESCO (2005), inclusive education meant that placement in a general education classroom was “not enough” with respect to equity in learning (Alzahrani, 2020). Inclusion moved beyond integration to an expectation that students with special learning needs and disabilities – visible or invisible – as well as second language learners, and those from varied cultural and socioeconomic backgrounds, needed to have a sense of belonging, feel valued, and be a part of all classroom activities (Tripp et al., 2007).

Universal design for learning (UDL) represents an educational model for providing inclusive education that facilitates proactive and flexible curriculum development that is accessible for all students (Rao et al., 2014). The original concept of universal design was founded in architectural innovation – the proactive design of the physical environment to remove or limit barriers in order to make public spaces as accessible to as many people as possible (Mcguire et al., 2006). By the early 1990s, this conceptual approach was adapted to learning environments in the hope that applying a proactive approach to curriculum design could “plan for” variable learning among students (Rao & Meo, 2016). The common sense appeal of a pedagogical approach that thrives on learner variability “captured the imagination of policy makers, researchers, administrators, and teachers” (Edyburn, 2010, p. 34), which stimulated UDL's adoption and accounted for its success across environmental settings.

The term Universal Design for Learning was coined by The Centre for Applied Special Technology (CAST) in the mid-1990s and represents a framework, based on the neuroscience of human learning that describes three “networks” of the brain responsible for learning variability among individuals (CAST, 2018). The networks are termed (1) the affective learning network (responsible for *why* students learn), (2) the recognition learning network (responsible for *what* students comprehend when they learn), and (3) the strategic learning network (responsible for *how* students learn and express what they learn) (CAST, 2018). Stemming from the foundation of these three learning networks, CAST has proposed three corresponding principles that can be used to support learning for all (Rao et al., 2014): (1) provide multiple ways of engagement (varied ways of supporting students to be in control as well as emotionally and cognitively engaged in their learning), (2) provide multiple means of representation (varied means of providing information and supporting students to process and comprehend content), and (3) provide multiple means of action and expression (varied ways of assessing student learning or supporting students to demonstrate what they know or can do) (Vanessa et al., 2021). CAST’s framework further operationalizes these principles through nine specific guidelines and 33 checkpoints that culminate in the creation of an expert learner: a student who is resourceful, knowledgeable, strategic, goal-directed, and motivated (CAST, 2018). The proactive design of a curriculum that attempts to accommodate all students is UDL’s defining feature, one that sets it apart from differentiated instruction (DI), an alternative inclusive education approach that modifies existing course curriculum based on individual student needs (van Munster et al., 2019).

As education policies have mirrored shifting global priorities mandating inclusive pedagogy, teachers have been presented with a changed landscape of ‘abilities’ within their

classrooms, often with a limited understanding of what works best to address diverse student needs. While widespread support for the principle of inclusion is present throughout the literature, how most effectively to implement inclusive education across settings or “even what it consists of” remains inconclusive (Alzahrani, 2020, p. 78).

Physical educators have not been exempt from the shift to inclusive pedagogy, and several systematic reviews have explored current trends in the field of inclusive physical education (IPE) (Qi & Ha, 2012; Tant & Watelain, 2016). While there is an overall acceptance that IPE can be a positive experience for students both with and without special needs (Block & Obrusnikova, 2007), research findings highlight that many students with disabilities still experience exclusion and a “lack of belonging in PE” (Rekaa et al., 2019, p. 36). Further, research indicates that physical education teachers feel unprepared and unconfident regarding how to provide instruction that reflects IPE (Rekaa et al., 2019; Tant & Watelain, 2016).

In Ontario, Canada, UDL has been highlighted in curriculum documents as a means to provide IPE (Ontario Ministry of Education, 2015) with similar guidelines noted in other countries, such as Australia (Capp, 2017). However, a preliminary search suggests that the field of PE is lacking resources for physical educators regarding how to apply the UDL principles in PE settings, leaving teachers with insufficient knowledge and understanding to implement curriculum recommendations. The Ontario curriculum document identifies one resource addressing UDL (Ontario Ministry of Education, 2013); however, this publication does not apply UDL to PE settings, and offers only examples of UDL principles as applied to a typical academic classroom. In a recent review exploring how researchers applied and assessed universal design (UD) educational models in educational settings across preK-12 and post secondary settings, Rao et al. (2014) did not document any research focusing on the implementation of UDL in PE.

The reality remains that teachers, including PE teachers, are being encouraged to adapt UDL principles to provide inclusive education; yet, with a lack of clarity in the literature, teachers remain unclear as to what UDL is or whether they are ‘doing’ it (Edyburn, 2010, p. 38). PE teachers need resources about UDL – ones that reflect a common framework, subscribe to one set of principles, and include clear examples that apply to their setting. To our knowledge, no synthesis of literature exploring UDL and PE has been published. It would, therefore, be beneficial to physical educators to identify and critically reflect on the literature incorporating UDL principles within a school PE setting.

A rapid scoping review approach is appropriate when there is a benefit to stakeholders to receive information in an accelerated manner, compared to the 1-2 years for publication of findings from a traditional scoping review. A rapid review is typically completed within 6 months, with publication soon after (Garritty et al., 2020). Given that PE curriculum documents name UDL as an inclusive teaching approach, an exploration and synthesis is timely and warranted. This rapid scoping review aims to map and describe the literature that highlights UDL and uses PE-specific exemplars and guidelines to support physical educators to implement inclusive PE. This review will answer the following research questions:

- i) How is UDL applied or demonstrated within the context of elementary and secondary PE?
- ii) How comprehensively is UDL explained?
- iii) How is the integration of UDL and PE presented within the larger discussion of inclusive PE?

Method

Rapid Scoping Review

A rapid scoping review was used to gather and synthesize current literature that discusses UDL in the PE context. Peters et al. (2020) offer the most updated recommendation for scoping

review methods. Their framework, which built upon the original work of Arksey and O'Malley (2005) and Levac et al. (2010), guided each stage of the review to ensure that search strategies were transparent, systematic, and reproducible.

A scoping review is a type of knowledge synthesis that can address broad, conceptual topics, allowing researchers to map and explore available evidence, identify knowledge gaps, and describe key concepts that underlie a field of research (Peters et al., 2020). Scoping review methods have become increasingly defined, demonstrating rigor and reliability similar to other systematic methods of knowledge synthesis (Peters et al., 2020).

Rapid reviews, as a method applied to existing types of reviews, have emerged to prioritize stakeholder needs that require a timely synthesis of literature (Garritty et al., 2020). A clear a priori methodology is essential to meet predetermined limits of a research team's time and resources (Peters et al., 2020). Further, timeline needs should equally match the benefit of timely publication (Tricco et al., 2017). Specific review criteria can be modified to enhance the rapid review's applicability, including date limits, language, study design and geographical restrictions (Tricco et al., 2017). Methodological decisions to facilitate the current rapid scoping review were based on the work of Tricco et al. (2017) and Garritty et al. (2020).

To map a field of study effectively, a scoping review can include both published and unpublished sources relevant to the proposed research question(s) (Peters et al., 2020). Given the novelty of the research topic, searching the grey literature (unpublished sources) was an essential component of this rapid scoping review. Although various definitions of grey literature exist, consensus supports that grey literature is published externally to commercial publishing organizations (Adams et al., 2016) and is “inaccessible via bibliographic databases” (CADTH, n.d., p. 1). Further, grey literature is differentiated from grey data, which is considered both

“web-based and user-generated” (Adams et al., 2016, p. 11). The current study searched both grey literature (published PDF resource documents) and grey data (website landing pages).

Tricco et al. (2017) recommended using an experienced team to enhance the efficacy and timeliness of a rapid review. The current research team included expertise in both rapid scoping review methods (WC, LR) and content areas of UDL (CM, WC), inclusive education (CM, WC), and physical education (ES). The lead researcher (ES) established the study protocol which (WC) and (CM) reviewed. We adhered to the PRISMA extension for scoping reviews (PRISMA-ScR) (Tricco et al., 2018) for study reporting.

Stages of Rapid Scoping Review

Setting the Research Question

Current guidelines for scoping review synthesis recommend using the PCC (Participants, Concept, Context) framework for question development (Peters et al., 2020). This framework allows for a question that addresses the breadth of a topic yet provides parameters to articulate the focus of inquiry. In the current study, these elements are identified as: a) Participants: physical educators; b) Concept: resources integrating UDL principles with PE-specific applications to guide inclusive practice; and c) Context: school-based physical education.

Setting Eligibility Criteria

Setting the search criteria for a rapid scoping review is critical to balance study timeliness and methodological rigour (Garritty et al., 2020). Defining key objectives and setting precise search criteria that address the study’s objectives are essential for manageable data collection within set timelines (Garritty et al., 2020). Given the novelty of the research topic, a review of both published and grey literature was conducted. For publications, inclusion criteria were as follows: English-language only, peer-reviewed, published between 1990 to 2020 (as the term

UDL was first adopted by CAST in the early to mid-1990s), and conducted in a developed country. Publications addressed the key concepts of the research question, namely reflecting on UDL as applied within the field of PE. The use of the term ‘physical education’ and affiliated search terms placed a contextual limit to studies within an educational setting. Further, the application of UDL principles, within a PE context, had to be present in a manner that would help a teacher to implement UDL in a PE class setting as a distinct and intentional teaching approach. We excluded the term ‘physical activity’ and associated terms to limit search findings within education. We also excluded editorials, quasi-editorials, books, and dissertations.

Searching the Literature

Peer Reviewed Literature. A search strategy plan was created in consultation with two university health science library liaisons. Endnote (Clarivate Analytics, 2018) and Covidence (Veritas Health Innovation, 2018) were used to increase review efficiency. Tricco et al. (2017) recommended using two or more databases for a comprehensive rapid review. A recent systematic review successfully explored research on teaching in physical education using three databases (Marttinen et al., 2019). To expedite the current review, the same databases were selected, and a field-specific database, Sport Discus, was added. Databases used were: 1) Physical Education Index, Proquest (1970- Present); 2) Eric (1966-Present); 3) Web of Science, Core Collections (1976-Present); and 4) Sport Discus, EBSCO (1830 to Present).

Initial search terms for the concept of UDL were identified using a current scoping review (Kennedy et al., 2018) and were further reviewed with a team member who is a content expert in the field (WC). The use of the term ‘physical education’ was restricted to the term physical education and its variations (e.g., phys ed, PE). Consultation with the library liaison and an initial pilot search ensured a set of terms that were targeted and comprehensive. Two final search

strings were combined using the Boolean factor ‘OR’ to combine all concept terms for UDL (S1) and Physical Education (S2), respectively, and are outlined in Table 1. All citations were uploaded into Endnote software and duplicates were removed. Citations were then imported into Covidence to facilitate screening. Additional duplicates were removed before screening. Additional citations were identified through grey literature searches.

Study Selection – Title and Abstract Screening. Two reviewers (ES and LR) pilot screened 50 articles independently. The same reviewers completed title and abstract screening for all citations, with conflicts resolved by consensus.

Study Selection – Full-text screening. A screening form was developed and piloted by the same two independent reviewers (ES and LR) using 15 articles. The reviewers then screened all full-text articles independently to select articles for data extraction, with conflicts resolved by consensus. The reference lists of selected articles were hand-searched (ES) to determine if potential articles meeting the selection criteria were missed. ES completed and verified data extraction from the 7 selected articles (see Appendix A).

Grey Literature. The grey literature was searched using the same search strings and inclusion/exclusion criteria as the peer-reviewed literature, with modifications for the targeted search engines. We completed pilot searches within two search engines (Google and DuckDuckGo), using advanced search features for domain type (e.g., .org, .gov, .edu), document type (e.g. .doc vs .pdf), and search terms (e.g., ‘any of’ vs ‘exact words’) to determine the most effective combination as determined by number of relevant website hits and most pertinent publication documents accessed. Two final searches were completed for PDF documents and website landing pages using the Google search engine as outlined in Table 1. The lead researcher (ES) searched the results for relevance (i.e., literature addressed both UDL and/or PE) and

document type (i.e., PDF or website landing page). All potential grey literature sources were included for full text review. Reasons for exclusion are listed in Table 1. Two independent reviewers (ES and LR) completed a pilot review using 10 documents. The same reviewers screened all full-text documents independently, with conflicts resolved by consensus.

Data Extraction.

