A.
Academic Literature Review: Executive Summaries

Executive Summary:

Barriers to Inclusive Education: A Review and Synthesis of the Canadian Grey Literature

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January 15, 2018

Purpose and Scope:

According to Statistics Canada (2011), 11% of adult Canadians without a disability had less than a high school diploma while approximately 41% of adult Canadians with a disability had less than a high school diploma. In the same survey, the employment rate of those who did not report having a disability was 79% versus 49% for those who reported having a disability (Turcotte, 2012). Worldwide, there remain significant gaps in education completion rates between people with and without disabilities (Hauerwas, & Mahon, 2017). Clearly, more needs to be done in primary to high school education to ensure school and life-long success for those who identify as having a disability. Inclusive education attempts to address this need but there are many barriers to its success.

This report attempted to answer the question, *'What are the barriers to inclusive education?'* Government and teachers' association reports on inclusive education are plentiful, easily found and freely accessible. These reports are often the result of considerable time and expertise, and frequently include syntheses of peer reviewed literature, various forms of data collection-including multiple means of input from stakeholders-and extensive policy analysis. This grey literature was reviewed and provided a comprehensive set of themes on barriers to inclusive education.

Methods:

Using Google Scholar, teachers' associations or unions and ministry of education websites, we searched for provincial and territorial ministry of education reports, teachers' association or union reports, and non-profit reports from between 1 January 2008 and 1 October 2017 (a 17-year period). The content of 39 reports were summarized and standardized into keywords. Predominant keywords were then tallied and graphed.

Main Themes:

Twelve main themes were found:
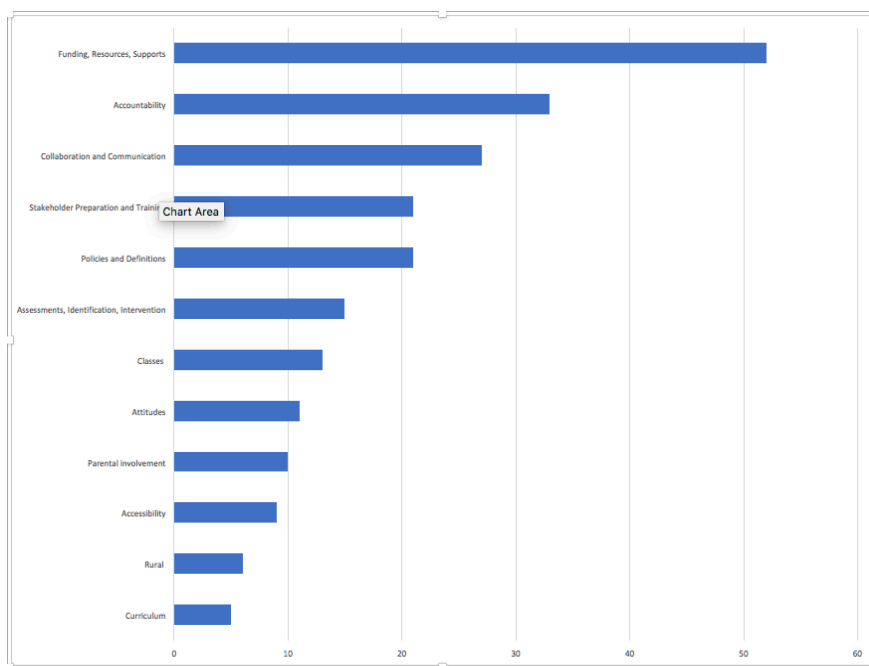
The main themes and their sub-themes:

Themes	Sub-Themes
Supports, Funding, Resources	allocation, distribution, amount, transparency, workload, specialist, hiring, retaining, roles
Accountability	lack of research, outcomes, data, roles of stakeholders, individualized program/transition plans
Collaboration and Communication	all stakeholders, language barriers, silos
Policies and Definitions	lack of, unclear, inconsistent implementation
Stakeholder Preparation and Training	pre- and in-service educators, support staff
Assessments, Identification, Intervention	wait times, for early years
Classes	size, composition, complex needs
Attitudes	negative: mainly educators, then parents and students
Parental involvement	various obstacles to parent engagement
Accessibility	facilities, equipment
Rural	systemic challenges
Curriculum	need for universal design and differentiation

Suggestions:

Suggestions for addressing the barriers to inclusion are based on key sub-themes found in the summary of barriers for each review. These themes and suggestions demonstrate the ongoing complexity of and challenges for inclusive education. Comprehensive educational reform is likely needed to meet these challenges.

Theme	Suggestions:
Supports, Funding, Resources	• Provide evidence-based resources and specialized supports directly in schools.
Accountability	• Regularly evaluate all schools using well-established inclusive school assessment tools. • Regularly collect data on school completion rates for all students in the province. • Regularly collect follow up data on students who do not complete high school.
Collaboration and Communication	• Provide high quality, evidence-based professional development on effective collaboration and communication within and across all stakeholder groups.
Policies and Definitions	• Create a new province-wide inclusive education definition and policy, created in collaboration with all stakeholders, especially students and their primary caregivers. • Provide clear examplars to demonstrate policy statements in action.
Stakeholder Preparation and Training	• Align pre- and in-service education, and paraprofessional training with evidence-based practices. Implement best practices for professional development / training.
Assessments, Identification, Intervention	• Use current epidemiological and census data to inform consistent and timely block funding for schools. • Assign school-based psychologists to work directly in schools with students using effective psychosocial interventions.
Classes	• Reduce class sizes where necessary. • Create and implement a complexity ratio for classroom composition.
Attitudes	• Implement Disability Studies in Education professional development for all stakeholders, with a particular emphasis on school leadership.
Parental involvement	• With parents, create and implement regular mechanisms for their involvement in school-based decision making.
Accessibility	• Evaluate school-based physical environments using well-established accessibility evaluation tools.
Rural	• Create specialized intra-disciplinary district teams in rural locations.
Curriculum	• Provide education on Differentiated Instruction and Universal Design for Learning for all pre- and in-service educators, and para-professionals.

Conclusion:

The themes and suggestions represent a review and synthesis of thirty-nine distinct pieces of Canadian grey literature on inclusive education. Most reports were from official provincial and territorial government initiatives to understand stakeholder and academic perspectives on inclusive education. Thousands of stakeholder voices from across Canada and more than 600 academic articles are represented in this grey literature and subsequent review.

This review of the grey literature has allowed me to offer a comprehensive, summary perspective for the question, 'What are the barriers to inclusive education?' Additionally, I have offered suggestions for addressing these barriers. They are by no means exhaustive of the possible suggestions available in the literature on inclusive education. Taken in part, and especially together, these suggestions point towards significant school reform as well as teacher accreditation reform.

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Executive Summary

What are the best practices regarding identification and intervention for young children at risk of school failure?

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January 15, 2018

Purpose and scope of this literature review

This literature review examines the identification of and intervention for young children with special needs (YCSN) as they enter the school system. These students have significant social, emotional, cognitive, and/or physical needs that may adversely affect their opportunities to be successful. This review was divided into several sub-questions: a) articulating a philosophy of inclusion in early childhood education, (ECE), b) the community and home context of YCSN in Nova Scotia, c) the process of identifying YCSN, d) access to services for families, d) partnerships between families and service providers, f) individualized family service plans, g) the attitudes and competencies of teachers of YCSN, h) the learning environment and h) the pedagogy for YCSN.

Methods used to conduct the literature review

*Th*e *Handbook of Effective Inclusive Schools: Research and Practice (*2014*), The Sage Handbook of Special Education. Volume 1 &2* (2014) and *The Handbook of Research on Special Education Teacher Preparation* (2014) were reviewed as they synthesized many peer-reviewed studies. Peer-reviewed journal articles were examined to find best evidence-based practices. Gray literature and handbooks produced by ministries of education and advocacy groups were reviewed. Alberta and New Brunswick have recently completed provincial reviews of inclusive education and these reports were reviewed. Particular attention was paid to the New Brunswick review (2012), given its similarity to the Nova Scotia context. Research on early childhood inclusion set in international contexts was included.

Main results and themes

The multiple supports that create full inclusion of YCSN *all* need to be in place for the process to be successful. Inclusion is a radical departure from the dual track education system that previously existed in schools. Given that attitudes towards inclusion affect the uptake by early childhood educators, time spent operationalizing inclusion with educators is time well spent. Key qualities of inclusion in ECE include membership and belonging, positive social relationships, learning that allows a child to reach his/her potential, and welcoming of families into a partnership roles with other professionals.

