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Teacher Professional Learning, Culturally Responsive/Sustaining Practices, and Indigenous Students' Success: A Comparative Case-Study of New Zealand and Saskatchewan, Canada

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Employing a multiple instrumental case study approach, we document and analyze initiatives in Saskatchewan and New Zealand to enhance cultural responsiveness among White educators through professional learning initiatives undertaken as part of broader strategies to animate more equitable educational outcomes for Indigenous students. The findings of this research confirm the capacity of teachers to act as agents of change and highlight the potential of teacher professional learning to catalyze educational reform and innovation, ensuring that schools can indeed benefit students who have historically been underserved by public education. We conclude that the growing Indigenous presence in classrooms is a powerful driver of innovation, which offers the potential to transform curriculum, pedagogy, and teacher-student relationships for the benefit of all learners in these contexts and beyond.

En utilisant une approche d'étude de cas instrumentale multiple, nous documentons et analysons des initiatives en Saskatchewan et en Nouvelle-Zélande visant à améliorer la sensibilité culturelle des enseignants blancs par le biais d'initiatives d'apprentissage professionnel entreprises dans le cadre de stratégies plus larges visant à produire des résultats éducatifs plus équitables pour les étudiants autochtones. Les résultats de cette recherche confirment la capacité des enseignants à agir en tant qu'agents de changement et soulignent le potentiel de l'apprentissage professionnel des enseignants à catalyser la réforme et l'innovation en matière d'éducation, garantissant ainsi que les élèves qui ont historiquement été mal desservis par l'éducation publique peuvent effectivement profiter des écoles. Nous concluons que la présence croissante des autochtones dans les salles de classe est un puissant moteur d'innovation qui offre la possibilité de transformer les programmes d'études, la pédagogie et les relations entre enseignants et élèves au profit de tous les apprenants dans ces contextes et au-delà.

Academic Disparities Characterise Indigenous Peoples Globally

In a recent paper, Santamaría, Santamaría, Webber, & Pearson declared that "[a]cademic achievement gaps are the contemporary schooling educational pandemic of this age" (2014, p. 4). Others have noted that there "is an ongoing issue of educational disparities that characterize

Indigenous peoples in many countries and continue to plague them for the rest of their lives" (Bishop, Berryman, Wearmouth, Peter, & Clapham, 2012a, p. 695); with Canada, the U.S., Australia, and New Zealand often being framed as comparators (Campbell, 2017; Cottrell, 2010; Cottrell & Hardie, 2019; Hornby & Lafaele, 2011; Ladson-Billings, 2014; Papp, 2016, 2020; Santamaría & Santamaría, 2016; Timperley & Parr, 2009). Since global reforms have amplified teachers' accountability for their students' learning outcomes, educators in these jurisdictions are increasingly being called upon to embrace profound innovations in classroom approaches and practices so that Indigenous students can derive more equitable benefit from publicly-funded education. However, despite a growing recognition of the efficacy of teacher professional learning in bridging the disconnect between a predominantly White teaching personnel and a burgeoning Indigenous student presence in many schools, very little research has focussed on the impact which this learning and innovation is having on teaching, learning, and classroom dynamics (Canadian Teachers' Federation [CTF], 2015; Campbell, 2017; Hattie, 2009; Kozlowski, 2017; Paris, 2016).

Our purpose here is to address that gap in the literature by documenting and analyzing initiatives in Saskatchewan[1] and New Zealand[2] (jurisdictions with particularly large Indigenous student populations) to enhance cultural responsiveness among White educators through professional learning initiatives undertaken as part of broader strategies to create more supportive school environments for Indigenous students. Our goal is to document these initiatives from the perspectives of teachers and administrators involved in the processes, to delineate motives, experiences, and impacts of such innovations. Because of striking similarities in Indigenous histories, demographic trajectories, educational inequities, and neo-colonial tensions, the implications of this comparative study are potentially broad and significant.