The lead researcher (ES) developed and piloted a data extraction form based on the study's aims and research questions; it was reviewed by the team content expert in UDL and scoping reviews (WS). ES completed and verified data extraction from selected articles (see Appendix A). Garritty et al. (2020) indicated that single reviewer data extraction can be completed for rapid reviews when only study characteristics are extracted. Critical appraisal analysis was not done since evaluating sources for best evidence was not a key study objective (O'Brien et al., 2016).

Results

A PRISMA diagram outlining the article selection process is provided in Figure 1. A total of n=1145 citations were identified through database searches and a total of n=1107 articles remained for screening after duplicates were removed. Two additional citations were identified through grey literature for a title and abstract review of n=1109 articles overall. A Kappa score of 0.90 was calculated for the pilot screen of 50 articles and a Kappa score of 0.84 was calculated for the title and abstract screening of all articles. In total, n=38 articles met all inclusion criteria for title and abstract screening and were selected for full-text screening [Primary inclusion criteria: presence of either term (or related terms) “physical education” and “universal design for learning” in an educational context]. A Kappa score of 0.74 was calculated for the pilot screening of 15 full-text articles and a Kappa score of 0.84 was calculated for the

full-text screening of all articles. A total of $n=7$ articles met all inclusion criteria and were selected for data extraction [Primary inclusion criteria: a peer-reviewed, English-language article that defined the UDL framework (CAST, 2018), addressed key concepts of the research question, and included applied PE examples]. No new articles were identified when the reference lists of these 7 articles were hand-searched. A total of $n=30$ grey literature sources were included for full-text review. Reviewers attained 100% agreement for the pilot screening of grey literature using 10 documents. Overall, 97% agreement was attained for the full-text screening of all documents. No documents from the grey literature search were selected for full-text extraction since inclusion criteria were not met.

Data extraction: Descriptive characteristics

A total of 7 published articles met the search criteria for full-text extraction. All articles were published in 2018 ($n=2$) and 2019 ($n=5$) in the United States. Each article had a different first author, but two authors had a prominent role in 3 of the papers. Six articles were published in professional practice journals: *Journal of Physical Education, Recreation & Dance (JOPERD)* ($n=4$); *Palaestra* ($n=2$); and one original case study was published in *Adapted Physical Activity Quarterly*. All articles discussed UDL within the context of providing inclusive PE classes for all students and diverse learners; articles highlighted diverse learners as students with and without disabilities as well as English language learners, gifted learners, and those with varied socioeconomic status and cultural backgrounds.

The focus of the articles included: curriculum development ($n=2$), activity-specific lesson planning ($n=2$), physical education teacher education (PETE) programs ($n=1$), and as an overview for general education (K-12) ($n=2$). The single research article provided an overview that focused on identifying inclusive PE strategies used within one school's elementary PE

classes. Levels of education addressed within the selected articles included: preschool (n=1), elementary (n=4), middle/high school (n=1), and teacher physical teacher education (PETE) programs (n=1). UDL was the primary focus of four articles: (1) UDL as a curriculum building tool to align UDL principles with PE national standards (Kennedy & Yun, 2019); (2) UDL as a framework for IPE in K-Grade 12 PE classes, with specific examples for grades 5 and 8 (Gilbert, 2019); (3) ways in which UDL could be introduced and integrated into PETE programs for K-Grade 12 preservice teachers (Lieberman & Grenier, 2019); and, (4) implementation of elementary PE teaching approaches based on UDL (van Munster et al., 2019). In three articles, UDL was an indirect focus: (1) description of a preschool curriculum developed using an applied UDL approach to promote motor development and school readiness (Aronson-Ensign et al., 2018), (2) use of a climbing wall PE activity to promote inclusion in middle/high school by incorporating UDL principles (Grenier et al., 2018), and (3) using a UDL approach in creative dance class to provide an inclusive elementary PE experience (Cleland Donnelly & Millar, 2019).

Data extraction: Explaining the UDL framework and the use of PE examples

Five articles described UDL as a proactive framework for designing an inclusive curriculum as promoted by CAST (2018) (Cleland Donnelly & Millar, 2019; Gilbert, 2019; Kennedy & Yun, 2019; Lieberman & Grenier, 2019; van Munster et al., 2019). Two articles described UDL as a ‘strategy’ (Aronson-Ensign et al., 2018; Grenier et al., 2018); however, one did not highlight the proactive element of UDL (Aronson-Ensign et al., 2018) and the second described the proactive element as ‘design-in’ (Grenier et al., 2018). All articles outlined UDL’s guiding principles from the CAST framework. One article did not explicitly include the principle

“multiple means of representation”, but indirectly referred to its meaning in suggested strategies (Cleland Donnelly & Millar, 2019).

Almost all articles clarified the intended meaning of UDL’s three principles; however, the wording was variable: three articles defined the principles using the “what/why/how of learning” approach presented by CAST (Kennedy & Yun, 2019; Lieberman & Grenier, 2019; van Munster et al., 2019); two articles used the terms “differences in task complexity and expectations/ motivates/demonstrates” (Aronson-Ensign et al., 2018; Cleland Donnelly & Millar, 2019); and one article clarified the UDL principles using the terms, “performance and assessment/ interaction with content/instruction”(Gilbert, 2019). One additional article did not clarify or define the principles, but indicated that the guiding principles of the activity were given "while considering the principles of UDL" without being explicit about which activity guidelines represented which UDL principle (Grenier et al., 2018). Further, one article offered extensive activity lesson plans; however, how the lesson plan directives related to the CAST framework were not outlined overtly (Cleland Donnelly & Millar, 2019).

Four articles provided clear examples for each UDL principle outlined (Aronson-Ensign et al., 2018; Gilbert, 2019; Lieberman & Grenier, 2019; van Munster et al., 2019) and two articles did not explicitly match each UDL principle with an example (Cleland Donnelly & Millar, 2019; Grenier et al., 2018). One article aligned UDL principles with statements that represented a national standards’ physically literate individual relative to the PE curriculum (Kennedy & Yun, 2019). This article also highlighted the relationship between UDL’s guiding principles and creating an ‘expert learner’ as outlined by the CAST framework (Kennedy & Yun, 2019). Tables were used in four articles to organize and present information clearly for the reader; however, in

many cases, the information in the tables did not directly associate UDL principles with examples (Garritty et al., 2020; Kennedy & Yun, 2019; van Munster et al., 2019).

UDL and DI are distinct teaching approaches for addressing learner variability; however, in two articles, there was incongruency with the use of the term “differentiated instruction” and how it interrelates with the UDL framework in a PE context. Kennedy and Yun (2019) indicated that UDL concepts are very similar to DI and that “the methods for creating a curriculum using UDL are the *differentiated instructional decisions...*” (p. 27); Lieberman and Grenier (2019) suggested that UDL is used to facilitate differentiated instruction by stating “...to *differentiate instruction* in physical education for all students, UDL affords multiple means of ... (p. 3). van Munster et al. (2019) offered clear definitions and explanations to distinguish between UDL and DI as teaching approaches; however, they used two different terms, UDL and universally designed instruction (UDI), to discuss UDL in a PE context.

Discussion

The purpose of this study was to map and describe the literature highlighting UDL and the use of PE-specific examples and guidelines to support the implementation of IPE. Findings from our rapid scoping review show that there is a recent growing literature base that explores the application of UDL in a PE setting, justified by the need to provide inclusive education to diverse learners. However, few articles met the study’s specific criteria related to key definitions or principles of the UDL framework or applied PE examples to promote understanding of UDL implementation.

How is UDL applied or demonstrated within the context of elementary and secondary PE?

The application of UDL in education has grown since its introduction in the 1990s; however, researchers and professionals in PE have only recently documented the UDL

framework and its principles as applied to the PE curriculum. The findings of this rapid scoping review highlight that this growth has been most common in the elementary school setting (Cleland Donnelly & Millar, 2019; Gilbert, 2019; van Munster et al., 2019), with initial applications in the preschool setting (Aronson-Ensign et al., 2018). Grenier et al.'s (2018) was the only article in our review that provided a middle or secondary school example (a climbing wall activity). However, the article did not provide direct associations between recommended in-class strategies and UDL principles. Gilbert (2019) presented an overview of UDL for grades K–12, yet the examples provided were for Grades 5 and 8 only. The goal of the article by Lieberman and Grenier (2019) was to ‘infuse’ UDL into a PETE program, which, while not specific to secondary school programming, could include application to this context by informing teachers streamed to teach in this setting, but this was not made explicit.

The pooled literature about UDL is reduced when a specific focus is considered, such as inclusive physical education in secondary school. Yet a concerning situation exists in descriptions of PE at the secondary school level: PE participation decreases, particularly for female students (Banville et al., 2021), and it is questionable whether PE’s predominant focus on multi-activity, sport-based curriculum accurately represents the physical activities preferred by most secondary students (Banville et al., 2021; Ison et al., 2021). Calls to create more relevant and meaningful PE opportunities for students invite educators to revisit and reconsider the current PE curricula (Banville et al., 2021; Beni et al., 2017). Integrating UDL into curriculum development at the secondary school level may play a key role in this re-evaluation.

Increased clarity is essential regarding how to apply the UDL framework in curriculum planning at the secondary school level since proactive curricular design is a core element of the UDL framework. Kennedy and Yun (2019) apply UDL to the national PE standards in the

United States but several sections of this article lack clarity for physical educators not familiar with UDL. Rao and Meo (2016) offer an approach that uses UDL to create a ‘standard base lesson’ from curriculum expectations, complete with explanations and user-friendly descriptions, but their approach is not tied to PE. For physical educators to benefit from the full capacity of the UDL framework, it is essential to continue to include examples of UDL implementation in the secondary school setting, at the curriculum and classroom level.

How comprehensively is UDL explained?

Similar to Ok et al., 2017, the most pervasive concerns of the current review were persistent discrepancies in terminology as well as in how authors clarified UDL principles and reported their application to PE examples. These findings were particularly concerning since we used strict criteria to include only articles that adhered to the CAST framework, highlighted its primary principles, and provided explanatory PE exemplars in the school setting. Given this, we expected to see precise standard reporting among terms, definitions, and explanations within this small subset of published literature.

Researchers and advocates in the field need to remember that UDL remains far from common knowledge, particularly in the field of PE. Given the abstract and conceptual nature of UDL principles and definitions, authors should make a concerted effort to use consistent terminology, definitions, and explanations if the understanding and implementation of UDL are to permeate the practice of PE (Mcguire et al., 2006). This reflection highlights a strength of the current review. The lead researcher initiated this review as an informed academic in PE with little knowledge of UDL. As such, this researcher’s reflections may represent the experience of others in the field as they attempt to understand the application of UDL to PE curriculum for the first time. The myriad definitions of UDL and its principles often seem inaccessible due to a lack

of clarity, leading them to be unmemorable, and often required multiple reads to reach a common understanding of terms and definitions across studies.

The results of our review demonstrate that many articles written for professionals to inform and invite their use of UDL have simplified the UDL framework in explanation. This may be purposeful to aid others' emerging understanding of UDL. It also helps to explain why many articles were excluded from the full-text extraction stage of this review. Several full-text articles introduced UDL as a teaching approach for inclusion but omitted an explanation of its framework or principles and did not illustrate application of its principles through PE examples. In the articles selected for extraction, the presentation of the framework, the application of its principles to a PE exemplar, and a clear message of how to implement the approach across all education levels were present only in varying degrees. To aid understanding, several articles referenced external sources to provide clarity to the UDL framework; however, these sources (e.g., CAST website) did not offer application to the field of PE, and other resources (e.g., UDL curriculum tool) were not easily located (Kennedy & Yun, 2019). These findings are concerning if UDL is a teaching approach that educators *should* adopt to provide inclusive education (Ontario Ministry of Education, 2015, p. 59).

Despite concerns regarding clarity and comprehensiveness in the literature we reviewed, the results of our study show promise in the quality and availability of literature for physical educators who wish to further their understanding of UDL. In particular, leaders have attempted to bring consistency to the understanding of the CAST UDL framework as it applies to PE. Of note, these leaders are authors on three of the seven articles included in this review (Grenier et al., 2018; Lieberman & Grenier, 2019; van Munster et al., 2019), with a published text book just out (Lieberman et al., 2020). Our review's inclusion criteria did not include books, and thus the

text was not addressed for analysis, yet it should not be overlooked in future resource lists for physical educators.

How is the integration of UDL and PE presented within the larger discussion of inclusive PE?