The community and home context of young children with special needs in Nova Scotia

The first 2000 days of a child's life are the most important in all human development. Early experiences determine whether a child's developing brain architecture will create a strong or weak foundation for all future learning, behavior, and health. The primary factors that shape the health of young children are the living conditions they experience. Poverty presents adverse living conditions for many families in Nova Scotia, a province that has the third highest child poverty rates in Canada. Poverty compromises healthy childhood development. Young children, children in rural areas and children living in lone-parent families are at greater risk of living in poverty. Children with disabilities are twice as likely to be affected by poverty. Poverty-reduction strategies that the province and school boards can engage in can positively affect the home learning environments for YCSN.

The process of identifying YCSN

The sooner YCSN are identified, the sooner interventions can begin. Early years intervention can significantly influence overall the development of YCSN. Conversely, any delay in screening for YCSN places them at risk of not reaching their potential. Early screenings by health professionals who have a deep understanding of child development are a best practice. The current family doctor and specialists' shortage in Nova Scotia could compromise the early identification process for YCSN.

Access to services for families, partnerships between families and service providers, and Individualized Family Service Plans

Services for YCSN must be located where families can have access to them. Families living in poverty and/or in rural areas face the most challenges in accessing services. The comprehensive school hub model acknowledges the school as the optimal place to locate services. An integrated service delivery model is recommended in which professional silos are abandoned and a transdisciplinary collaborative approach is used.

Models that place families as the center of the intervention process are identified a best practice. Teaching and interventions, outlined clearly in the Individualized Family Service Plan build upon and enhance the relationship between the young child and the parent/guardian. These relationship-focused interventions deepen the competence and confidence of the parent/guardian to support their child's development.

Transition into school

The efforts to support YCSN described above risk being dashed if there is not a coordinated support for the child as s/he enters public school. The transition from home to school needs to build upon the successes of pre-school period. Having an early childhood interventionist (ECI) coordinate this process is a best practice. The ECI acts as a navigator for the family, helping them maintain their confidence during the transition period and provides important support to the teacher and school team. The transition process for children diagnosed with autism can be particularly challenging for families. The highest level of stress among families of YCSN is found in parent/guardians of children with autism.

The attitudes and competencies of teachers of YCSN

Inclusive education has often focused on the material conditions in schools, but at its core, inclusion is about attitudes. Teachers' attitudes towards inclusion creates spaces that make it possible – or prevent it. When early elementary teachers receive support in implementing inclusion, they develop positive attitudes and build confidence in their ability to

be inclusive. When teachers are provided with on-going, job-embedded professional development about inclusion, their sense of agency and efficacy increases. When school and system level teams provide support and expertise for programs for YCSN, teachers do not feel isolated, but rather empowered.

The learning environment

The ECE classroom environment is often the first place where children learn about inclusion. The quality of the classroom environment has a compounding effect, influencing the quality of relationships between teachers and children, which in turn influences the social-emotional and academic outcomes of the children. Carefully structured, rich environments, both indoor and outdoor, can create optimal learning from the start.

The enormous social and academic benefits of play are increasingly recognized in ECE. Environments where the focus is on play, alongside well-qualified early childhood educators develop social, emotional, physical, and cognitive skills in young children. High quality play environments develop the more complex executive functions in the brain and promote healthy development and resilience. Play provides an important opportunity for parent/guardians to bond with their children, especially important for parent/guardians of YCSN, whose lives are often filled with higher levels of stress.

The pedagogy for YCSN

Best pedagogical practices in ECE include the ability to engage in individualization, combined with specific procedures and interventions where needed, implemented in well-designed environments. Quality, bounded time for educators to collaborate with their peers using reflection, assessment, and problem-solving and co-teaching were identified as best practices in ECE pedagogy for YCSN. Social learning impacts children's self-regulation which influences their ability to learn and has as much importance as academic learning in ECE. Best results occur when social and academic occurs together. School-Wide Positive Behavior Supports are effective practices but generally underused in schools. Various multi-tiered systems of support have emerged as promising practices to improve outcomes for YCSN.

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Executive Summary
Inclusive education: What are effective interventions for child and youth mental health problems and disorders?

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January 15, 2018

Method and Scope:

The information in this report largely comes from reviewing the high-quality content found in the following two sources:

- *Children's Mental Health Research Quarterly* and *BC Provincial Reports* (publications of the Children's Health Policy Centre of Simon Fraser University)
- Dr. Stan Kutcher and TeenMentalHealth.org
- Collaborative for Social and Emotional Learning (CASEL.org)
- World Health Organization
- Canadian Centre for Policy Alternatives
- Evergreen: Canadian Mental Health Commission's National Framework for Child and Youth Mental Health

Main Results:

The sooner an intervention begins (identification, assessment, treatment), the better the health and school-based outcomes (Kutcher, 2017). Poor social determinants of health (SDOH) like income and poverty, correlate to higher prevalence of mental disorders (Patten et al., 2005; Starkes et al., 2005 in Mikkonen & Raphael, 2010; WHO, 2007). 21.6% of Nova Scotia children live in poverty. Nova Scotia had the third-highest provincial child poverty rate, and the highest rate in Atlantic Canada (Frank & Saulnier, 2017). There is strong best-available evidence* supporting the following approaches in addressing child and youth mental health:

> - Feasible School Practices
> - Social Emotional Learning
> - Mental Health Literacy
> - Psychosocial Interventions

More school-based research on the above approaches is needed.

Themes and Suggestions:

1) The sooner an intervention begins (identification, assessment, treatment), the better the health and school-based outcomes (Kutcher, 2017). Inclusive education should largely focus on early/ immediate intervention.
2) Poor social determinants of health (SDOH) like income and poverty, correlate to higher prevalence of mental disorders (Patten et al., 2005; Starkes et al., 2005 in Mikkonen & Raphael, 2010; WHO, 2007). 21.6% of Nova Scotia children live in poverty. Nova Scotia had the third-highest provincial child poverty rate, and the highest rate in Atlantic Canada (Frank & Saulnier, 2017). Inclusive education should work to address poor social determinants of health.
3) There are feasible practices schools can do to sustain and/or improve students' mental health (Mental Health Quarterly). Inclusive education should focus on feasible practices for sustaining/improving student mental health.
4) Mental Health Literacy, a branch of Health Literacy (HL), is a universal health promoting intervention that has the potential to improve health and school-based outcomes (Kutcher,

2016). Inclusive education should focus on embedding MHL into school curriculum, as well as in pre- and in-service teacher education.

5) There are several Social Emotional Learning programs that have strong evidence of improving school-based outcomes (CASEL, 2013, 2015). Inclusive education should focus on embedding SEL into school curriculum, as well as in pre- and in-service teacher education.

6) There are many interventions for specific mental disorders that have moderate evidence for prevention and intervention efficacy and there are a few interventions that have strong evidence for efficacy (Waddell et al., 2014). Inclusive education should focus on implementing best-available evidence interventions for students with mental disorders.

7) For most of the interventions, they are most likely to be effective when the content and/or training most closely approximates the behavior targeted in daily life, and the dose of practice and feedback is high (Evans et al., 2017). Regarding generalization, expecting parent-focused behavior management interventions to generalize to school settings without active interventions at the school constitutes a "train and hope" approach that is unlikely to work (Stokes & Baer, 1977 in Evans et al., 2017). Inclusive education should focus on implementing best-available evidence interventions for mental disorders in the daily lives of children and youth.

8) It is extremely important to note while SEL and MHL interventions can be feasibly implemented by educators in school-based settings, the research evidence*± on the prevention and treatment of mental disorders by and large continues to support that this work is best facilitated by mental health professionals, though there are some exceptions. Inclusive education should focus on placing mental health practitioners directly in schools, to work directly with students (and teachers). Similarly, where the evidence supports this, pre- and in-service teachers should be provided with training in the implementation of best-available evidence interventions for mental disorders.

9) More school-based research is needed (Kutcher, 2017). Inclusive Education should focus on investing in and cultivating strong research relationships among health practitioners and educators, and other partners such as families, students, and research institutions. Promising interventions with less supporting evidence should be implemented in schools with rigorous data gathering and implementation plans.

*Evidence in this report largely refers to the criteria found in the *Cochrane Collaboration* and *Evidence-Based Mental Health*. In most cases, the criteria for acceptable evidence were the top three tiers of the evidence hierarchy: meta-analysis of randomized control trials, randomized controlled trials and quasi-experimental designs.