We begin with a brief historical overview of Saskatchewan and New Zealand providing short sketches of current contexts, highlighting differences but also striking similarities in the shared trajectory from colonization towards new accommodations with Indigenous Peoples[3] in these disparate locations. The literature section provides definitions and descriptions of teacher professional learning, reviews links between teachers' professional learning, culturally responsive education and pedagogical efficacy, and highlights a significant gap in evidence regarding the role of professional learning in fostering cross-cultural competence among teachers working with Indigenous students in North American, and especially Canadian, contexts. Our methodology section follows, and we then present our data and identify the central themes derived from the data. The findings suggest that in the contexts studied, intentional teacher professional learning, aligned with whole systems initiatives, has transformational potential in inducing some educators to confront deeply-held epistemic and ontological assumptions and to entertain radically different pedagogical strategies and conceptions of relationships with students. After documenting the positive impacts of those initiatives for Indigenous students' educational and personal success, we conclude the paper with recommendations regarding policy and practice and suggest further areas for research.

Historical Background

Saskatchewan and New Zealand share a common historical trajectory from British colonies to modern English-speaking culturally diverse settler states. A comparative lens highlights five distinct and almost identical post-contact phases in the evolution of discourses around indigeneity and education in these two contexts. These include attempts by Indigenous groups

after contact to access formal European schooling, often through treaty; a colonial[4] era beginning in the 19th century when education was used by British authorities both as a vehicle for nation-building and as a tool of Indigenous assimilation with culturally genocidal effects; a post-World War Two integrationist phase underpinned by liberal ideas of individualism and equality; the beginnings of a decolonization discourse in the 1970s characterized by Indigenous groups asserting control over education as a means of revitalizing their languages and cultures; and contemporary contexts in which Indigenous assertions of sovereignty are bolstered by growing demographic presence and are complicated by increasingly unambiguous data around incommensurate educational outcomes (Haig-Brown & Hoskins, 2019; Kamens & McNeely, 2010). Common to both historical contexts also were deeply entrenched educational discourses that framed Indigenous peoples through a range of deficit conceptualizations that problematized them as deficient in critical ways related to learning, due to racially and culturally ascribed limitations (Orlowski & Cottrell, 2019). A consequence of these pathologizing discourses in both contexts is entrenched alienation and disengagement from schools among significant numbers of Indigenous students (Castagno & Brayboy, 2008; Sleeter, 2011).

Saskatchewan Context

Approximately 16% of the Saskatchewan population claim Aboriginal status as descendants of the Indigenous groups that occupied the area in pre-contact times (Waiser, 2005). Two-thirds of Aboriginal people identify as First Nations, roughly one-third as Métis, and less than 1% as Inuit (Statistics Canada, 2007). In Saskatchewan today, one in four children under four years old is of Aboriginal ancestry, and Aboriginal students represent 47% of the province's school-age cohort. If the Aboriginal growth rate continues in line with the 2011 census, half of Saskatchewan's population will be Aboriginal within 25 years (Falihi & Cottrell, 2015). However, for Aboriginal peoples themselves and the broader community to derive maximum benefit from this demographic potential, it is critical that persistent gaps in educational attainment are addressed (Cottrell & Hardie, 2019; Orlowski & Cottrell, 2019).

The 2010 Saskatchewan Education Indicators Report stated that "almost three-quarters of Saskatchewan students graduate from Grade 12 within three years of starting Grade 10. Of the self-identified Aboriginal students who entered Grade 10 in 2008–09, about one-third had graduated on-time by 2010–11" (Saskatchewan Ministry of Education, 2011, p. 6). The Saskatchewan Ministry of Education 2013–14 Plan reported that in the "2009–10 school year, 35.9% of the First Nation, Metis, and Inuit students graduated on time compared to 73.7% of all students" (p. 11). The Ministry of Education says more students are graduating from high school in Saskatchewan, but the rate for Aboriginal students remains more than 20 percentage points lower than the province's long-term goal. In 2016–17, the graduation rate for Aboriginal students increased to 43.2 percent in 2016–17, from 41.9 percent in 2015–16 (Canadian Broadcasting Company News [CBC], 2017).