The articles selected for our review clearly justified the need to incorporate the UDL framework into the PE curriculum as a pedagogical approach to address policies and mandates for inclusive education. Further, all articles reviewed outlined that UDL is meant to address the needs of all students, including students both with and without disabilities, diverse socioeconomic status, language barriers, or other invisible concerns that create challenges to learning (Lieberman 2019). All except one article (van Munster et al., 2019) were published in a professional practice journal. Of the original 38 articles selected for full-text screening, the majority were published in similar professional publications. Only two of the initial full-text articles selected for screening were original research articles, which shows a substantial gap in the literature that merges the fields of UDL and PE. Research initiatives are notably absent.

In a recent meta-analysis of literature on UDL and education, Capp (2017) determined that UDL is effective in enhancing the student learning process, yet highlighted that outcome-based research demonstrating the effectiveness of UDL is still lacking. Without this evidence base, professional practice articles – which have emerged due to the need to inform physical educators about UDL – can at best offer suggestions and interpretations that reflect an applied understanding of UDL in a PE setting. It is still unknown what works most effectively regarding UDL implementation in PE.

The published research study in this review (van Munster et al., 2019) used interview data to examine inclusive teaching approaches used by PE teachers to identify how they reflected

Normalized Instruction (NI), Differentiated Instruction (DI), or universally designed instruction based on the principles of Universal Design for Learning (UDL). In doing so, the researchers uniquely offered a ‘live’ example of how these teaching approaches could be operationalized within PE and what differences between DI and UDL might look like in practice. If UDL is to gain traction among the repertoire of strategies that physical educators use, then there needs to be a clear articulation and understanding of how UDL and DI are different but also interconnected teaching approaches. CAST (2014) supports the presence of synergistic strategies between UDL and DI approaches, but highlights that the key difference is the proactive design of the environment and curricula (UDL) versus the response to individual needs (DI). Moving forward, it is the responsibility of researchers and professionals to provide a unified presentation and application of inclusive teaching approaches to the field of PE. Anything less may invite confusion among physical educators about what UDL is, and how it can benefit and enhance their current teaching practices.

Limitations

Articles may have been missed from our review or published after the review was completed. The latter may be relevant given our use of rapid scoping review methodology, as only four databases were searched within a short time and search terms included those relevant to ‘physical education’, but not the term ‘physical activity’. Further, we focused on the inclusion of the UDL framework published by CAST and the application of its principles in a PE setting. It is possible that other articles that clearly articulate the application of UDL principles in a nonspecific-PE setting may be a resource for the use of UDL in PE (Rao & Meo, 2016). However, the focus on providing physical educators with examples of UDL in PE was a primary objective of this review, and articles solely focused on UDL did not meet inclusion criteria. In

addition, the grey literature search may have been limited by the use of Google as the only search engine, despite using advanced search features. Consultation with stakeholders was not facilitated for this rapid review.

Implications for Research

The call for evidence-based research evaluating the effectiveness of UDL on educational outcomes in varied educational settings and populations remains mostly unanswered (Capp, 2017; Rao & Meo, 2016). Smith et al. (2019) have documented recommendations for a national UDL research agenda. The findings of our review echo the need to move past merely publishing descriptions of UDL without application (Rao et al., 2014), and they support outstanding concerns with multiple frameworks, inconsistent terminology, lack of definitions as well as limited applied understanding that make it difficult to proceed with research that can draw comparisons and reach conclusions (Rao et al., 2014; Smith et al., 2019). As the field moves forward to establish an evidence base for UDL in education generally, this study illuminates a message of importance: *let's not forget PE*. We need to ensure that the educational setting of PE is included in future research that guides educational policies and practice recommendations related to UDL. The potential role of UDL in supporting inclusive pedagogy within PE is one pathway that might lead towards more meaningful physical education experiences for all students.

Implications for Practice

Our research explored the extent to which UDL principles are being applied to support the professional development of physical educators and to contribute to inclusive pedagogy in practice. Current literature suggests that training in inclusive education is sought by educators (Griful-Freixenet et al., 2020), and that additional training can lead to more positive attitudes

about inclusive education (Holmqvist & Lelinge, 2020), with professional development in UDL leading to more inclusive lesson planning (Capp, 2017). The current resource base to support professional development in PE is small but growing, and future contributions with outcomes-based evidence will help to offer specific implementation guidelines across curriculum and grade levels. With continued growth in the field, it is hoped that physical educators can begin to find more clarity and be able, effectively, to meet the recommendation to adopt UDL within inclusive PE practice.

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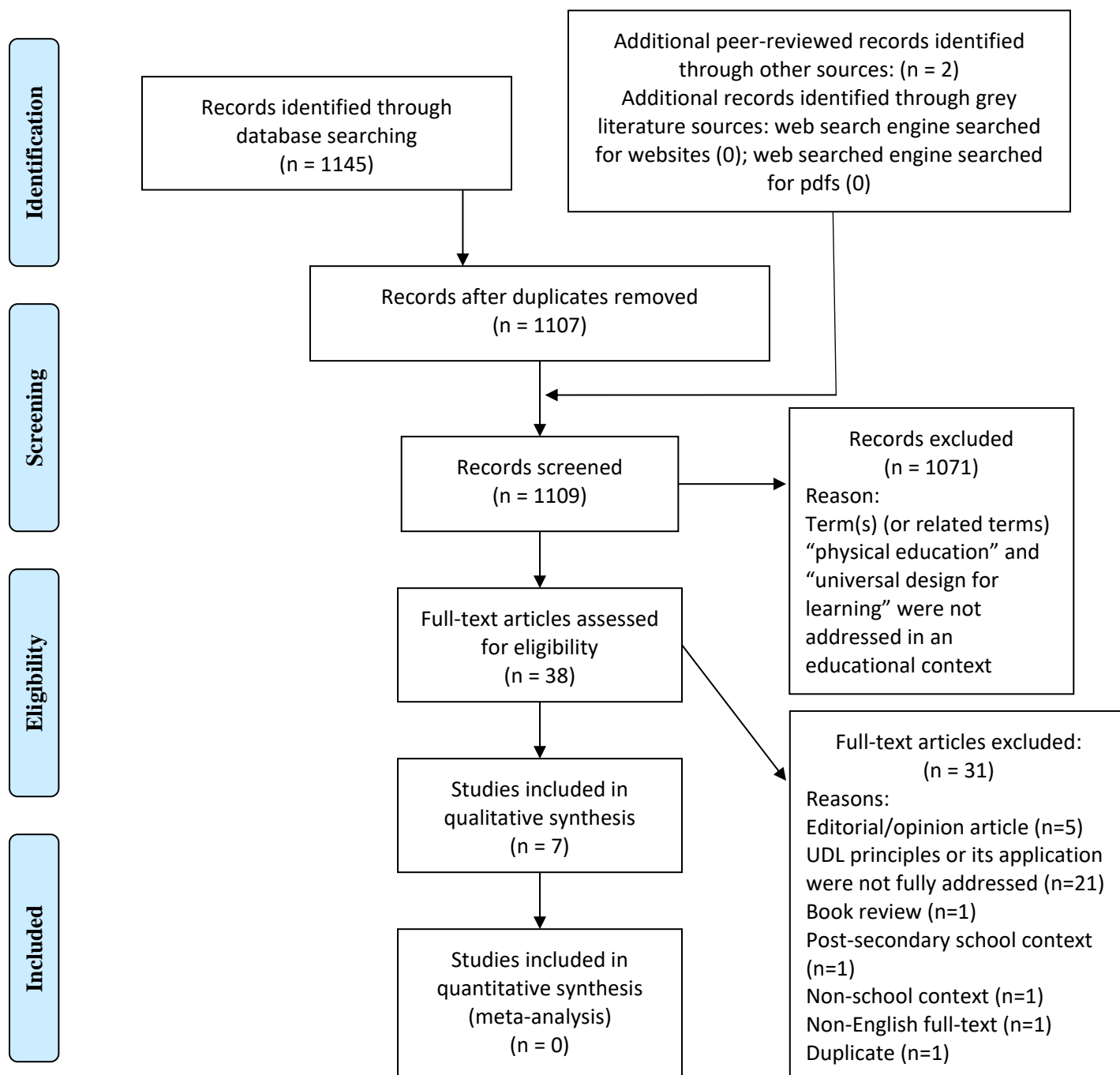
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Table 1. Search Strings and Exclusion Variables

Peer reviewed literature	Grey literature
Search strings “S1” and “S2” were linked using the Boolean factor ‘AND’	Search strings were inserted into the “Any of” and “Exact words” fields within Google’s advanced search engine
S1 "universal design for learning" OR "universal design for instruction" OR "universal design" OR universal NEAR/5 design OR universal NEAR/5 instruction OR "universal instructional design" OR "UDL" OR "UDI" OR "UID" OR "UD" OR "universal design of instruction" OR "universal design instruction" AND S2 "physical education" OR "Physical Education" OR "phys-ed" OR "PE" OR "pe"	UDL concept search string was searched as: “Any of”: "universal design for learning" OR "universal design for instruction" OR "universal design" OR "universal instructional design" OR "universal design of instruction" OR "universal design instruction" PE concept search string was searched as: "Exact words": "physical education" OR "Physical Education" OR "phys-ed" OR "PE" OR "pe".
Reasons for exclusions	
See Methods and Figure 1	Initial Search Review: Single Review Search led to an insecure site, abstracts, unpublished research papers, marketing advertisement (conference; workshop; PD development), required extra registration to enter site, lesson plan only, links to other pages, personal webpages (e.g., LinkedIn), Curriculum vitae with words highlighted, slide deck, site unavailable, course program, meeting minutes meeting outline, parent handbook, operating procedures, newsletters, out of scope, distance learning and re-entry guidelines following Covid Full Text Review: Dual Review UDL framework not provided or described, only words provided without explanations, no PE reference, physical activity reference, words ‘PE’ and ‘UDL’ in references only, no UDL principles provided, only a link to udl information was provided; slide deck, UDL framework only mentioned, not described, CAST framework was not used; only a link to CAST provided, out of scope; information provided as a link to a video

Note. UDL = Universal Design for Learning; CAST = Centre for Applied Special Technology

Figure 1*PRISMA Flow Diagram*

Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097

Appendix A

Articles Selected for Full Text Review

Author(s)	Journal	Type of article	Context	Grade	How is UDL applied to PE	How UDL is defined	UDL principles	UDL principles explained	Examples	Inclusion context	Contribution
Aronson-Ensign et al. (2018)	Palaestra	In Practice	Curriculum Development	Preschool	UDL-designed lessons within the context of a structured preschool motor program that supports school readiness and increased physical activity levels in children; Program/Activity is the primary focus	UDL strategies	All three principles identified and defined with examples: Multiple Means of Representation; Multiple Means of Engagement; Multiple Means of Expression	Offer differences in task complexity or expectations/ Ways to motivate/ Variety of response modes to demonstrate skills	Applied UDL strategies to 'one core activity' (Obstacle Course); one example provided for each UDL principle	Children with disabilities; Support needs of all children	Fills a gap in preschool programming; 42 lessons available within program
Cleland Donnelly & Millar (2019)	JOPHERD	In Practice	Creative Dance Lesson	Elementary	UDL is introduced as a way to provide an inclusive class as part of an interdisciplinary creative dance lesson; Program/Activity is the primary focus	framework; proactive; support curriculum development	All principles are NOT explicit or complete with examples: Multiple Means of Engagement; Multiple Means of Expression; Multiple Means of Representation not included when defining principles	Alternative ways to demonstrate what is known/Motivate to learn using different means	Provides examples of modifications that can be used within the class; examples are not connected specifically to each UDL principle; UDL aspects are not explicit when worked into the lesson plan; Specific suggestions are made for students with visual impairments or for students who use a wheelchair	Support needs of all children	Inclusive lesson plan for interdisciplinary creative dance unit; Explicit lesson plans would be useful if UDL principles incorporated were clearly outline