Discussion:
There now exists considerable best-available evidence for school-wide, teacher-led mental health promotion programs that increase student academic outcomes, decrease disruptive behaviours, and increase teacher's knowledge, skills and attitudes. Feasible School Practices, Social and Emotional Learning, and Mental Health Literacy should become foundational content for pre- and in-service teacher professional development. Concomitantly, there is best-available evidence for targeted mental health problem and mental disorder programs, most often facilitated by health professionals, that prevent (primary and secondary)

disorders or reduce the symptoms and/or the severity of the symptoms of disorders in children and youth. While pre- and in-service educators ought to know about these latter interventions, by and large, trained and accredited health professionals should be working directly in schools, applying the interventions to students and where appropriate, their families. In some cases, teachers may be involved in these targeted interventions. The best-available evidence suggests the above work is most effective when it begins early in a child's life or, as soon as symptoms of mental health problems or disorders appear. Targeted interventions must be intensive, frequent, and on-going.

Given the above, school curriculum across the school years should include Social and Emotional Learning and Mental Healthy Literacy while targeted interventions should be implemented in school settings by accredited health professionals. In the absence of such health professionals, and where appropriate, dedicated educational staff (Guidance, School Psychology, Special Education Teachers, Consultants, etc.) should be accredited to facilitate best-evidence programs. Promising school-based programs should be evaluated before wide implementation, thus necessitating stronger research relationships with research intensive institutions like health and post-secondary education, for examples. Further school-based research is needed, overall, on this topic.

While the above provides direction and perhaps, some hope for what is needed in preschool and primary to grade twelve school settings for an inclusive education system, poor social determinants of health remain unaddressed. This is a limitation of this report, and likely one of the greatest barriers to inclusive education. Poor SDOH most likely requires greater and more complex considerations than what is within the purview of inclusive education. Still, all stakeholders ought to be aware of the impacts of poor SDOH on child and youth mental health.

Conclusion:

With the exception of the social determinants of health, this brief report provides considerable clarity on what is needed to help address the mental health problems and mental disorders of children and youth in schools.

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Overview of Provinces' and Territories' Policies, Processes, and/or Practices for Individualized

Program Planning

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Abstract

The process for developing programs for students who require individualized program plans to allow them to be successful in schools was examined in each of the 10 provinces and three territories in Canada. As schooling is a provincial and territorial responsibility, the authors examined all provinces'/territories' Ministry of Education websites to locate documents that described the program planning process in each jurisdiction. The overall multi-step individualized program planning process seems to be quite similar across jurisdictions with some provinces/territories providing guides which are detailed and comprehensive (e.g., Northwest Territories) and others providing less such guidance (e.g., Québec). The composition of the school team, which is charged with developing the individualized program plans, is also comparable across jurisdictions—with acknowledgement that the student and his/her parents/guardians are central to the process. In most contexts, the principal provides leadership in the development and overseeing of the individualized program planning process. There is great variation in publication dates with several jurisdictions' documents published within the last three years (e.g., Québec, New Brunswick, Newfoundland and Labrador, Yukon Territory) and several others being over 10 years old (e.g., Ontario, Nova Scotia, Prince Edward Island, Northwest Territories). In the development of the individualized program plans in both Nunavut and the Northwest Territories, an assets-based 'visioning' process articulates the larger life goals and dreams for the students; annual goals (and later shorter-term goals) are nested in that larger vision. This practice may be implied in other jurisdictions but was explicitly stated in these.

Keywords: Program Planning Process, Individual Program Plan, Individual Education Plan

Currently, all provinces and territories have policies, processes, and practices related to individualized program planning for students with various specialized learning needs. These plans have different names within different provincial or territorial jurisdictions: British Columbia, Manitoba, Ontario, Québec, Prince Edward Island, Newfoundland and Labrador, the Yukon Territory, and Northwest Territories have Individual(ized) Education(al) Plans (IEPs); Alberta and Nova Scotia have Individual(ized) Program Plans (IPPs); Saskatchewan and New Brunswick have Personal(ized) Program Plans (PPPs); and Nunavut has Individual Student Support Plans (ISSPs). Irrespective of these differing labels, all plans are, in many ways, meant to capture the same information, as well as document instructional and assessment intentions and results.

Individualized Program Planning across the Nation

This report summarizes the IPPs within all 10 provinces and three territories.[2] Within these summaries is key information related to policy, process, and/or practice. Primary sources of information were online Government/Ministry (re)sources. URLs for these are included on Table 1 and full citations are listed within the References section. Additionally, Table 1 provides a brief summary of these IPPs. More complete summaries of these provinces' and territories' individualized program planning follows here. Table 1 and the information that follows are meant to provide some initial information to answer the question, "How is individualized program planning for students with special needs conducted in other provinces and territories?"

British Columbia

Individual Education Plan (IEP) development in British Columbia is meant to be a cyclical planning-implementing-evaluating process whereby seven essential components are present (i.e., assessment, collaboration, writing, introducing, monitoring, reviewing, reporting). An IEP must be designed for all students with special needs "as soon as practical after the student is so identified by the board" (Province of British Columbia, 2009, p. 4). Note, however, that there are three circumstances in which an IEP for a student with special needs is not necessary: no adaptations or only minor adaptations are required; expected learning outcomes have not been modified; or required remedial instruction (by a person other than the classroom teacher) for a

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[2] Individual(ized) Program Plan (IPP) is the term used herein to refer to all of these plans.

year is 25 hours or fewer. IEPs are not required for students not identified as having a special need—irrespective of required adaptations or remedial support (though a learning plan would be appropriate).

An IEP is meant to document individualized goals and shorter-term objectives related to a student's special needs, teaching and learning strategies, required services and resources, measures for tracking achievement, and adaptations and modifications. Goals and objectives are meant to be realistic (e.g., in number) and achievable, as well as measurable. The SMART construct is offered as a helpful tool for setting appropriate goals and objectives (Specific, Measurable, Achievable and Action-oriented, Relevant and Realistic, Time-related).

An IEP usually includes one or more of the following strategies: remedial or compensatory instructional interventions; extended content (e.g., enrichment); adaptations to the learning environment (e.g., to address sensory needs); alternative approaches to instruction or assessment; adaptive or assistive technologies; or specialized services (e.g., Braille). Finally, evaluation of goals and objectives (and strategies) is meant to rely on appropriate observational and product data (e.g., portfolios, checklists, rubrics and rating scales, functional and student assessments).

Alberta

Individualized Program Plan (IPP) development in Alberta is meant to occur as soon as a student is identified as having special education needs. Typically, this occurs at the beginning of a school year. The IPP process relies upon three identified differing types of assessment data: specialized assessment data (e.g., formal standardized testing done for diagnostic and programming purposes; administered by qualified professionals); classroom assessment data (e.g., writing samples, reading inventories; administered by classroom teachers); and assessment of IPP progress data (e.g., behaviour observation checklists, performance tasks; administered by classroom teachers).

Goals and objectives are meant to be measurable; a number of Alberta's school jurisdictions also apply a version of the SMART construct (Specific, Measurable, Achievable, Relevant, Time-limited). Goals are also meant to be annual goals. Short-term objectives are

meant to be "stepping-stones between the current level of performance and the annual goal" (Alberta Education, 2006, p. 2).

Accountability for the delivery and implementation of IPPs falls upon school site principals. Relatedly, principals are also required to ensure that teachers of student with special needs are afforded relevant resources and access to related professional development opportunities. While principals are ultimately responsible for IPPs, they are also required to identify teachers who have the responsibility to coordinate, develop, implement, monitor, and evaluate IPPs.

Saskatchewan

Within Saskatchewan, Personal Program Plans (PPPs) are created and implemented in a cyclical five-step process: setting direction; gathering and sharing information; the PPP planning meeting; writing the PPP; implementing and evaluating the PPP. A PPP is required for all students who: 1) are working on learning outcomes that differ from provincial curriculum outcomes from their grade level; 2) require continuing interventions or individualized supports beyond simple adaptations; or 3) require intensive supports. Though every student who requires a PPP will not require intensive supports, all students who require intensive supports will require a PPP. A Record of Adaptations is required for all students with a PPP. This record is meant for students who follow the approved provincial curriculum but who require accommodations/adaptations to meet those learning objectives or who require adaptations/extensions to add breadth and depth to those learning objectives (i.e., enrichment).