Gilbert (2019)	JOPHERD	In Practice	Physical Education - General	Elementary	UDL is introduced as a way to plan an inclusive class as part of an inclusive curriculum; UDL is the primary focus	framework; proactive; support curriculum development	All three principles identified and defined with examples: Multiple Means of Representation; Multiple Means of Engagement; Multiple Means of Action and Expression; Application of principles is not as clear in the provided tables	Instruction; Interaction with content; Performance & Assessment;	Strong application example for all three principles in two elementary grade levels (5th and 8th grade) across two activities: Striking with a Short-handed Implement & Fitness Dancing	Support needs of all children; with and without disabilities	Strong application example for lesson planning within two elementary grades; Need for UDL in PE is well-justified; Reviews current literature looking at UDL and PE and adds to the literature base
Grenier, Fitch, & Colin Young (2018)	Palaestra	In Practice	Climbing Wall Lesson	Middle School/High School	Advocates for UDL within Adventure Education; Offers planning for a climbing wall lesson, including gymnasium layouts; Program/Activity is the primary focus	strategy; 'design-in' approach to curriculum development	All principles are identified but are undefined; Examples included but not clearly associated with principles: Multiple Means of Engagement; Multiple Means of Expression; Multiple Means of Representation	Undefined	Guidelines for climbing are given, "while considering the principles of UDL", but it is not explicit about which guidelines apply to which UDL principle	Children with disabilities; Diverse learners	Gym layout designs; complementary relationship between adventure education and UDL; activity targets middle and high school students
Kennedy & Yun (2019)	JOPHERD	In Practice	Curriculum Development	Elementary	Curriculum development using UDL principles through curriculum goals, methods, materials, and assessments to create expert learners in PE; UDL is the primary focus	framework; proactive; support curriculum development; goal to create expert learner	All three principles clear with examples that align with national standard statements for a physically literate individual: Multiple Means of Representation; Multiple Means of Action and Expression;	What material is taught; Why the material is taught; How material is taught	UDL principles are aligned with national standard statements; specific examples are highlighted through "goals, methods, materials, assessment" outline; hypothetical example	Children with disabilities; Support needs of all children	Most comprehensive explanation of UDL framework and how it can provide a process for curriculum development

							Multiple Means of Engagement		expressed using Grade 6 boy with cerebral palsy, but it is not aligned with UDL principles		
Lieberman & Grenier (2019)	JOPHERD	In Practice	Physical Education Teacher Education	PETE - Elementary & High School	How to "infuse" UDL into PETE programs; UDL is the primary focus	framework; proactive; support curriculum development	All three principles identified and defined with examples: Multiple Means of Representation; Multiple Means of Engagement; Multiple Means of Action and Expression	"What" of learning; "Why" of learning; "How" of learning	Numerous PE examples provided throughout the article	Children with disabilities; Support needs of all children	Addresses the need for professional development by discussing how to 'infuse' UDL in PE and PETE
van Munster, Lieberman, & Grenier (2019)	Adapted Physical Activity Quarterly	Qualitative Research; Embedded Case Study	Physical Education - General	Elementary	Used a case study method to describe the approaches used by elementary PE teachers in New York to provide inclusive physical education; UDL is the primary focus	framework; proactive; support curriculum development	All three principles identified and defined with examples within research findings: Multiple Means of Representation; Multiple Means of Engagement; Multiple Means of Action and Expression	"What" of learning; "Why" of learning; "How" of learning	Examples are provided using the interview findings from 5 PE teachers, 5 students with disabilities, and 1 adapted physical education specialist; descriptions of teaching approaches are coded as NI, DI and UDI	Children with disabilities; Diverse learners	Only research study that met criteria for inclusion in full text articles and abstraction stage; Shows teachers how what they are doing may fit into one or more approach to providing inclusive physical education; Distinguishing between NI, DI, and UDI helps teachers to identify which approach they currently use

Note. UDL = Universal Design for Learning; PE = Physical Education; PETE = Physical Education Teacher Education; NI = Normal Instruction; DI = Differentiated Instruction; UDI = Universally Designed Instruction; based on the principles of Universal Design for Learning

Chapter 4

Title of Paper: Perspectives of secondary school physical educators on implementing inclusive physical education: An interpretive description study

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Abstract

Background: Researchers have outlined the importance and need for inclusive programming in physical education (PE). PE programs designed for diverse student abilities give all students the opportunity to develop physical literacy. The objective of this qualitative study is to elicit the perspectives of Ontario secondary school PE teachers about implementing inclusive PE.

Methods: Interpretive description was used to explore the perspectives of 7 Ontario secondary physical educators. Teachers were recruited to participate in a semi-structured interview through snowball sampling methods. Interviews were transcribed verbatim and coded using methods of thematic analysis, such as in-vivo and focused coding.

Findings: Four themes emerged from the thematic analysis of participant experiences: (1) The goal is teaching kids to love to move for life – no matter their ability; (2) All courses can be inclusive, but some are more adaptable and curriculum flexibility helps; (3) To be an inclusive teacher, you have to “step up your game”; and (4) Fostering inclusivity can be hard, but you always try.

Conclusions: Physical educators felt largely accountable for creating PE classes that

were inclusive for all students. Empowering teaching approaches to instill fun and meaning in PE for all students were used often. Teachers emphasized that receiving support from others was most helpful to aid inclusive practice. The potential for collaborations between physical educators and experienced professionals should be explored. Further qualitative work should ensure a representative population of teachers and students to allow for comparison across PE settings and to engage the student voice.

Keywords: qualitative, inclusion

Introduction

Policy that legislates inclusive education in Ontario requires educational programming that provides equitable access to all students with diverse needs in classes with same-age peers (Ontario Ministry of Education, 2009). The directive for inclusive education includes physical education (PE) classes, providing opportunities for discussions among key stakeholders about differences and abilities that vary from traditional classroom-based subjects.

Researchers have outlined the importance and need for inclusive programming in PE (Barber, 2018; Caçola & Romero, 2015; Qi & Ha, 2012). Benefits to participation in PE for students with and without disabilities can extend beyond physical activity, with the potential to promote social skills, positive attitudes, awareness, and leadership (Haegele & Sutherland, 2015). Ultimately, PE programs designed to consider diverse student abilities give all students the opportunity to develop physical literacy (Haegle, 2017). Physical literacy is a foundational concept of PE curricula that aspires students to achieve healthy and active living for life (Ontario Ministry of Education, 2015).

International research suggests that PE teachers receive minimal training about inclusive strategies for teaching PE (Barber, 2018; Coates, 2012; Maher, 2016; Qi et al., 2017) and perceive many barriers related to facilitating inclusive PE (Haegele et al., 2018; Haegele et al., 2020; Qi et al., 2017). Hence, it is unsurprising that research also documents a need for physical educators to receive more support to create equitable and accessible classes to students who have both visible and invisible challenges to participation (Block & Obrusnikova, 2007; Qi & Ha, 2012; Rekaa et al., 2019; Tant & Watelain, 2016; Wilhelmsen & Sørensen, 2017). In a recent study exploring PE among

students with disabilities, Haegele et al. (2018) found that teachers identified both teacher-related (e.g., teacher knowledge) and program-related (e.g., personnel support) factors as barriers and facilitators of PE participation. Similarly, a study with adapted physical educators (a support role to PE teachers common in some countries) cited teacher-related barriers and facilitators (e.g., activity selection/modification) as most related to students' feelings of inclusion (Haegele et al., 2020). Interestingly, equipment and programming-related factors (e.g., lack of resources) were underreported by adapted physical educators, suggesting that educators may not recognize students' needs and the resources to address those needs, and students with disabilities may not feel included in PE despite equity in access and resources (Haegele et al., 2020).

Haegele et al. (2018) also found that teachers frequently highlighted “personal-related factors” (p.130) (e.g., student abilities) as barriers to participating in PE, a finding not common in existing literature. The researchers suggested that this may reflect participant differences in teacher conceptualizations of disability that may align with either a medical or social model of disability. A medical model conceptualizes disability as a personal deficiency to be fixed to meet standards of ‘normal’, whereas a social model conceptualizes disability as a social construction that results from society-produced barriers to participation, depending on one’s specific impairment (Oliver, 1998). Shifts in international perspectives regarding the purpose of PE (i.e., traditional values of competition, sports, games versus a growing focus on meaningful experiences and being physically active for life), as well as PE teaching approaches (i.e., pedagogy) and understandings of disability (i.e., medical vs social model) affect how inclusion is conceived, and thus implemented via PE curricula (Barber, 2018; Beni et al., 2017;

Croston & Hills, 2017; Kilborn et al., 2016; Svennberg, 2017). In a current review exploring the experiences of students without disabilities in inclusive PE classes, Ruscitti et al. (2017) identified a dearth of research exploring topics such as “the environment of less competitive PE classes” (p. 254), an approach to PE emphasized in less traditional pedagogies.

The call for “less competitive PE” pedagogy stems from research demonstrating that girls and boys are less likely to enjoy PE classes if they have low self-efficacy (Dishman et al., 2005), low perceived competence (Cairney et al., 2012), lowered self-concept (Barr-Anderson et al., 2008), or a lack of motivation (Sallis et al., 1999). Furthermore, students who are unhappily participating in PE classes are more likely to stop participating as soon as curriculum requirements are fulfilled (Jachyra, 2016). Hobin et al. (2010) completed an analysis of Ontario secondary schools and reported that student enrolment in PE courses declined from 73.4% to 51.3% in Grades 9 (first year of high school) to Grade 12 (final year), respectively. While multiple factors contributed to this decline (Hobin et al., 2010), these findings demonstrate that it is imperative that PE programming meets the needs of all students, if the curricular goal of physical literacy is to encourage lifetime participation and healthy active living for all students.

The Ontario Ministry of Education revised the Ontario Physical and Health Education Curriculum (Grades 9-12) in 2015 (Ontario Ministry of Education, 2015). In 2018, the Ontario Human Rights Commission outlined that teachers have a legal responsibility to accommodate disability-related student needs, with or without the presence of an individual education plan (OHRC, 2018). Since 2009, the Ontario Ministry of Education has published several documents to support the direction and

implementation of inclusive education in Ontario; however, researchers in Ontario have documented a lack of resource support for inclusive PE (Simpson & Mandich, 2012) and others have noted challenges to implementing physical literacy within PE as a foundational component of the PE curriculum (Gleddie & Morgan, 2020). Furthermore, there is a lack of literature that specifically addresses inclusive PE in secondary school. As such, it is currently unknown how Ontario secondary school physical educators are implementing inclusive PE within the 2015 curriculum, the supports that are available to them, and their perceived needs to facilitate inclusive education for all students.

Recently, research teams used an exploratory qualitative methodology to examine barriers and facilitators to providing inclusive PE (Haegele et al., 2018; Haegele et al., 2020). However, it was noted that their methods did not include interviews, and thus, did not elicit in-depth qualitative data to offer an enhanced understanding of participant responses. Additional qualitative research is needed to gain a more comprehensive understanding of stakeholder experiences in inclusive PE (Block & Obrusnikova, 2007; Qi & Ha, 2012; Qi et al., 2017). The objective of this qualitative study is to elicit the perspectives of Ontario secondary school PE teachers regarding the challenges and facilitators of implementing inclusive education practices within the PE curriculum. The information gained will inform administrators, teachers, researchers, and policy makers about the current needs of physical educators as they support secondary students with varied needs and abilities in PE.

Methods

Interpretive Description

Interpretive description (Thorne, 2016) was used as the qualitative approach to

explore the perspectives of Ontario secondary physical educators on implementing inclusive education within the Ontario Physical Education Curriculum, Grades 9 to 12. Thorne (2016) has advocated for the use of interpretive description as an inductive research method within various applied disciplines, and researchers have successfully used interpretive description in both PE and secondary school educational settings (Clark et al., 2011; Nordheim et al., 2016).

Interpretive description is philosophically aligned within an interpretive framework which acknowledges the possibility of multiple realities that are both contextual and subjective (Thorne et al., 2004). Within this approach, a guiding theory is not selected in advance of analysis as the theory that frames an interpretive description study is grounded in its data and determined by its analysis. Without an initial guiding theory, interpretive description places emphasis on theoretical scaffolding as a foregrounding initiative to provide a study with ongoing direction (Thorne, 2016). Theoretical scaffolding requires a researcher to both position the study within current literature and to address their own positionality in considering what they “bring” to their own study (Thorne, 2016, p. 60). This purposeful technique is completed before research onset to guide process decisions and to place the study within a “disciplinary orientation that shapes what [the] study is meant to represent in the larger sense of evolving knowledge” (Thorne, 2016, p. 60). Within this context, interpretive description allows a researcher to explore human experience while simultaneously gaining contextual understanding to address applied questions in their field (Thorne, 2016).

Ethics approval was received from the Hamilton Integrated Research Ethics Board. (HiREB Project #8233)

Study Population

Ontario secondary school PE teachers were recruited to participate through snowball sampling methods (Noy, 2008). Individuals in the field of PE known to the primary author were approached by email to inquire if they would act as gatekeepers to promote recruitment (Wilson, 2019). Gatekeepers were asked to distribute a recruitment email to potential English-speaking participants and were also given the opportunity to participate.