A PPP is a "compilation of student outcomes that have the highest priority" (Saskatchewan Ministry of Education, 2008, p. 2) for a student within a school year. In addition to annual student outcomes and short-term objectives, PPPs are meant to consider what are termed meaningful adult outcomes (e.g., related to independence, community participation, meaningful employment, etc.). Areas of student development and target skills may be in any of eight areas (academic, communication, personal management, social competence/social

networks, leisure/recreation/physical wellness, career/work exploration, task performance/work habits, other).[3]

Student outcomes are meant to be annual (or end-of-semester as appropriate). Short-term objectives are meant to be developmental steps towards achieving an annual student outcome. The SMART construct is offered as a helpful tool for setting appropriate goals and objectives (Specific, Measurable, Achievable, Relevant, Time-related).

Manitoba

In Manitoba, Individual Education Plans (IEPs) are developed in a four-step cyclical process: develop or revise the student profile; develop and write the IEP; implement the IEP; and review, evaluate, and revise the IEP. These IEPs are meant to document the student-specific planning process; they function as planning, record-keeping, and communication tools. IEPs are required for students who require student-specific outcomes instead of, or in addition to, expected provincial learning outcomes. Individuals who contribute to the development and implementation of an IEP include a "core team" (i.e., student, parent[s]/guardian[s], classroom teacher[s]), an "in-school team" (e.g., core team *and* special education teacher, resource teacher, school counsellor, principal), and a "school support team" (e.g., core team *and* additional personnel, such as consultants).

A hierarchy of interventions is offered to meet students' special learning needs. These interventions move from differentiated instruction (DI) to adaptation to modification to individualized programming. Primarily, within Manitoba, a student must have an IEP when: 1) a specialized assessment determines that support is needed to meet expected learning outcomes; 2) a specialized assessment determines that support is needed to meet student-specific learning outcomes. There are other criteria for IEP requirements (e.g., receiving special needs categorical support, requiring reading aloud for standardized tests).

Student-specific outcomes are concise descriptions of what students should be able to do by the end of the school year. They should be related to a priority learning need, challenge

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[3] These areas are unclear within this provincial document (different labels are used on different pages); "expanded descriptions…will be included in the next revision" (Saskatchewan Ministry of Education, 2008, p. 8).

the student, and be achievable. The SMART construct is offered as a helpful tool for setting student-specific outcomes (Specific, Measurable, Achievable, Relevant, Time-related). Performance objectives are smaller, more manageable components or steps to be achieved as one aims to meet a student-specific outcome.

Ontario

In Ontario, it is incumbent upon a school principal to ensure an Individual Education Plan (IEP) is developed for any student deemed exceptional by an Identification, Placement and Review Committee (IPRC). This IEP must be developed within 30 school days of a student being placed in a special education program. Discretion is also granted to school boards to develop IEPs for students who have not been officially identified as exceptional, but are nonetheless receiving special education-related services, or are placed in a special education program. Essentially, the IEP is a written plan, based on a compete assessment of the student. The IEP notes accommodations or alternative expectations the student requires to achieve success.

The principal normally delegates the responsibility for developing, implementing, and monitoring the IEP to a teacher. However, despite the fact that this task is vested with a single teacher, a team-approach is recommended. Throughout the IEP process, the focus should always be curriculum-oriented, and focused on the manner in which the student will navigate the curriculum with or without modification of expectations.

Ontario's IEP process progresses through five phases: 1) gather information (review student record; consult with parents/guardians, school staff and other professionals; conduct additional assessments if required); 2) set the direction (establish the IEP team, and begin working on the plan); 3) develop the IEP (determine accommodations and modified expectations; meet with parents/guardians and obtain principal's approval); 4) implement the IEP (share the IEP with all parties involved, and put the plan into action; continuously monitor, assess and revise as needed); and 5) review and update the IEP (update learning expectations at the beginning of each reporting period, and plan for transitions when relevant).

Québec

The identification of the needs and services offered to students with handicaps, social maladjustments, or learning disabilities is elaborated through an Individual Education Plan (IEP) that targets the actions that will help students succeed.

The principal, with the student's parents/guardians, the staff providing services to the student, and the student him/herself, if able, establish the IEP. It includes: an assessment of the student's abilities and challenges; the competencies to be developed; the support services needed; an outline of the required interventions; the role and responsibilities of each partner involved; the process and dates for evaluating the results; and the process for IEP review. For some secondary students, the IEP contains goals and objectives related to transitions from school to working life. The student's parents/guardians must be made aware of the student's code or identification.

The principal oversees the implementation and periodical evaluation of the IEP and informs the student's parents/guardians of progress regularly. Based on the periodical review, the principal decides whether or not to maintain (with or without change) the identification of the student as a student with a handicap, social maladjustment, or learning disability.

At the final IEP meeting of the year, the team makes its recommendations for the following school year. In specific student situations, the school may be asked to participate in an Intersectorial Individualized Service Plan that includes services and resources from the education, health, and social services sectors.

The Ministry stresses that parents/guardians and school staff are to work together in the IEP process. Regular communication between home and school is cited as one of the best tools to ensure this collaboration.

New Brunswick

A Personalized Learning Plan (PLP) is developed for a student if the superintendent of a school district, after consulting with qualified persons (teachers, members of the school-based education support services team, and other related professionals), determines the physical, sensorial, cognitive, social-emotional, or other needs of a student dictates that such a plan should be put in place. As such, a PLP is considered when a student experiences difficulty over

an extended period of time that is not ameliorated by additional supports provided by the classroom teacher(s). If classroom teachers or parents/guardians suspect that a PLP may be required, a referral should be made to the education support services team, at which point informal and formal assessments will be examined.

The PLP is instituted if a student "requires specific and individual identification of practical strategies, goals, outcomes, targets, and educational supports that ensure the student experiences success in learning that is meaningful and appropriate, considering the student's individual needs" (New Brunswick Department of Education and Early Childhood Development, 2015, p. 8). The PLP is a living document and is expected to change throughout the course of the school year. As well, the entire process is predicated on the collaboration between educators, parents/guardians, students, and community. And, finally, decisions surrounding the PLP are made "based on an educational rather than a medical model, and an inclusive rather than a special education model" (New Brunswick Department of Education and Early Childhood Development, 2015, p. 8).

Nova Scotia

Nova Scotia's special education model is centred on a program planning process, which is a team-driven enterprise designed to plan appropriate programs for students with special needs. Members of the program planning team might include any or all of the following: parents/guardians, principal/vice-principal, teachers, resource teachers, other professional staff, the student, if deemed appropriate, and additional members if relevant.

The program planning process progresses through eight stages: 1) screening and identification (if the student has been identified as requiring an IPP prior to starting school, the process may advance to Stage 3; 2) exploration of instructional strategies by classroom teachers (adaptations are implemented, and if these prove to be successful, the process may stop); 3) referral to program planning team meeting (this referral made be made by the student, parents/guardians, teachers, or guidance counsellors); 4) program planning team meeting (decisions are made as to whether to develop further adaptations, conduct further assessment, or develop an IPP); 5) Individual Program Plan (IPP) development (modifications are instituted to the student's plan of study); 6) implementation of IPP (instruction and assessment of

outcomes); 7) monitoring of IPP (a change of outcomes necessitates a referral back to the program planning team; and 8) review of IPP (should be reviewed prior to each reporting period).

In looking specifically at the IPP, it can best be categorized as "…a statement of annual individualized outcomes based on the student's strengths and needs that is developed and implemented for every student for whom Nova Scotia's public school programs curriculum outcomes are not applicable and/or attainable" (Nova Scotia Department of Education, 2006, p. 5).

Prince Edward Island

In Prince Edward Island, when the special needs of a student are such that an intervention is required, parents/guardians, teachers, resource teachers, and school counsellors may opt to refer a child to the school-based services team. The core members of this team include a school administrator, resource/special education teacher, classroom teacher, parent(s)/guardian(s), and student, when appropriate. Additional membership on the team may be drawn from other professions as required. Ideally, this team operates in a collaborative and consultative manner.

This referral to the school-based services team initiates the process in determining whether a student will require an Individualized Educational Plan (IEP). As a first step, the team may recommend alternative strategies, and if they are successful, no further individualization is required. If these strategies do not meet their intended outcomes, further assessment may be required, and based on these results, a course of action is developed, implemented, and monitored.

An IEP for a school-aged child involves "…programs and services that are substantially different from most other students" (Prince Edward Island Department of Education, 2005, p. 14). In addition, students placed on an IEP are unable to meet the outcomes of the regular curriculum, and in some cases may require the support of an educational assistant.