Potential participants who were interested in receiving more information about the study were instructed to contact the primary researcher by email. Consent forms and a link to a demographic questionnaire created in REDCap (Research Electronic Data Capture) (Harris et al., 2009) were sent to interested participants who signed and returned the consent form electronically and completed the online demographic questionnaire. All participants chose to complete their interview using the Zoom platform and oral consent was recorded at the time of the interview.

A semi-structured interview guide was designed based on knowledge gained from a recent analysis of Ontario's secondary PE curricula (Selkirk et al., 2021) and supporting documents in the field. Open-ended questions with probes were used to solicit rich and meaningful data through prolonged engagement of participants (Schwandt et al., 2007). Broad topics included: 1) secondary physical educators' current understanding of inclusive PE and supporting pedagogical approaches; 2) their knowledge and use of inclusive practices within curriculum planning as well as facilitators and barriers to their use; and 3) the perceived, known, and accessed resources available to support Ontario secondary physical educators in incorporating inclusive practices for physical activity. Interviews were audio recorded, transcribed verbatim and anonymized in preparation for

qualitative analysis.

Data Analysis

Qualitative data analysis software NVivo 12 (QSR International Pty Ltd, 2018) was used to assist with data management, organization, and analysis procedures (Bringer et al., 2006). A log memo, journal, and analytic memos were kept to document procedural methods, analysis processes, and reflexive journaling (Birks et al., 2008; Miles et al., 1994). Data analysis followed an iterative approach in which analysis was continuous and simultaneous with data collection.

Reflexive thematic analysis was used as an analysis method with varied strategies and techniques to consider emergent ‘patterns’ (themes, categories) across participant interviews (Braun & Clarke, 2021). Thorne (2004) highlights how various approaches to qualitative analysis – from established qualitative traditions - can be adopted within interpretive description methodology. Braun and Clarke (2021) speak to “methodological integrity” to describe the accepted use of varied analytic tools in thematic analysis if simultaneously chosen to align with the study’s purpose, theoretical assumptions, question and methods. Braun and Clarke (2021) further highlight the importance that a researcher remains purposeful and critical in the selection of techniques that align with the study’s philosophical underpinnings and objectives. In this manner, thematic analysis can be considered “theoretically flexible” in that it becomes “infused with theoretical assumptions when enacted in a particular study” (Braun & Clarke, 2020, p. 38).

Specific to the current study, initial coding of each transcript was completed using line-by-line and in-vivo coding to identify topics and emerging concepts as well as to stay close to the data. This first-cycle coding process allowed researchers to identify and

categorize preliminary conceptions of data meaning into conceptual units (Thorne, 2016). Methods of constant comparison were used to facilitate second-cycle codes and to transform and reduce data within the initial hierarchal coding structure as patterns and relationships emerged (Miles et al., 1994; Thorne, 2016). Purposeful analytic strategies (Bazeley, 2013) such as conceptual mind-mapping were used to highlight relationships between emerging themes as well as to illuminate participant voices from within the data (Mills et al., 2006). Focused coding then facilitated raising terms to concepts by coding conceptual categories that attained saturation to represent each thematic category (Saldaña, 2015). Thematic categories were then presented as thematic statements as a purposeful means to reach a broader readership using language that would resonate with the intended audience (Sandelowski & Leeman, 2012).

This study adhered to traditional criteria of trustworthiness, including establishing credibility (using prolonged engagement); transferability (thick description); and confirmability (audit trail, reflexivity) (Schwandt et al., 2007). The criteria of authenticity (Schwandt et al., 2007) and resonance (Tracy, 2010) were used as additional evaluative elements that consider the essence of truth established through the meaning-making processes of analysis. Limitations on the researchers' ability to recruit participants due to the impact of COVID-19 on schools led the team to cease recruitment once thematic saturation was substantiated for key themes.

Results

Participants

Seven Ontario secondary school PE teachers participated in in-depth interviews of approximately one hour in length. Of these participants, four held a leadership/teaching role [Department Head of Physical and Health Education (n=3); Assistant Curriculum

Leader and Head of Physical and Health Education (n=1)] and 3 held a teaching-only role [Physical and Health Education Teacher (n=3)]. One participant was a trained Special Education teacher and another was a Student Success teacher. Two participants currently taught at schools that supported PE integration with a Developmental Disability specialized program class. Participants collectively had taught at several different Ontario secondary schools [Range = 1–8; Median = 4] for a range of 8 to 26 years [Median = 17]. Years teaching at the current school of employment varied [Range = 1 – 23; Median = 8]. Schools were described as English (n=6) and French (n=1); Public (n=5) and Catholic (n=2); boys only (n=1); urban (n=6) and mixed (rural/urban; n=1); and belonging to a large (n=6) and medium-sized (n=1) school board. School populations were estimated at 400 students to 2000 students, with a median of 1300 students.

Participants identified that they had taught the following Ontario secondary school physical education courses (see Table 1): PPL-Healthy and Active Living Education [Grade 9 (n=7); Grade 10 (n=6); Grade 11 (n=5); Grade 12 (n=5); PAF-Healthy Living and Personal and Fitness Activities [Grade 9 (n=1); Grade 10 (n=5); Grade 11 (n=6); Grade 12 (n=5); PAL-Healthy Living and Large Group Activities [Grade 11 (n=2); Grade 12 (n=1)]; PAI-Healthy Living and Individual and Small-Group Activities [Grade 11 (n=1); Grade 12 (n=1)]; PAD-Healthy Living and Outdoor Activities [Grade 10 (n=1)]. No participants had taught Healthy Living and Aquatic Activities (PAQ) or Healthy Living and Rhythm Movement Activities (PAR).

Thematic Analysis

Interpretive description allowed for a thematic analysis of participant experiences that captured participant narratives as they described their stories of facilitating inclusive

PE. The following thematic statements share the essence of the educators' collective experiences: (1) The goal is teaching kids to love to move for life – no matter their ability; (2) All courses can be inclusive, but some are more adaptable and curriculum flexibility helps; (3) To be an inclusive teacher, you have to “step up your game”; and, (4) Fostering inclusivity can be hard, but you always try. The first three themes highlight aspects of teaching that facilitate inclusive physical education and the fourth highlights aspects of teaching physical education that may present barriers.

1. The goal is teaching kids to love to move for life – no matter their ability

All participants described a philosophy to teaching PE at the secondary school level that supported one of the core premises of physical literacy within the Ontario PE curriculum: to help students gain movement skills and an appreciation for movement that will allow them to have an active lifestyle beyond secondary school (Ontario Ministry of Education, 2015). Creating an environment that encouraged students to love movement – for life and not just for the sake of the course – was key to the teachers' approach to facilitating inclusivity within the classroom and providing as many options for success as possible. This pedagogical approach to teaching PE was evident across all interviews and emerged in the participants' expressed importance to ensure that their students find relative success within physical activity participation:

I just want everybody comfortable within the classroom and trying different skills...not making it overtly...technical per se...just having an appreciation of movement, plain and simple and enjoying each other's company and just making sure that they're working as a team...but that's what I would say in terms of inclusive classes (ID-2)

So I've always sort of had the base of the pyramid in mind...how do we remove as many barriers as possible so that kids can actually get in and get moving and find the joy of this...The philosophy of just keeping in mind what our role is and really remembering who we're here for... the way that I see my job and the way that my department sees their job is that, especially for those kids who haven't had the exposure, the experience, the confidence, the success already, we need to find success for them so that they will continue finding that joy of movement (ID-7)

...show them enough options and enough different activities that they're hopefully, by the end of the course, finding something that they want to do and they want to be active in for the rest of their lives in a way to be to finding what's right for them (ID-3)

For most teachers interviewed, inclusivity within PE meant having less concern for the assessment of skills and the achievement of specific standards, while ensuring academic success for all abilities. Eliminating a focus on competition yet evaluating effort, participation, and characteristics such as having a positive attitude placed the teachers' foci on a classroom environment that tells students that only personal bests matter:

I think with the equity piece being what it is in the [board] right now, and the push for creating a more equitable system...where you're realizing that you're not to be evaluating with what – on what the students already come into your classroom with (ID-3)

Yeah. So, I mean the first day, I always tell them, like, it doesn't matter if you're like the best athlete in the school or...you don't do any athletic kind of activities at all. It

doesn't matter. You can still get a good mark in this course as long as you have a good attitude, you try hard, you're willing to try new things - all those sorts of things (ID-6)

The participants placed a particular emphasis on their efforts to make PE inclusive and engaging for all students by creating an environment that was fun and enjoyable for everyone. As one teacher stated: *“success might look different for some students than others but finding that way to be successful and to have that enjoyment in what they're doing in class (ID-3).”* Another teacher described it as a pedagogy: *“the way [our department] describe[s] our pedagogical approach is typically you want to have a low floor and high ceiling, um, so that everybody has like somewhere they can get in and have a good time (ID-7).”* In other cases, teachers described creating a fun classroom atmosphere for students – one that was not dependent on the activity itself – to remove focus on the physical activity:

...They feel like they're bad at it... so they aren't finding the enjoyment, they're not connecting to it...something as small as like playing music during class...in an activity where they're not having success, [say to them] let's say tomorrow before the activity, you bring in the playlist that has all your 10 favourites on it and that's where we're going to start out. (ID-1)

An unanticipated triangulation of data occurred when teachers were asked directly what they would most recommend to a new secondary school teacher to facilitate inclusive physical education. Teachers provided quotes that directly supported this emergent theme:

...I think after a while you learn what kids really enjoy and participate well [in]

and then you learn what things turn them off. And so even the kids that are really good at sports don't like skill testing and there's no point to skill testing...in the whole scheme of trying to get kids to be active and healthy and lifelong fitness...knowing how good they are at a sport doesn't really matter. So I think, I would tell a new teacher, to make sure that they don't focus on skills (ID-5)

2. All courses can be inclusive, but some are more adaptable, and curriculum flexibility helps

When asked specifically, on the demographic form, which courses were considered most adaptable for inclusivity, teachers unanimously selected the subject courses, Healthy Active Living Education (PPL) and Health Living and Personal and Fitness Activities (PAF). Four teachers responded that they considered PAI (Healthy Living and Individual and Small-Group Activities) adaptable. Teachers were then asked to provide their reasoning to support these course selections. Participants responded:

In my experience, inclusivity has worked quite well in both regular sport classes [PPL] and fitness classes [PAF]. However, I've also seen inclusive environments in PAI courses as well – those courses that have a very specific focus. I'm optimistic that inclusivity could be realized in PAL and PAQ courses as well. (ID-4)

PAF is a personal goal-setting course with lots of room for individual programming. This is probably the most adaptable course. PPL is basic sports with opportunity for adaptations to play for all students based on skill. (ID-5)

When interviewed, participants further described the PAF course as an individualized, personal fitness course that could be adapted for diversity in students:

...the fitness program is much more forgiving...it's set more personal goals and just active participation. It takes that competitive piece out that drives a lot of kids away

and again, if you're a kid that does have any kind of mobility impairment or coordination...it takes that competitive aspect...that is removed because it really is more about you in setting those goals and the teachers are focusing on that ... [it is] figuring out what you're good at and just the joy of movement comes out there
(ID-7)

A few teachers emphasized that the PAF course might be enjoyed by students who did not like sports and they mentioned its growth in popularity among students: “.. *the kids that typically don't really like sports...but they like movement and they like being in a gym and they like the idea of being fit...that's the kind that come* **(ID-5)**; “...*it started...about 10 years ago and within the first four years... we went from having one or two sections to having like 10* **(ID-1)**.”