Newfoundland and Labrador

According to Newfoundland and Labrador's framework, when a classroom teacher observes that their teaching strategies are not resonating with a student, the teacher should

contact the parent/guardian to begin a pre-referral process. This pre-referral is designed to be collaborative, and normally involves an informal assessment. Through discussion, alternative strategies are explored, which may enable the student to meet the prescribed curriculum. If, however, the strategies do not meet with success, the teacher will make a referral to the service delivery team. At this point, additional strategies may be recommended, or a referral for a comprehensive assessment can be instituted.

In order to receive special education services, a student must have an identified exceptionality, so this comprehensive assessment is an important component of the process. Once a student is identified, a program planning team is convened, and based on a thorough review of the available material, it will determine any changes required in the student's programming, including accommodations, modified prescribed course, alternate program, alternate course, and alternate (functional) curriculum.

The Individual Education Plan (IEP) is "a document that records and tracks the educational supports and services provided to a student. An IEP is required for students with identified exceptionalities who are receiving modified prescribed courses and/or alternate programs, courses and curriculum" (Newfoundland and Labrador Education and Early Childhood Development, 2015, p. 13).

Yukon Territory

In the Yukon, an Individual Education Plan (IEP) is required for students who have been identified as being exceptional and/or who have been acknowledged by the School Based Team (SBT) as needing special or individualized education supports to achieve learning expectations. Learning expectations are modified from the expectations set out for a particular grade level or course in a territorial curriculum document. Students who require accommodations to their learning but do not have special needs to meet the IEP criteria will be supported by a Student Learning Plan (SLP).

The school administrator is a member of the school team and calls together a school team to develop the IEP where it is deemed necessary. The IEP planning team core members include the school administrator, case manager (a Learning Assistance Teacher), classroom/subject teacher(s), parent(s)/guardian(s), and student, where appropriate. The

student is understood to be at the centre of the IEP process. The administrator assigns support personnel, provides appropriate materials, and facilitates in-service training, given the needs of the student.

The student's classroom teacher is understood to be a lead participant in the IEP process. The usual expectation is that the IEP will be implemented in the least restrictive environment, which in most cases is the inclusive classroom. However, some services may be deemed to be better implemented outside the classroom. Some students may also require services and supports provided by agencies in the community. An integrated approach to service delivery is needed to ensure consistency in interventions.

Students on IEPs are assessed regularly and the IEP is reviewed on an on-going basis. Evaluation and reporting procedures will accommodate the range of adaptations and modifications. Where evaluation procedures are adapted, they should be noted in the student's IEP.

Northwest Territories

The Northwest Territories Individual Education Plans: Guidelines for Development (2006) provides an excellent exemplar of the purpose and development of the Individual Education Plan (IEP). The IEP is described as "what the student knows and can do and, based on the long-term life goals identified, what and how the student should learn next, where instruction will take place, who will provide it, how long it may take, and what the student will do to demonstrate learning" (Northwest Territories Department of Education, Culture and Employment, 2006, p. 9). The annual student outcomes are student-specific and flow from a person-centred plan based on a "vision" for the student, using a MAPS or PATHS process. The IEP team includes the student, parents/guardians, principal, teachers, education support personnel, other professionals, and can include extended family and community members. The IEP process is a four-step process: setting direction; gathering and sharing information; developing and writing the IEP; and implementing and reviewing the IEP.

Student outcomes are expressed as SMART (Specific, Measurable, Achievable, Relevant, Time-related) goals. The IEP identifies who is responsible for implementing student instruction and outlines accommodations and supports to be in place. IEP team members may be involved

in assessing /evaluating student progress. While the classroom teacher is the primary person responsible for the implementation of the IEP, s/he is not the *sole* person responsible for its implementation.

If changes are made to the annual student outcomes/short-term learning objectives in the IEP, they are recorded in handwriting. Informal meetings may result in changes to strategies, resources, or supports but not to annual student outcomes/short-term learning objectives.

Nunavut

Inuit Qaujimajatuqangit (Inuit worldview) is used as the basis for curriculum in Nunavut. Nested within that framework, *Inuglugijaittuq: Foundation for Inclusive Education* (2008) outlines inclusive education from an Inuit perspective using a 5-tiered model of interventions for student support. The regular Nunavut curriculum is made available to all students at Tumit 1. Tumit 2/3 meets the needs of students who are capable of meeting curricular outcomes with some accommodations through an Individual Accommodation Plan (IAP). Tumit 3 provides support for students through an Individual Behaviour Plan (IBP) who are academically capable of meeting regular curriculum outcomes, but who are experiencing emotional or behavioural issues that interfere with their ability to learn.

Individual Education Plans (IEPs) are provided for some students at Tumit 4 who are unable to access the regular curriculum, even with significant accommodations. IEPs are required for all students at Tumit 5. Tumit 5 students have likely been identified at an early age as individuals who require significant modifications to their learning goals and outcomes as a result of specialized assessment and significant involvement with medical, psychological, and other professional personnel. These students are also likely to require assistance with daily living skills. Such students are likely to need consistent life and transition planning. For secondary students, a Secondary Individual Education Plan (SIEP) replaces the regular education program.

The School Team creates the IEP and includes parents/guardians, educators, family members, peers and other community members, agency representatives such as health personnel, and itinerant specialists. In the initial phase of IEP development, the School Team

conducts an assets-based assessment processes such as MAPS or PATHS. All decisions regarding a significant change to a student's program must involve parents/guardians and, where possible and appropriate, the student him/herself.

Key Observations

1. The Individualized Program Planning process is very similar across the country, most often as a straightforward four- to five-step process involving setting direction, gathering information, developing the plan, implementing the plan, and reviewing the plan.

2. The central role of the student and his/her parent(s)/guardian(s) was noted across all jurisdictions. The importance of respectful, on-going, and two-way communication between home and school and among professionals was noted as essential in the development and execution of the Individualized Program Plan.

3. A student's Individualized Program Plan must be nested in longer term life goals and expected future environments for that student. With that in mind, it is important that prior to creating annual and short-term learning goals, the school team engages in assets-based visioning processes in which longer life goals and dreams are articulated. Nunavut and the Northwest Territories include these processes as first steps of Individualized Program Plan development and note that school team members are trained in these.

4. Given the complexity involved in providing services for students who require Individualized Program Plans and attitudes that are necessary for effective implementation, policies that gave some background about the *why* of inclusion, as well as thick, rich description about the *what* and *how* of creating and monitoring these plans were deemed to me more helpful to teachers. We call attention to the Northwest Territories' *The Northwest Territories Individual Education Plans: Guidelines for Development* (2006), which is a very educator-friendly and comprehensive document.

5. Seven of the 13 guides reviewed were published prior to 2010. Given the changes that have occurred in legislation and education since that time, it was surprising that these documents were not more up-to-date. For example, the Ontario document was written in 2004.

6. In all documents, the principal took a lead role and often had a large role in the whole process, yet it is our experience as teacher educators that preparation and training in inclusive/special education is frequently not part of leadership preparation.

7. Many documents name the classroom teacher as the primary lead in implementing the Individualized Program Plan. However, the Northwest Territories' guide provided a graphic that noted the many kinds of supports and resources that are required from others professionals and families for student success to occur. This reinforced the notion that professionals need to be working collaboratively to achieve inclusion in schools.

8. Giftedness is an issue that may demand further recognition in terms of Individualized Program Plans. It seems that far too often, gifted children may not receive the type of enrichment they require to meet their learning profile. As an example, the Nova Scotia Individual Program Plan review found that of the 1232 IPPs examined, only one was for enrichment (2016, p. 12).

Teacher Assistants: Their Role and Effectiveness

A Brief Literature Review

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January 15, 2018

In their selected summary of peer-reviewed studies associated with the utilization and deployment of teacher assistants in support of students with disabilities, Giangreco, Doyle & Suter (2014) deliberately use the term teacher assistant and not teaching assistants. They do this because they determined that these individuals "always *assist teachers*, though not exclusively or necessarily with *teaching*" (p. 691). They and others have raised a variety of concerns associated with the rapid increase in the deployment of teacher assistants (TAs) and call for more careful analysis of their roles and effectiveness in addressing the academic and socio-emotional needs of students with disabilities in regular classrooms.

It is estimated that there are 1700 TAs employed in Nova Scotia schools and that this number has increased steadily since their original deployment in the mid-1990s. This rapid and steady increase in the deployment of TAs to address the needs of students with special needs in inclusive settings is consistent with findings from other parts of Canada and beyond. If we assume an annual salary per TA of $30,000.00, this would mean that the Nova Scotia education system is expending $51 million dollars per year on TAs. This indicates a significant provincial investment. Revised teacher assistant guidelines were prepared by the Nova Scotia Education Student Services Branch (2009) to update the guidelines first introduced in 1998. However, there is a lack of evidence

as to how well the c. 1700 TAs are doing in meeting the needs of students with special needs in inclusive settings in the Nova Scotia public education system. There has not been a systematic evaluation of their effectiveness.

This brief review draws upon several key research syntheses and some selective related articles to identify recurring issues in the literature associated with the roles and effectiveness of TAs in inclusive settings. It will highlight training and supervision issues and research on the impact of TAs on the academic achievement, communication and social skills of special needs students placed in inclusive settings. It will also identify a few considerations from the research literature related to supports for best ensuring the effectiveness of TAs.

Training and Supervision of TAs

It has been shown that a lack of training of TAs is a consistent problem across most nations. TA training and supervision are both inadequate for their roles (Butt & Lowe, 2012; Fisher & Pleasants, 2012; Webster, Blatchford, Bassett, Brown, Martin & Russell, 2010). Research also confirms that in most inclusive settings, the number of TAs greatly outweighs the number of special education teachers, resulting in TAs getting little time for mentorship with special education teachers (Giangreco, Doyle & Suter, 2014). In Nova Scotia, there are many more TAs than special education teachers supporting students with special needs in classrooms. This is in stark contrast to students without disabilities, who receive most if not all of their instruction from qualified teachers, which has led a number of researchers to note this as both illogical and inequitable (Giangreco, Suter, & Hurley, 2013; Rutherford, 2011).

Research has identified effective and ineffective models of organizing the work of TAs in inclusive classrooms. When TAs were organized to work as part of teams or in zones within classrooms, this tended to result in greater levels of student engagement

(Devecchi, Dettori, Doveston, Sedgwick & Jament, 2012; Devecchi & Rouse, 2010). The large-scale United Kingdom longitudinal study entitled *Deployment and Impact of Support Staff* (Webster, et al, 2010) determined the ways that TAs provided support to students with special needs often resulted in negative outcomes in academic achievement. These negative outcomes were attributed to the types of deployment, preparation and practice that TAs offered (Giangreco, Doyle & Suter, 2014).

The practice of one-on-one engagement of special needs students by TAs has been noted as problematic for two reasons, which can both be related to the effectiveness of discourse. An observational study that compared the ways that TAs and teachers talk with students with special needs revealed significant differences. In this study, TAs tended to shut down student talk by focusing on task completion, and often providing answers to students and even completing their work. In contrast, teachers typically opened up dialogue through linking to student's prior knowledge, and prompting and questioning them to encourage and check for understanding (Rubie-Davies, Blatchford, Webster, Koutsoubou & Bassett, 2010). The physical proximity of TAs to special needs students has been shown to significantly affect the quality and intensity of interactions with their classroom teachers and their student peers, resulting in few interactions with these individuals when teacher assistants were close to them (Malmgren & Causten-Theoharis, 2006). When TAs were assigned to work with larger groups of special needs students or with the entire class, general education teachers interacted more frequently with the students with disabilities in their classrooms (Giangreco, 2010). The implication of this research is that the way teacher assistants interact with special needs students has a significant impact on the quality of their learning experiences. Therefore, the quality of these interactions is a very important but often overlooked indicator of success.

McDonnell and Jameson (2014) have done an extensive review of research and identified several programmatic priorities that have been shown to be necessary for effective deployment of TAs.

1) *TAs work should be part of school-wide approaches that evaluate and develop the capacity of all staff in support of inclusion.* This will require ongoing investment in professional development of all staff. Central to this approach is organizational restructuring with a goal of evaluating the heavy reliance on TAs. Systematically implanting such program evaluation frameworks as *Guidelines for Selecting Alternatives to the Overreliance on Paraprofessionals* (Giangreco & Broer, 2003) may lead schools to reductions in the number of TAs or their redeployment in ways that are deemed to be more effective.

2) *The role of TAs should be blended with other supports that are nested in the Individualized Education Planning process.* The role of TAs should be constantly evaluated as part of an ongoing examination of the effectiveness of IPPs. This would mean that meeting student's academic and social needs, as part of a team-wide set of interventions, is the main role of TAs.

3) *TAs should supplement and not replace other natural learning supports found in inclusive classrooms.* The support provided by general educators for special needs students should be paramount in inclusive classrooms. The services of TAs should be aligned with the way the classroom is organized and the curriculum delivered for the entire classroom.

4) *Licensed teachers should be directing the teaching and behavior plans that are enacted by TAs in support of special needs students.* The academic and social learning needs of students with disabilities are highly complex and the decisions affecting their learning should not be left to untrained paraprofessionals who have no background in

curriculum and learning design and delivery. TAs can provide quality support when provided with lesson designs that are carefully scripted by qualified teachers. Supervising TA activities can then be enacted through a combination of support and direction from both general and special education teachers and not just be based upon inputs of supports and services but also on the basis of outcomes of learning related to achieving their IEP goals.

Conclusion: Enhancing the Effectiveness of Teacher Assistants.

More attention needs to be placed upon ensuring TAs have very specific job descriptions that provide everyone with clear expectations that are observable and measurable (McDonnell & Jameson, 2014). They also should be required to have systematic pre-service and on-the-job training that increases their expertise in important matters such as communication strategies, teaching and learning styles, behavior analysis and ethics. Offering post-secondary certification in psycho-educational approaches may be warranted. The deployment of TAs would also benefit from consistent ongoing monitoring and evaluation from special educators and general educators to provide them with feedback on the effectiveness of their implementation of supports tied to achieving goals of IPPs and determining appropriate models of deployment. Implementing such evaluative instruments as the Giangreco and Broer (2003) *Guidelines for Selecting Alternatives to the Overreliance on Paraprofessionals*, would assist schools to systematically assess their overall needs for TAs in each classroom context and build towards a possible reallocation of supports and resources. The establishment of regular times for teachers to meet with TAs to plan and provide them with regular support is also important. Finally, it is noted that enhancing the effectiveness of TAs is more likely if general and special educators are taught how to effectively manage and support TAs in pre-service and in-service education.

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Executive Summary

Teachers' Inclusion-related Knowledge, Skills, and Attitudes and Student Outcomes: A Scoping

Review of Recent Literature

Dr. Daniel B. Robinson

Purpose and Scope of Report

This report offers a scoping review of empirical literature addressing the relationship between teachers' inclusive education knowledge, skills, and attitudes and student outcomes. Using six common electronic databases for education, we searched for peer-reviewed publications between 1 January 2008 and 1 December 2017 (a 10-year period). A total of 25 articles met the search criteria for this scoping review and were consequently subject to a more-detailed examination. These 25 articles include eight systematic or scoping reviews, two that report on experimental studies, nine that report on quasi-experimental studies, and six that report on correlational-descriptive research studies.

Main Question

The lone question considered in this literature review was, "What is the relationship between teachers' knowledge, skills, and attitudes in inclusive education and student outcomes?" Teacher variables were identified and categorized as one or more of the following: 1) knowledge, 2) skills, 3) attitudes. Student variables were identified and categorized as one or more of the following: 1) intellectual disabilities (IDs), 2) learning disabilities (LDs), 3) autism spectrum disorder (ASD), 4) other mental health disorders, 5) giftedness. Student outcomes were identified and categorized as one or more of the following: 1) social well-being, 2) functional/life skills, 3) academic achievement, 4) post-secondary transitions, 5) exceptionality-related (e.g., intensity or frequency of feelings of isolation or depression for a student with depression).

Methods Used to Conduct Literature Review

The initial search resulted in 1301 articles. All articles' titles and/or abstracts were read to determine if the research: 1) focused on at least one of three teacher variables (knowledge, skills, or attitudes), 2) focused on students with at least one of five identified exceptionalities (IDs, LDs, ASD, other mental health disorders, or giftedness), and 3) focused on at least one of five student outcomes as a variable (social well-being, functional/life skills, academic achievement, post-secondary transitions, or exceptionality-related [e.g., improvement in symptoms related to a health disorder]). This process resulted in the exclusion of 1006

additional articles. The remaining 87 articles were read in their entirety to determine if they met these same criteria. This resulted in an additional 62 articles being excluded, leaving 25 articles to be subject to a more comprehensive review.

Main Results and Themes

Almost all the research articles focused on more than one (closely related) teacher variable. Specifically, most focused upon teachers' knowledge and skills (n=18)—related, for example, to teaching with a program intended to be responsive to students' exceptionalities. Only a small number of research articles focused upon teachers' attitudes, alone (n=3) or alongside other teacher variables (n=3).