According to the participant demographic form, PAF was offered in the following grades at their current schools: Grade 9 (n=2), Grade 10 (n=5), Grade 11 (n=6), Grade 12 (n=4). One teacher noted that their school might offer the PAF course in grade 10 in order to offer an additional option at an earlier grade: “*to allow these students to get kind of into that different form of physical activity earlier and get kids taking phys-ed longer... (ID-6)*”. It was identified that PPL and PAF were the most widely available courses, but that offering more courses could provide options for students to participate in preferred activities. Teachers acknowledged, however, that each school had differing needs that affected the variety of PE courses offered:

... PAF in most schools and then the other ones are sort of sporadic and based on school need...I think most schools...give the students the most opportunity[courses] to participate in where they...get the most participation and you're limited by

facilities that you have in a school. You're limited by staffing, you know, as far as how many sections of a Phys Ed class that you can offer at once. (ID-3)

One participant highlighted the need for creativity when PE space was limited: “...so we've gotten creative – like we have a spin room, we have a weight room, we have like a yoga fitness studio. Uh, right now, we're using our cafeteria.” (ID-7). Another teacher described using external facilities to engage in inclusive activities and outdoor education, also noting that equipment for specialized activities can be difficult to obtain to facilitate use within the school setting (e.g., goalball equipment):

3. To be an inclusive teacher, you have to “step up your game”

Participants collectively described an understanding that it was the responsibility of the teacher and the department to ensure that inclusive PE was realized both within the classroom and across the courses offered within the school. Several teachers acknowledged that creating an inclusive classroom required an effort to engage students who may not view physical activity as a personal strength and who may be hesitant or less willing to participate:

...So you have to do your best to encourage them to participate, to get them into classes, to try new things. So the motivational part is you have to step up your game in terms of making sure that they're comfortable within the class and trying things. (ID-2)

I find that as a teacher, there's this misconception in the society that like, we have these books of things to follow...like all sort of set up for you, right? It's like, no...a lot of the initiative to make things successful for people that need a little bit more help falls on whoever is going to care about it. (ID-5)

You got to find out kind of what their likes and dislikes are and kind of roll with it and be creative and kind of know that things will fail and you just got to keep trying different things until one thing clicks and you're like, oh, this is going to work. (ID-6)

One participant shared how the school PE department intentionally addresses inclusion:

...it's just like an example of the mentality that is running through the department, which is really helpful if just saying like who's missing? Look around – and who's missing and why are they missing and what can we do to remove whatever barriers are there? (ID-7)

Within the attempt to “step up their game”, teachers highlighted that one of their primary strategies to provide inclusive PE was to get all students on a level playing field:

...there's huge satisfaction in terms of being able to try something new and everybody had pretty much a level playing field...it's more getting away from the traditional sport – five, seven days – that type of idea...I cater to more of those adaptive games. (ID-2)

In this context, teachers spoke about playing non-traditional sports:

...it's a lot of small-sided games...like if we're playing basketball, you would never see a 5 on 5 basketball game with regular rules... it's based on developing movement skills and having a good time... So, theoretically, that should be accessible to everybody, sometimes slightly different tools, if the movement range is that much greater in terms of the diversity of the skillset. (ID-7)

...I find that like the less traditional sports are much easier to bring to baseline than the traditional sports because kids haven't been exposed at varying levels...so

we won't have the competitive player and the non-competitive player. (ID-1)

Examples of traditional and non-traditional activities included: (1) Non-traditional – goalball, rugby, sitting volleyball, wheelchair basketball, wheelchair rugby; and (2) Traditional – badminton, basketball, floor hockey, lacrosse, soccer, and volleyball. One teacher highlighted how there remains a place for traditional sports and games in creating an inclusive classroom using less traditional activities:

... I think the kids like, for the most part, doing sort of typical sports in those programs, with certain days sprinkled in where maybe it's a brand-new game or a brand new activity. But I don't think they want to do new games every day. (ID-5)

Planning for difference and modifying activities were the common ways that teachers talked about addressing differences in physical ability within the classroom. One teacher outlined: “*I have sections in my lesson plan template that would say modifications for program or just accommodations for specific lessons or units, and that'll be in there.*” (ID-4)

Teachers described modifying manipulatives, rules, and range of game play:

...especially with kids that might have coordination difficulties or any sort of physical limitation...giving them different ranges of play that they can play in and be considered normal in class...really sort of goes...it's adapted, but everybody is doing it. (ID-5)

...sometimes we modify different games like handball games and other target games...just so ... more people can be successful at the game...we try and make students have as much success as they can or feel like they're having success. (ID-6)

For evaluation measures, one teacher also described providing modified assessments:

*...for their final assessments...I get them to demonstrate five of their favorite skills
...however [they] want to communicate it...they can physically show me the
skill...or they...tell me about the skill - telling me that they actually understand all
the learning pieces, but their body may not just be able to do that yet. (ID-1).*

Physical educators described talking with other teachers, mentors, or experts in the field as the greatest source of support for sharing ideas about planning inclusive classes. Professional collaboration and networking was highlighted as the primary facilitator for providing inclusion: “*Human resources would be my answer: I'd go to the special ed teachers if I needed some help and like, they give me some background (ID-4)*”; “*that's mostly where it comes from and getting ideas from other teachers about how they deal with certain challenges (ID-1)*”; “*I've found that just talking with colleagues and how we can adapt games and make things more easier for students and more successful (ID-6)*”. One teacher described a professional development network among the outdoor education teachers: “*they built a really nice community where they do have this ability to learn and share from each other and figure out ways to collaborate (ID-7)*”. Another teacher complimented a teacher-led conference that offered exposure to workshops led by other teachers: “*...the best one...it's teacher-led...you have a bunch of teachers doing the activity, you talk about how to adapt it and change it and modify...(ID-1)*”

One teacher highlighted professional service providers as a means for support when providing inclusive physical education: “*when I've had [students] with more significant issues in my class, I might have an intro meeting with their social worker, to introduce me to them and what they struggle with and things like that (ID-5)*.” The same

participant further suggested the potential benefit of learning from other expert providers:

So even like having access to... to throw ideas off of people that work in therapy, right? Like just sort of a resource list of people that would be willing to help you learn how... because really when you have people that need extra, you have to be a teacher, but you also have to be a little bit of occupational physical therapist, right – in the sense that you have to adapt, play and recognize the deficit so that you can help them achieve...if you had access to information from people that know more than you, that would be really helpful (ID-5)

When teachers were asked directly what they would most recommend to a new secondary school teacher to facilitate inclusive PE, participants further supported mentorship and networking: “...job shadowing. So teacher shadowing...especially if they're a visual learner – like I am – I need to see things (ID-2).” Several participants also suggested the potential for professional development days that would allow them to observe other physical educators:

...see what other people are doing and taking – you know – the best parts of what everyone else is doing and getting different strategies from other teachers...even take a day as a new teacher and visit another classroom or another school and see what's going on (ID-3)

4. Fostering inclusivity can be hard, but you always try

Teachers mostly spoke about elements of building an inclusive classroom that they could influence directly (e.g., modify an activity). However, teachers also spoke about factors which might affect an inclusive environment but that were less amenable to change. When describing these factors, teachers often included proactive suggestions they could try in order to counter the challenge. For example, when speaking of

inappropriate peer behaviours in class, teachers noted:

sometimes it's not easy, like you don't always have a classroom where everybody cares, but...you just continue to have conversations with the class about good sportsman-like behaviour, about inclusivity, what are the things we need to do as a class to make people feel included. (ID-5)

some of those kids are just there to cause trouble and do silly things and make people not have fun...that definitely hurts the kind of inclusivity environment. But generally it's pretty good and I try and foster that inclusivity as much as I can in my teaching. (ID-6)

Several teachers highlighted personal student factors, such as socioeconomic status or being an English Language Learner that were not related to physical ability but that might influence how inclusion is experienced within a PE class:

...I think there's so many other structural supports that are outside of what we can see that you might not have impact on that, right? ...Socioeconomic status...I think it is probably pretty important as far as even just coming in the door with running shoes and phys-ed clothes...even knowing what else is going on at home or where you've come from, the idea of playing games might not be that important to you in your life, you know. (ID-3)

It was particularly within these circumstances that teachers emphasized the importance of getting to know their students – building a trusting relationship that might encourage students to share with them changes that could foster enjoyment and participation:

...if they come at the end of class and they're like, shoulders are drooped and their head is drooped...then I did something wrong in that class: I didn't read something

and I didn't modify right or I didn't make the right outtake adaptations or instructions. [To the student] I'd like you to just reflect over it and you can respond to me directly, or you can email me or you can write a note and send it to me or whatever you want – however you communicate – but the idea is for me to do better at my job. (ID-1)

I think if a student can trust you, I think that the inclusivity kind of part will take care of itself because they feel comfortable coming into your classroom, and they know that you're going to kind of provide them with the best opportunity to be successful. So I think building relationships is kind of one of the biggest keys to having an inclusive environment in your classroom. (ID-6)

When teachers were asked directly what they would most recommend to a new secondary school teacher to facilitate inclusive physical education, participants further supported that knowing their students and class was key to building inclusivity:

...get to know...sit down and have an extensive conversation, be observant as to what's going on in your classroom, read the body language...be reflective in your practice and be okay to acknowledge that you weren't great that day. (ID-1)

...get to know your own students first and you'll be able to identify the stronger ones and the weaker ones, the leaders and the compliant ones, the behaviours, and all of that...get to know your own first (ID-4)

Conversely, teachers indicated that factors that affected their ability to connect and spend time with students one-to-one made fostering an inclusive environment more difficult. Increased class sizes and a decrease in support from others within the class (e.g., educational assistants) were described as hindering a teacher's ability to offer more

individualized support. One teacher described this concern: *“it's more of the individual approach that I can't give enough attention to that one student during the class...having that extra body [EA] when you have another 27 in front of you was definitely beneficial (ID-2)”*; *“not all of those kids can get that kind of one-on-one support and it's certainly helpful when it happens, but that's the funding model (ID-7)”*.

Funding, in addition to time, was cited as challenges for participating in professional development activities that support inclusive PE: *“I would say like the funding for PD is quite low, so we don't get a lot of PD (ID-1); “So I did go back ...so a one-day session, and that was about two, three years ago. It wasn't recent” (ID-2).*

Another participant expanded on these challenges:

I do typically go to as many conferences as I can...but if you can get the conference paid for, and if you can get the time off: if you have to travel, it's on your dime. If you stay at a hotel, it's your dime while you're away and you're eating, it's your money you're spending. You have to really be interested to go to that length because it's expensive (ID-7).

One participant, who had experience working specifically with the PE curriculum, highlighted professional development opportunities that may be more available to physical educators through resource availability and online learning:

It would vary by board, but there's more national conferences and online things you can look at...OPHEA does a great job of putting out resources. OFSAA is our governing body as well and they've been putting on more conferences lately, especially without the competitive sports going on [due to Covid]... PHE Canada

has been providing webinars and things you can attend and that's throughout, you know, my teaching career, not just in this year [due to Covid]... (ID-3)

Discussion

The objective of this qualitative study was to highlight the perspectives of Ontario secondary school PE teachers regarding the challenges and facilitators of implementing inclusive education practices. An interpretive description approach was used to explore participants' collective experiences in providing inclusive PE. The following themes emerged that described the essence of their shared perspectives: (1) The goal is teaching kids to love to move for life – no matter their ability. (2) All courses can be inclusive, but some may be more adaptable, and curriculum flexibility helps. (3) To be an inclusive teacher, you have to step up your game. (4) Fostering inclusivity can be hard, but you always try. These findings are novel in sharing the teacher voice through in-depth qualitative methods to highlight facilitators and barriers to incorporate inclusive PE in secondary schools.

Within the Ontario PE curriculum, the overall objective is to help students become physically literate, comprising the goal to build movement skills that transfer between activities and facilitate a means for students to engage in physical activity beyond secondary school (Ontario Ministry of Education, 2015). As evident in the current study, the focus on physical literacy has facilitated a pedagogical shift among some teachers toward the joy of movement within PE and less emphasis on the attainment of skills, fitness standards or competition. This finding aligns with research that prioritizes alternative and progressive pedagogies within PE to challenge traditional

skill-focused approaches that may concentrate on sports and competition (Griggs & Medcalf, 2015).

Aartun et al. (2020) completed a literature review of 42 studies that explored pedagogies of embodiment in physical education, characterized by student-centred and inductive approaches to teaching that “facilitate embodied learning, empowerment, and positive experiences of being in movement” (p. 1). While our findings suggest that this shift has permeated into practice for some Ontario secondary school teachers, much research suggests that PE remains predominately focused on skills as well as competitive sports and games (Barber, 2018; Kilborn et al., 2016; Penney et al., 2018; Tant & Watelain, 2016) – activities that are largely inaccessible for students who do not excel at these activities (Banville et al., 2021). Hearing the voices of secondary school PE teachers, it is encouraging to see the discursive roots of an alternative embodied pedagogy that supports the primary tenets of physical literacy. However, it also raises questions. For example, most research in PE targets elementary school practice and the current description of PE in the literature reflects those research findings. If a shift in pedagogical discourse and reflexive practice for PE educators has begun to trickle into secondary school PE, this is not yet clear in current literature. A Canadian initiative was implemented in a PE teacher education (PETE) program to encourage a new perspective of “‘dis’ ability” that underscores philosophies of inclusion to facilitate physical literacy for all students (Barber, 2018). Findings suggested that pre-service interventions could change attitudes toward inclusion; however, the influence on actual changes in behaviour is unknown. It would be interesting to explore the presence of a pedagogical shift among a larger, representative group of physical educators to understand forces at play in the

emergence and adoption of newer pedagogies in secondary school PE.

Recently, explorations in the areas of meaningful PE (Beni et al., 2017; Fletcher et al., 2020), enjoyment (St. John et al., 2020) and student preferences in secondary school PE (Banville et al., 2021; Weeldenburg et al., 2021) have emerged. Aartun et al. (2020) state that pedagogies of embodiment nurture students in “choosing activities and creating content” (p. 1), giving voice to what is meaningful to students. Recent explorations that highlight transformative practices to empower students by having a voice within PE have illuminated the benefits and challenges of this work (Howley & O’Sullivan, 2020; Ison et al., 2021; Weeldenburg et al., 2021). The teacher participants in the current study spoke about building relationships as well as talking to students to help identify strategies to facilitate experiences of engagement and enjoyment within PE. Helping all students to find the “joy of movement”, regardless of ability, was a primary objective of the secondary school teachers in this study. Research supports that a PE teacher’s positive attitude is an important element of creating meaningful PE experiences for students with disabilities (Block & Obrusnikova, 2007; Rekaa et al., 2019). Further exploration into what provides meaningful PE experiences for secondary school students of diverse abilities may offer tangible strategies to physical educators.

Findings suggest that providing course offerings of PE that support a range of small and large group activities, as well as individual, strength-based programming, may be necessary to reach all students. However, participants identified that, although the provision of courses and activities within school PE may reflect student needs as well as teacher familiarity, it is also influenced by school size, facilities, PE space, and equipment availability. In 2006, Dwyer et al. conducted a questionnaire study of 474

Ontario secondary schools and reported similar barriers including funding, timetable, lack of facilities and resources. In 2021, the curriculum supports a wide offering of courses and activities that could be tailored to a particular school environment, student needs, or specific classes. However, it appears that this flexibility is also the source of diversity between courses offered at different secondary schools and the activities offered in similar courses across schools. One teacher spoke of a department initiative to identify which students were missing from particular courses or activities, to help determine which specific barriers needed to be addressed. A similar research initiative on a much larger scale would be timely: there is much that we do not know about how PE is offered and how this creates different opportunities and access for different students. Such work could shed light on the range of PE experiences that are present within the province. It could also offer an impetus to initiate similar conversations inter-provincially. Rekaa et al. (2019) and Qi et al. (2017) remind us that inclusion in PE is a largely localized phenomenon that intersects culture, curriculum, meanings of PE, and understandings of “dis” ability that need exploration across various contexts.

What we do know is that the study participants were aware of the need for inclusive PE and were actively trying to implement inclusive practice. Similar to other studies (Rekaa et al., 2019; Tant & Watelain, 2016; Wilhelmsen & Sørensen, 2017), teachers felt largely accountable for creating PE classes that were inclusive for all students. Educators spoke little about the availability of resources or funding, and similar to Haegele et al. (2018), there was little conversation about programming or equipment needs that affected inclusivity. Teachers were more likely to describe a need for their own creativity to facilitate what worked best for all students, given parameters of

available facilities, space, and resources. Explorations of how teachers' "agentic action" facilitates inclusive education is gaining momentum in present literature (Miller et al., 2020, p. 1). Considerations of how systemic barriers influence teachers' ability to engage in inclusive practice need to remain part of the conversation.

Participants in the current study were clear about their need for support to implement inclusive practice. Yet the teachers seemed to agree that receiving support from others was most helpful to achieving this goal. There was little discussion about using other resources or documents as aids to implement inclusive practice. This does not suggest a lack of use, but perhaps that written materials or published documents were not the primary preference for accessing resources among these participants. Physical educators identified that their preferred sources of support for implementing inclusive PE were colleagues, experienced teachers, experts, and professional networks that, through means such as mentorship, job shadowing, and professional development could tailor support to help guide their practice of inclusive PE. Current research parallels this preference by exploring professional development approaches in PE, such as collaborative professional development (Braga et al., 2017), instructional coaching models (Fletcher et al., 2018), and collaborative consulting in adapted physical education (de Oliveira et al., 2019). Within a Canadian context, Morrison and Gleddie (2019) found that elementary school PE teachers and educational assistants expressed a preference for collaborative professional development specific to inclusive physical education as a means to form communities of practice and a team approach in providing IPE.

Holmqvist and Lelinge (2020) completed a systematic review that examined teachers' collaborative professional development (CPD) for inclusive education (non-PE

specific). They found that participating in professional development training influenced teachers' positive attitudes about inclusive education; however, small-scale research projects and a lack of control data prevented the researchers from recommending a CPD model based on enhanced outcomes or satisfaction (Holmqvist & Lelinge, 2020). The authors noted a lack of research that explores CPD for inclusive education, but particularly that which examines outcomes at a classroom level (Holmqvist & Lelinge, 2020).

One participant spoke about the potential for collaborative support in PE from health professionals such as a social worker, occupational therapist or physical therapist for students with greater needs. While the role of a trained adapted physical educator (APE) is present in some regions that promote inclusive PE (Block & Obrusnikova, 2007; Haegele et al., 2020; Qi & Ha, 2012), there is a gap in Ontario – and perhaps Canada – regarding collaboration with APEs or health professionals in PE settings. Within Ontario, a tiered approach to in-school rehabilitation services, as a support to enhance all students' participation and promote inclusion within classrooms, has shown positive outcomes and benefits at the elementary school level (Missiuna et al., 2017). Partnering for Change (P4C) emphasizes collaboration among occupational therapists and educators to support students with a variety of physical and developmental challenges. Future research is warranted to explore the potential for tiered in-school support at the secondary school level involving collaborations between PE teachers and occupational therapists of physical therapists around universal design for learning or in the provision of more specific strategies and accommodations for some students.

In this study, seven physical educators shared their experiences providing

inclusive education at the secondary school level. They had a collective story to share that crossed school boards, student populations, and personal narratives. Given the small participant group, this analysis represents key themes that are preliminary in their generalizability, but essential in their relevance and importance to nurture growth in the field. Various sample sizes can be effective within an interpretive description design (Thorne, 2016), and the qualitative experience of the primary researcher gives increased credibility to the richness of data collected through interviewing and the in-depth analysis of the small participant group.

Although numerous teachers were recruited for the study and many indicated interest, only seven felt able to follow through with an in-depth interview. It is possible that only participants who felt confident in their experiences with inclusive PE were willing to engage in an interview. Further, it is possible that the participants felt uncomfortable discussing challenges in implementing inclusive PE within the Ontario secondary school curriculum and thus emphasized their successes. Participants were aware of the primary author's experience and "insider position" within the field of physical education, which provides support for the authenticity of the teachers' perspectives and the depth of analysis used. Future research will need to explore varied means of recruitment and use of a mixed methods approach. A survey study of Ontario secondary schools could provide a wealth of information about the equitable presence of PE in Ontario – what courses, activities, and facilities are available to all secondary school students across grades and gender to support the provision of inclusive PE. Further qualitative work should ensure a diverse population of teachers and students to allow for a comparison of experiences between groups such as urban versus rural, large versus

small school boards, and schools with class designations for students with special needs as well as those with elite athletes.

Conclusion

Findings that illustrate physical educators' perceived challenges and facilitators to providing inclusive PE to all students within Ontario secondary school PE are documented through an interpretive description of these educators' perspectives. Support for current research initiatives in the field of inclusive PE are evident within the findings. This study highlights several areas for future research, including giving voice in PE to teachers and students to explore meaningful PE; describing the status of courses and activities available across diverse secondary school contexts; considering discourses of teacher agency in the field of inclusive education; and exploring means for professional development in PE that facilitates collaboration among physical educators and experienced professionals.

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Table 1. Physical Education Courses in the Ontario Secondary School Curriculum

Course Code	Course Name	Course Options
PPL	Healthy and Active Living Education	PPL10; PPL20; PPL30; PPL40
PAF	Healthy Living and Personal and Fitness Activities	PAF10; PAF20; PAF30;PAF40
PAL	Healthy Living and Large Group Activities	PAL10; PAL20; PAL30;PAL40
PAI	Healthy Living and Individual and Small-Group Activities	PAI10; PAI20; PAI30;PAI40
PAD	Healthy Living and Outdoor Activities	PAD10;PAD20;PAD30;PAD40
PAQ	Healthy Living and Aquatic Activities	PAQ10;PAQ20;PAQ30;PAQ40
PAR	Healthy Living and Rhythm Movement Activities	PAR10;PAR20;PAR30;PAR40

Chapter 5

My path to the direction of study set forth in this dissertation was not linear. The focus of my thesis research was the intersection of many paths preceding this work, which culminated at a time when research in the field of inclusive physical education (PE) was growing rapidly. I have had a privileged position, joining three phases of my professional and academic experiences: (1) completing a Bachelors of Physical and Health Education, followed by a Masters of Exercise Science; (2) nine years of professional experience as a qualitative health researcher at Toronto's SickKids Hospital; and (3) over twenty years of personal and professional experiences working in an academic (non-PE) environment that supported students with mild traumatic brain injuries (TBI). As a qualitative researcher with an academic background in PE, I brought a unique perspective to the Rehabilitation Science program to explore how PE is reflected within an education system that is committed to inclusive education through provincial policy.

The purpose of this research was to explore how current curriculum, resources, and educational practices support or create barriers to the provision of inclusive PE in secondary school within Ontario. In this discussion section, I will review study findings, outline the contribution of the work, and place it in the context of inclusive PE literature. Contributions to the field of rehabilitation science and inclusive PE as well as research implications will be described.

Chapter 1 provided background information that presented the context of the growth of inclusive education (IE) and the current status of PE in Canada and Ontario. It addressed current definitions of inclusive education and the social model of disability as

well as the philosophical underpinnings of qualitative research that offered the foundation, contextual understanding, and rationale for the present work.

Chapter 2 presented a published manuscript outlining a critical discourse analysis of the recently revised Ontario (ON) secondary school PE curriculum (2015) to show how language is interwoven in current textual policy documents in ways that both support and challenge the implementation of inclusive PE practice. The analysis looked at whether inclusiveness was represented within discourse in the revised ON secondary PE curriculum (2015). Findings showed that the curriculum reflected inclusivity through overt language and intention, but concerns were identified about whether these ideals were reflected in the realities of the diverse educational contexts across the province. The question was raised about whether resources were available to support PE teachers in implementing inclusive PE within the curriculum's expectation to promote physical literacy for all students; the analysis also highlighted that building teacher capacity requires support beyond written policy. Both teachers' and students' voices were notably absent from the curriculum documents.

Chapter 3 described a rapid scoping review of current literature that explored the application of the Universal Design for Learning (UDL) framework to the field of Physical Education. UDL is identified within the ON secondary school PE curriculum (Ontario Ministry of Education, 2015) as a teaching approach to support inclusion, yet the curriculum provides scant information or resources to support teacher use in its application. Using rapid scoping review methods to explore and map the field, the findings highlighted several issues, including the presence of multiple frameworks, inconsistent terminology, and lack of definitions that make it difficult to engage in

outcomes-based research that can facilitate comparisons and synthesis across studies. Findings showed that the resource base available to promote professional development of UDL in PE is small but growing. In addition to published resources, supports are necessary to provide a comprehensive understanding of UDL to physical educators to aid their implementation of UDL in practice.

Chapter 4 offered insight into the collective voices of seven ON secondary school PE teachers as they described their perspectives on providing inclusive PE and the factors that support and create challenges to its implementation. Interpretive description captured participant narratives and guided a thematic analysis to illustrate the educators' collective experiences. Despite identifying some challenges similar to those already documented in recent literature, a positive overview was provided of inclusive PE among the seven secondary PE teachers who participated. Teachers articulated a desire for increased support and the need for additional professional development to build their capacity to implement inclusive practices in PE. Participants identified that "human resources" were preferred. Recommendations included in-person supports, such as experienced colleagues and professional collaborative networks, or "untapped" professional supports who had physical movement expertise that could span educational contexts, such as an occupational therapist, as noted by one participant. This study highlighted areas for research including continued explorations of "meaningful PE" as a teaching approach to facilitate physical literacy for all students. Emergent themes affirmed that present discourses must extend beyond teacher agency and that research is needed to address system-based barriers to inclusive PE.