Student variables included IDs (n=7), LDs (n=2; e.g., dyslexia), ASD (n=12), and other mental health disorders (n=8; e.g., emotional and behavioural disorders, depression, speech delay, anxiety, attention deficit/hyperactivity disorder [ADHD], oppositional defiant disorder [ODD]). No research studies were found that focused upon giftedness. While most research studies focused upon a single student variable, three focused upon two or more student variables. That is, Bottge et al. (2015) focused upon IDs, LDs, ASD, and other mental health disorders, Coleman, Hurley, and Cihak (2012) focused upon IDs and ASD, and Hong, Shaffer, & Han (2017) focused upon ASD and other mental health disorders (speech delay).

Student outcomes were related to social well-being (n=7), functional/life skills (n=8), academic achievement (n=17), and/or they were exceptionality-related (n=5). While some research studies focused upon a single student outcome (n=12), others focused upon two or more student outcomes (n=13). No research studies were found that focused upon post-secondary transitions.

Conclusions and Implications drawn from Results

A search for recent research literature related to the initial question has uncovered literature that is: 1) largely focused upon teachers' knowledge and skills (together, and generally without also focusing upon attitudes), 2) related, primarily, to IDs, ASD, and other mental health

issues, 3) also related, primarily, to academic achievement—but also to social well-being, functional well-being, and exceptionality-dependent.

This focus upon teachers' knowledge and skills as a multi-variable deserves additional qualification. That is, in almost every instance in which these variables are considered, they are presented as being a result of some sort of specialized training/intervention program (rather than as a result of, for example, pre-service teacher training). That is, specialized knowledge and skills are generally taught to in-service teachers who first learn about and how to implement an educational program that is meant to support students with exceptionalities. Also, none of the experimental or quasi-experimental research studies measured teachers' existing knowledge and/or skills and then tried to determine if these attributes had a relationship or impact upon student outcomes. Rather, the common model has been to improve upon teachers' knowledge and skills (by way of in-service teacher training) and then determine if that training made a significant difference. Often it did, but not always. Additionally, that attitude-related research is largely absent from the literature suggests that few-if-any conclusions can be made about the relationship between teachers' inclusion-related attitudes and student outcomes.

Most of the research focuses upon three of the five categories listed: IDs, ASD, and other mental health issues. The two research studies that attend to LDs provide only minimal informative information (note, too, that one is a multi-exceptionality study and the other is a correlational-descriptive study). Again, giftedness is entirely absent in the literature when teachers' knowledge, skills, and/or attitudes and student outcomes are considered. So, we do have some useful information related to students' exceptionalities but it, unfortunately, is lacking in these two important areas.

That academic achievement is the most widely considered outcome should not be construed as altogether troublesome. Indeed, student success in academics is a straightforward and logical goal of (inclusive) education. If academic achievement is to be a primary goal of education and/or of inclusive or special education, this research provides useful information. For the other possible outcomes, evidence is also there, though there is less of it.

Suggestions

- Pre-service teacher education programs (and pre-service teachers) and educational jurisdictions (and in-service teachers) must consider that some school-site intervention programs (e.g., related to depression or mental health [first aid]) might be best delivered by people other than teachers. Others (e.g., related to anxiety) might be best delivered by teachers. Pre-service and in-service teacher training material and human resources should not be (mis)directed to train teachers if others (e.g., health professionals) are better or best suited to deliver the same content.

- Pre-service teacher education programs (and pre-service teachers) and educational jurisdictions (and in-service teachers) need to access training programs that will equip teachers with the knowledge and skills needed to deliver educational programs that are purposefully aligned with the exceptionalities they encounter in practice. While initial teacher education programs might do this by way of broad surveys and/or focused selections of exceptionalities, in-service teachers will need to be able to access continuous and ongoing specific training (that aligns with the changing exceptionalities found within their teaching contexts).

- Pre-service teacher education programs (and pre-service teachers) and educational jurisdictions (and in-service teachers) need to consider technology-based interventions for students with ASD with a healthy degree of caution. Moreover, because technology use is both costly and potentially ineffective, decisions to use (or not use) various technologies cannot be left to teachers alone.

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Executive Summary of the Funding of Special Education: A Review of the Literature

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Purpose and Scope

This report provides an overview of the literature surrounding the funding of special education. Although international perspectives were offered when and where appropriate, the focus and scope remained largely domestic. By drawing on examples from all provinces and territories, a pan-Canadian overview was possible, which facilitated in both comparing and contrasting the arrangements found in each jurisdiction. However, it is important to note that although recommendations were advanced in regards to the funding of special education in Nova Scotia post-2018, the temptation to critique in terms of right or wrong, or best and worst, was intentionally avoided.

The Literature Review: Parameters and Specifics

In terms of this particular review of the literature, a Research Assistant (RA) was employed to conduct an initial scan of the field to determine what sources were available. To employ a technical vocabulary, the RA engaged in what is often referred to as a scoping review, in which the effort was directed at documenting what was already known, all the while maintaining a critical stance. The RA was charged with conducting a thorough review of the available databases, and maintaining a search record. In surveying the literature—both academic and government/ministerial—a picture emerged of how special education is funded in Canada. Once the scoping activity was concluded, the findings were written via a thematic analysis. That is, material was chunked according to emergent patterns.

Main Results and Themes

The issue of funding special education has been a recurring theme in educational and policy circles for many years. Much of the recent focus rests on the position that the current funding levels for education is inadequate, and as such, greater expenditures must be made if we are to improve the overall experience for students and educators alike.

Across Canada, special education does tend to vary between locales, and is largely driven by provincial/territorial policy. As such, there are some common elements shared among the various jurisdictions, but difference remains as a constituent feature of the landscape.

A cursory examination of the funding of the Canadian public education system appears to point to a theme of centralization at the ministerial/department level. In looking specifically at special education funding, most but not all provinces employ a block grant funding model. However, there are some unique variations when comparing provinces and territories.

When examining provincial education spending, with the exception of British Columbia, Nova Scotia has the lowest percentage change in terms of dollars spent between 2005/2006 and 2014/2015. And when comparing Nova Scotia with some of the biggest spenders, the discrepancy in the percentage change is dramatic. This undoubtedly has a tangible and real impact on student learning.

Alternatives to the Status Quo

In thinking about special education funding, there is little dispute that to provide an appropriate education for children with exceptionalities, adequate financial resources must be in place. In fact, research has found that funding is one of the most important factors in creating an inclusive education system. Increased funding could result in the ability to hire

additional special education teachers or other frontline professionals. It would also allow for more general education teachers to be hired, which could contribute to a further reduction in classroom sizes.

It is equally important that in addition to the funding allocated to boards being adequate, it needs to be predictable in that boards can depend on stable funding across multiple years. And furthermore, funding must be spent wisely. In this vein, a re-allocation of resources might be necessary.

In terms of special education, it is most important to remain acutely aware of the fact that every child is unique in and of themselves. As such, services that are required and yield positive results for one child may not be as effective with another child, even if both are diagnosed with the same exceptionality. In the context of Nova Scotia, one cannot lose site of the fact that the urban/rural split also impacts questions of equity. Students in rural areas of the province do not have access to the same level and degree of services that those in urban areas may enjoy. As such, any question of funding needs to take into account and be respectful of the issue of vertical equity.

On another front, future funding arrangements in Nova Scotia need to center around the notion of inter-departmental/agency cooperation. In terms of children with exceptionalities, it is important that the view that this is solely a matter under the purview of the Department of Education and Early Childhood Development be abandoned. The siloed approach does not work, and students with exceptionalities would benefit tremendously from a collaborative approach where working together and the pooling of resources is the norm. A

natural link can and should be forged between various departments, including but not limited to Education and Early Childhood Development, Justice, and Health and Wellness. To take the notion of cooperation a step further, it would be equally advantageous if school boards within and between provinces cooperated. There is much to be learned from one another, and healthy dialogue can only help to serve the best interests of all children in schools.

It might also be time to re-examine the whole notion of centralized funding that has become the norm in Canada. As such, a decentralized model where more power is vested in the hands of individual boards and schools might prove advantageous. Research has found that such arrangements can yield positive dividends. At the same time, a proviso is offered in that this decentralization should not be unfettered, as accountability measures must be part of the apparatus.

Conclusion

In Nova Scotia, the time is right to revisit the provincial special education framework. There are without question elements of the current system that need to be tweaked or outright replaced, but at the same time, there are features that still work remarkably well. In terms of thinking about alternatives, as a cautionary note, it is wise to keep in mind that just because a particular formula has worked in another geographic locale does not necessarily mean it is easily transferable to the Nova Scotia context. Too often, policy has been "borrowed" from other jurisdictions with often less than impressive results. In sum, the local should not be lost in our discussions. Nova Scotia is a unique geo-political unit, and policy should reflect this unique local character.