In summary, inclusive education in ON classrooms requires that all children –

with or without disabilities, learning challenges, or special needs – learn within the same classroom to the greatest extent possible. A recent report suggests that approximately 27% of secondary school students in ON access special education programs and services (People for Education, 2018), including both those with IEPs and those without. Key findings from this dissertation identified that direct support and professional development regarding inclusive practices are desired by secondary school physical educators. A recent systematic review identified the need to provide professional development about evidence-informed inclusive practices to promote “successful teacher experiences” in implementing inclusion (Van Mieghem et al., 2020, p. 675). The ON PE curriculum requires teacher accountability for creating inclusive classrooms and teachers have reported feeling responsible for accessing their own resources and supports to facilitate inclusion (Rekaa et al., 2019; Tant & Watelain, 2016; Wilhelmsen & Sørensen, 2017). However, traditional means of support and knowledge transfer, such as written resources and documents, were not emphasized and rarely discussed by the interview participants.

Study findings confirmed that educator supports need to include and extend beyond the policies that support inclusive practice. Even with well-intentioned accommodations and policy guidelines, implementation of inclusion can be difficult if teachers are not informed and supported to meet student needs (Barber, 2018). PE teacher participants expressed the need for “human” supports, such as experienced physical educators, who can engage collaboratively to enhance inclusive practices in PE that support all students. These findings are supported by a survey completed by the Canadian Teachers’ Federation of approximately 3,800 teachers across Canada, representing 9,900 classes in English and French schools (Towle, 2015). An “overwhelming majority” of participants

cited “a strong disconnect between the philosophy behind inclusions policies and their everyday classroom implementation”, further identifying a need for increased human resource support and means to build capacity among teachers through “real and ongoing hands-on training” versus the often received “theoretical workshop” training (p. 24).

Who is missing in practice and research?

When using a critical lens to analyze my research, I needed to ask what or who was missing – and why. It was easy to determine who was included; it was less easy to recognize who was not included in discourse, experiences, and narratives.

It became apparent through my research and study that the student voice is exceptionally quiet or absent in the international discussion about inclusive physical education (Howley & O’Sullivan, 2020). Within the current thesis, the student voice was only present as a hypothetical voice within the Ontario PE curriculum document, which offers support to advocate for research and policy that includes all student voices, particularly marginalized groups who are often further excluded or unheard. Current research suggests that students find meaning when involved in planning at the classroom level yet also highlights that teachers struggle with implementing the concept of student voice in practice (Howley & O’Sullivan, 2020). In my current research, PE teachers spoke often about talking to students, engaging with students and offering them a safe space to offer feedback about how the PE class could be made more meaningful to them. This demonstrates a willingness for PE teachers to elicit the student voice to initiate classroom change. However, research is needed to elicit the student voice in Ontario secondary schools to gain a comprehensive and evidence-based perspective about how the student voice can influence inclusive PE at classroom, school and policy levels.

Collectively, my thesis analysis involved using a critical lens to explore the

secondary school PE curriculum, an in-depth consideration of UDL in PE, and teachers' perspectives of implementing inclusive practice in PE. Through this work, it became apparent that rehabilitation health professionals were not part of the conversation about inclusive PE in secondary school.

Could the expertise of rehabilitation health professionals support secondary school teachers in providing PE to all students, with tailored knowledge to support students with disabilities and challenges that affect motor skills and competence? While physical educators are trained to accommodate for a range of physical abilities within class settings, it has been suggested that they may not be trained adequately at the lower end of the motor skill spectrum and in the “specific didactics needed for children with motor disabilities” (Smits-Engelsman & Verbecque, 2021, p. 9). Rehabilitation health professionals, such as physical and occupational therapists, may be well-suited to support secondary school PE teachers since they are trained in motor skill acquisition and development and have experience in helping children with diverse types of disabilities adapt motor skills to task demands (Smits-Engelsman & Verbecque, 2021). Lange (2018) states that health professionals who “focus on human movement are in the best position to address perceptual-motor skills” (pg 35), further supporting the consideration that the collaborative expertise of educators and rehabilitation health professionals may provide the interdisciplinary approach needed to affect change in inclusive practice within secondary school PE.

The suggestion of involving rehabilitation health professionals is further supported by research that identifies that teacher attitudes towards providing inclusive education may vary by the students' types and severity of disability (Qi & Ha, 2012; Tant

& Watelain, 2016) as well as the teachers' perceived teaching competence (Tant & Watelain, 2016). One participant interviewed for this dissertation had experience integrating students with developmental delay into their mainstream PE classes but made a point of stating that teaching the specialized program PE class for students with developmental delay would not be their preference. This current study was limited in that no teachers were included who discussed providing inclusive PE to students with severe challenges related to physical ability and motor competence. The need for support in this context is likely greater than was expressed by the participants. The teacher who identified the benefit of collaborating with an occupational therapist to help implement inclusive practice had both professional and personal experience with the needs faced by PE teachers in including students with low motor competence.

Currently, rehabilitation health professionals provide services to students in elementary schools in ON through various service delivery models. In exploring teacher strategies for including children with autism spectrum disorder in mainstream classes, Lindsay et al. (2014) identified that teamwork through an interdisciplinary team, including professionals such as resource teachers, educational assistants, and occupational therapists was necessary to establish effective strategies for inclusion. Anaby et al. (2018) completed a scoping review that provided an overview of the principles and implementation strategies currently used successfully to promote inclusive education practices for students with disabilities. Guiding principles included models for intervention that are multilevel and collaborative, promote knowledge exchange and capacity building, and are facilitated through training and well-coordinated partnerships

(Anaby et al., 2018). An example of a service delivery model in ON that aligns with these guiding principles is called Partnering for Change (P4C).

Partnering for Change (P4C) is an empirically-derived, school health service model initially developed to deliver occupational therapy support to children with DCD (Missiuna et al., 2017). It strives to build capacity among both educators and occupational therapists through collaboration, coaching in context, relationship building and knowledge translation to support participation of all students in classroom settings. Within this model, the school is the ‘client’ rather than individual identified students (Missiuna et al., 2012). Health professionals prioritize coaching teachers in the context of the classroom, playground or gymnasium to help increase teacher capacity to ‘recognize, accommodate, and support children who have difficulty with motor coordination’ (Missiuna et al., 2012, p. 42). Educational approaches such as universal design for learning and trialing specific strategies are used to facilitate inclusion of all students (Missiuna et al., 2017). In one two-year study, the P4C model was implemented across 40 schools in three school boards and two health care regions in ON, Canada and demonstrated preliminary success as a collaborative and partnered model of service provision that can build teacher capacity to offer inclusive practices within the elementary classroom environment (Missiuna et al., 2015). This was the first study to implement and evaluate systematically a tiered model of rehabilitation service delivery in Ontario schools (Missiuna et al., 2015). The P4C model has now been adapted and implemented successfully in varied settings (Blumenstock et al., 2017; Corelli et al., 2017) and locations, including Quebec (Camden et al., 2021) and the Netherlands (Piskur & Meuser, 2020). However, to date, the P4C model, as a means to build capacity among

educators and rehabilitation health professionals, has not been evaluated at the secondary school level.

Future directions in research

Based on the findings of the three studies in this dissertation, and recent literature, it is proposed that a mixed-method pilot study is warranted to explore the potential of building a collaborative relationship between rehabilitation health professionals (e.g., school occupational therapist, school physical therapist) and secondary school physical educators to inform and increase their capacity to implement inclusive practices for all students in secondary PE. The findings from the current thesis work demonstrate that challenges persist in secondary school for physical educators to implement inclusive practices and that teachers prefer in-person support to assist when needed and to offer knowledge related to inclusive practice. Further, since rehabilitation health professionals are not usually present in secondary schools in ON, one must question if this leaves students with disabilities, specifically those that affect motor competence and other challenges to physical activity, at a loss for intervention opportunities in a school setting or at a heightened risk for negative long-term health sequelae. Using a mixed methods research approach would allow for an exploratory qualitative study that invites the perspectives of both rehabilitation health professionals and secondary school physical educators to consider the potential for collaboration.

Future research in rehabilitation sciences must also attempt to build and expand on developing theories, models and frameworks within the field. Research that progresses the work within my dissertation could be supported by using the International Classification of Functioning, Disability, and Health (ICF) as a biopsychosocial model of disability that provides a common language within inclusive education studies (Maxwell

et al., 2018). As per the ICF, an individual's level of functioning is a dynamic interaction of three components: their health condition(s), environmental factors, and personal factors. In this context, the ICF provides a framework to describe an individual's levels of functioning that integrates current models of disability and provides a link between an individual's environment, including physical, social and attitudinal parameters, and their ability to participate in required or desired activities within it (Imms et al., 2017).

Given this understanding, the ICF allows research in inclusive physical education to situate itself between the social model of disability (which underscores inclusive education in Ontario) and the participation of students in a manner that emphasizes both attendance and involvement (Maxwell et al., 2018). Respective of the current work, "involvement" refers to a student's ability to participate in a physical education class in a manner that is engaging and meaningful, and in which, a student feels both involved and included; the ICF supports the message within inclusive education that attendance alone is not enough to determine inclusion. Considering the ICF in the context of inclusive education is a developing approach but offers a novel perspective and common foundation for research that intersects education, rehabilitation, and health.

PE research in rehabilitation or rehabilitation research in PE?

Within a qualitative framework, it is the obligation of the researcher to consider their position of knowledge as it relates to the current topic of study (Creswell, 2013). As described in Chapter 1, I offered transparency in my roles as the primary researcher and as a doctoral candidate in Rehabilitation Science, with postsecondary degrees in Health and Physical Education and experience as a varsity athlete and a coach of children's recreational sport. This background placed me in a unique position, as an insider and outsider, to adopt a critical stance within the field of inclusive PE.

Upon reflection, I have recognized that, prior to my studies in Rehabilitation Science, and despite my experience with students with mild TBI, I had rarely considered the experience of PE for those whose challenges might affect their enjoyment of PE. I studied PE in post-secondary school because I had a passion for sport, playing games, competition, and succeeding. From my perspective, no academic subject was more fun, and studying PE meant learning with others who wanted to build a career with the same passion for PE as I had. It had not occurred to me that being a physical educator – with learned understanding and knowledge to address differences in both ability and access – meant trying to instill the same passion in others who may not have a similar love for sport or physical activity as I do.

This dissertation was completed in the School of Rehabilitation Science, an academic environment that provided me with courses to study foundations in rehabilitation theory, models of disability, and to foster a critical awareness that brought new perspectives at the intersection of education, health, and disability studies. I learned to reconceptualize disability along a continuum of function, within a social model of disability, and to challenge and redefine the notion of normality. Had I completed the same research in a physical education program of study, my depth of exposure to these new perspectives related to inclusion and disability may not have occurred. Completing my studies in Rehabilitation Science provided me with a new vantage point in which disability and inclusion were central to every aspect of my learning and provided me with a cornerstone foundation for continued research in the field of inclusive PE.

Is there a need for policy change?

This research illuminated discussions about physical literacy as a guiding principle to the PE curriculum and endorsed teaching approaches to support inclusion, such as

universal design for learning. There is strength in the revised ON PE curriculum (2015) in how it represents inclusive education for all as well as embracing physical literacy as a shift from the traditional physical education foci of competition, games, and skills to a framework proposing lifelong participation. However, my thesis findings repeatedly identified that the onus of inclusive practice is placed on physical educators, as the prime facilitators, to implement successful inclusive practices within the classroom. In fact, the PE curriculum states that the PE teacher is responsible for the ‘creative’ implementation of inclusive practices to provide opportunities and options that meet the needs of all students.

As researchers, we have an obligation to identify the systemic barriers giving rise to the parameters within which teachers are asked to be creative. Access to resources and facilities, time and funding for professional development, reduced class sizes, and access to increased support within the classroom have been identified as facilitators to providing inclusive education in PE (Haegele et al., 2018) – yet, these factors are rarely amenable to change by teachers alone. Collectively, teachers and students have voices that need to be shared and heard. Manuscripts in this dissertation have recommended exploratory research that invites student feedback on curricular documents to ensure that its language and discourse reflect that all students *feel* included as much as documents state that they *are* included. Initiatives have also been recommended to elicit the perspectives of physical educators and rehabilitation health professionals about potential collaborations to facilitate inclusive practice in secondary school PE.

I move forward with optimism based on the abundance of research that has contributed to the field of inclusive PE over the past few years and with the knowledge

that it will help push boundaries of discourse, change, and implementation for professional practice – for both physical educators and rehabilitation health professionals. It is my hope that this thesis work will prompt discussions about inclusive PE in secondary school and how we can better support our physical educators to encourage lifelong physical activity for all students.

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