Where and how is inclusive education being successfully implemented?

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Purpose and scope

This literature review aims to determine where and how inclusive education is successfully implemented. Inclusion has too frequently been related to *where* students are educated and *with whom*, or, simply, space (Erevelles, 2011). This question of space has focused far too much on the technical problem of physically placing students with disabilities into general education classrooms and has spent insufficient time on ensuring the intensity and quality of interventions are related to improved outcomes for students with special needs (Kozleski, Artiles & Skrtic, 2014; Batsche, 2014). "[P]lacement in general education classrooms does not ensure that students with disabilities are valued, actively participating members of these classrooms and schools, [nor that they] are making adequate yearly progress on academic and social benchmarks" (McLeskey, Waldron, Spooner & Algozzine, 2014, p. 9).

"Effective inclusive schools, then, are those with classrooms where students with disabilities are provided with the supports they need to succeed in academic, social and extra-curricular activities." (McLeskey, Waldron, Spooner & Algozzine, 2014, p. 4). This review aims to identify the most effective evidence-based supports for students with special needs in inclusive classrooms and the organizational conditions that have been proven to enable these supports to be enacted.

Methodology

This literature review was conducted by first examining in detail several leading research handbooks related to inclusive education to identify the major themes being addressed related to the assigned research question of "Where and how is inclusive education being successfully implemented? (McLeskey, Waldron, Spooner & Algozzine, 2014; Florian, 2014). Three main themes of effective inclusive schools that emerged from the analysis were related to data-informed and multi-tiered interventions, general and special education teacher collaboration, and ensuring effective paraprofessional and specialized support personnel allocations. Three conditions for effective implementation noted in this literature were learner-centered professional development; effective in-school inclusive leadership and an unwavering focus on school change and comprehensive school reform. References cited in these handbooks as well as other articles available from journal searches that related to these above main categories were explored.

Main themes

1. Effective Inclusive Schools are Data-Informed and Multi-Tiered

Multi-tiered intervention has helped shift the attention from tiers as *places* (general, remedial and special/alternative classrooms) where inclusion happens to the *intensity* of time and focus. Measurable instructional variables within tiers are group size, time of instruction, instructional focus, and characteristics of the instruction (Batsche, 2014).

In order for multi-tiered intervention to be successful there is a need for a classroom model in which students with disabilities and those students who do not have disabilities are both based in a regular classroom structure so that they receive support from both general and special educators. Multi-tiered intervention that accounts for a full range of classroom needs, and in which no student engages in alternative activities that disrupt or misaligns their daily schedule or peer relationships can be considered inclusive. A teaming process that is both flexible and coordinated and builds collaboration across roles of special to regular educators, parents to educators, and educators to the community is needed (Causton & Theoharis, 2014).

Multi-tiered intervention has proven to be highly effective but appropriate implementation will require specialized training for general classroom teachers, restructuring of roles in schools, and dedicated time for planning if this method is to be widely implemented.

2. Inclusive Schools Implement Co-Teaching and Effective General and Special Education Collaboration

To meet the needs of all students, special education teachers and general educators need to work together to co-plan and co-deliver instruction (Causton & Theorharis, 2014). It has usually been implemented without recognizing the need for adequate time to be allocated to co-planning (Friend, Cook, Hurley-Chamberlain, Shamberger, 2010), attention to ensuring compatibility of co-teaching pairs (Murawski & Dieker, 2013), and the need to provide appropriate and meaningful professional development (Salvoviita & Takala (2010). The general and special education teacher working collaboratively is not currently the norm. Opportunities to learn these new roles and gain knowledge are necessary at the pre-service and in-service levels (Friend & Cook, 2013).

Taking an inventory of all in-service teachers who currently have specialized training in special education and all general education teachers who have knowledge and experience with co-teaching could provide an important base-line for further actions to advance co-teaching. This inventory could also explore what these individuals perceive as barriers to co-teaching.

3. Inclusive Schools Align Paraprofessional and Specialized Professional Work in Support of Inclusive Education

Paraprofessionals have both positive and negative effects on academic and social outcomes (Giangreco, 2010). This review has outlined concerns with "…a lack of adequate training and supervision of paraprofessionals in many schools, allowing paraprofessionals to make instructional and behavior support decisions for students, the potential for unintended negative impacts that paraprofessionals may have on students, and the inequities of students with disabilities receiving the bulk of their education from unlicensed professionals" (McDonnell & Jameson, 2014, p. 102).

Specialized services personnel also play a valuable role in supporting special needs students in inclusive classrooms through their participation in multi-disciplinary teams and in home-school liaison (Joyce-Beaulieu & Welsh, 2014). Research confirms that the allocation of these support personnel to inclusive schools remains below recommended ratios.

A systematic analysis of the need for teacher assistants could be undertaken in each school, perhaps using Giangreco and Broer's (2003) guidelines. A comprehensive pre-service accreditation of teacher assistants and targeted in-service professional development as well as specific training in teacher education for general and special education teachers in how to supervise teacher assistants would help ensure quality services. Ratios of specialized service personnel should be reviewed with the goal of ensuring that general classroom teachers have appropriate timely access to specialized services to assist them in supporting their special needs students.

4. Shifting from Expert-Centered to Learner-Centered Professional Development

It has proven to be difficult to ensure that professional development is appropriate for preparing teachers to meet the needs of students with disabilities in their classrooms (Jenkins & Yoshimura, 2010). Inclusive schools which are effective tend to develop comprehensive approaches to professional development that provide teachers with support that is tailored to their context through such means as learning communities and in-classroom coaching that assist teachers to develop the specific skills needed to be effective in their particular settings (McLeskey, Waldron, & Redd, 2013).

Timely and learner centered professional development provides teachers with seminars and workshops related to key practices in specific areas they determined which were followed up with subsequent learning experiences in which teachers were supported to develop upon their initial learning (Leko & Roberts, 2014).

Effective learner centered professional development takes time and resources that governments and school boards are not accustomed to allocating. The province might

wish to re-visit its own 2009 policy on professional development and re-consider the merits of its own tenets for mobilizing a more comprehensive strategy for learner centered professional development.

5. In-School Inclusive Leadership is Crucial

It is well established that the principal is key to enacting effective inclusive schools (Hoppey & McLeskey, 2013; Waldron, McLeskey, & Redd, 2011). School administrators are best positioned to help eliminate the barriers to teacher learning and support them to adopt new practices, including allowing time to attend initial sessions, follow-ups, and collaborative planning (Leithwood & Jantzi, 2000). They also are able to provide resources, help make school-wide inclusion goals explicit and can help align PD within an overall school-wide priority (Klinger, 2004).

Despite the overwhelming evidence that the principal is a critical attribute in the effective education of students with disabilities (DiPaola, Tschannen-Moran & Walther-Thomas (2004), "many principals are not prepared to lead inclusive schools and are wary of inclusion" (Billingsley & McLeskey, 2014, p. 67).

All dimensions of principal preparation, recruitment and support in Nova Scotia should be examined to gain an understanding of the specific elements of principal preparation that are currently devoted to building inclusive leadership capacity and the gaps in this preparation. This examination should identify a comprehensive strategy for ensuring that principal preparation, recruitment and support is appropriate for building the capacity of principals as inclusive leaders.

6. An Unwavering Focus on School Change and Comprehensive School Reform

Inadequate attention has been paid to effective and sustained implementation of inclusion (Alberta Teachers Association, 2014). Much of this failure can be traced to the fact that education systems tend to be too easily influenced by shifting priorities, and have tended to be distracted from their vision for inclusion by these other, often politically expedient priorities. This has far too often led to changes in the level of allocations of support and resources for inclusion (Sindelar, Shearer, Yendol-Hoppey & Liebert (2006).

Fullan (2011) has identified overarching policy and strategy levers or 'drivers' that have proven to be successful in scaling up reform beyond pockets of innovative schools to entire systems. These drivers focus on addressing change to the culture of schools, and focus on fostering intrinsic motivation for implementing the changes in both teachers and students. Participants learn to develop new skills through the creation of structures that support educators to work collectively as they improve their own and each other's practice.

The province could develop a comprehensive implementation strategy for restructuring inclusive schools that incorporates strategies about what we know about the complexity of second order change. Furthermore, the province could consider how it might infuse change leadership education across all levels of professionals who are responsible for supporting professionals to implement inclusion.

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