New Zealand Context

In New Zealand, Māori people constitute approximately 20% of the population, 5% are of Pacific Island Polynesian descent, and 3% are Asian. English and Māori are New Zealand's two official languages. The Māori and Pacific Island populations are typically younger than other groups, and close to 30% of the school-age population are Māori. The New Zealand education system has

undergone extensive change over the past three decades, informed by neoliberal accountability and market-driven reforms, with a strong focus on improving outcomes for Māori students, including a Māori Education Strategy and specific Māori-medium education. Despite this, the Māori students still experience persistent disparities in educational outcomes. In 2010, 55% of Māori students achieved the National Certificate of Educational Achievement (NCEA) level 2 (minimum graduation certification) compared to 78% of the non-Māori student population. Only 24% of Māori students leaving school were qualified to enter university, in comparison with 52% of the non-Māori student population (Bishop, Berryman, Wearmouth, Peter, & Clapham, 2012b). As described starkly by Bishop, Berryman, Cavanagh, and Teddy (2009):

> The overall academic achievement levels of Māori students is low; their rate of suspension from school is three times higher; they are over-represented in special education programmes for behavioral issues; enroll in pre-school programs in lower proportions than other groups; tend to be over-represented in low stream education classes; are more likely than other students to be found in vocational curriculum streams; leave school earlier with less formal qualifications and enroll in tertiary education in lower proportions (pp. 1-2).

Similar colonial dynamics in Saskatchewan and New Zealand over the past two centuries have therefore resulted in contemporary contexts where "more equitable educational outcomes for Indigenous learners is a shared and urgent policy priority" (Cottrell, 2010, p. 223). And in both jurisdictions, policymakers have increasingly looked to whole system school reforms to address this challenge. This approach is defined by Fullan (2011) as "raising the bar and closing the gap for all students in every school, and in every district and at all levels in the public school system (n.p.)", and it is achieved through "professional development, leadership development, curriculum, and instructional resources, reinforced … with interventionist accountability schemes" (Fullan, 2010, p. 25).

Ongoing Teachers' Learning and Professional Development: A Review

An imperative to engage in ongoing learning and professional development to improve pedagogical effectiveness with the goal of maximizing the conditions for student learning has been an expectation of teachers since the earliest days of the teaching profession (Grimmett, 2014). Typically accessed as a one-day in-service, such ongoing teacher professional development and learning is described by Bullock and Sator (2015) as featuring:

> … a combination of presentations, hands-on workshops, and collaborative teamwork that are often organized in advance by school and school district leadership. Teachers also routinely set their own, informal, ongoing PD agendas, such as taking additional courses, pursuing graduate study, personal study of their subject matter or teaching approaches, sharing resources and ideas with colleagues, and building learning networks through social media (n.p.).

Avalos (2011) suggested that "professional development is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth" (p. 10). Historically framed as teacher professional development, proD, or PD, the process has more recently been recast as teacher professional learning (Opfer & Pedder, 2011). Bullock and Sator (2015) referenced the essential learning involved in the process by defining teacher professional development as "teachers' ongoing learning to improve the way they teach

[which] occurs in both formal and informal ways." Since others (Fullan, Hill, & Crevola, 2006; Campbell, 2017) also prefer the term professional learning, we will follow that usage here, unless referencing sources that employ more traditional terminology.

A large body of research highlights the importance of teachers' professional learning and confirms that students are more successful when teachers have meaningful, ongoing, professional learning opportunities (Bullock & Sator, 2015; Campbell, 2017; Darling-Hammond, 2008; Fullan, 2010, 2011; Nieto, 2013). Other studies (Hattie, 2009; Kozlowski, 2017; Opfer & Pedder, 2011; Papp, 2016, 2020; Sleeter, 2011) noted the powerful effect of professional learning on improved student achievement, with positive impacts being most significant for low-achieving students. Teacher professional learning is recognized to be a complex process, requiring cognitive and emotional involvement of teachers individually and collectively, the capacity to examine convictions and beliefs, and the willingness to enact appropriate innovations to practice (Avalos, 2011). In whatever form it is accessed, the best professional learning "involves knowledge for practice, knowledge in practice, knowledge of practice and knowledge of self" (Kelly, 2017, p. 1). Darling-Hammond, Hyler, & Gardner (2017, p. 1) delineated the following features of effective professional learning for teachers:

- Is content focused
- Incorporates active learning utilizing adult learning theory
- Supports collaboration, typically in job-embedded contexts
- Uses models and modeling of effective practice
- Provides coaching and expert support
- Offers opportunities for feedback and reflection
- Is of sustained duration

Significant for this research is the professional learning needs identified by Canadian teachers in a recent survey, highlighting the importance of, and demand for, appropriate professional learning to enhance their ability to support and teach diverse students, in particular, to increase knowledge and understanding of Indigenous students (CTF, 2015). Despite this, however, we were unable to uncover any significant body of research analyzing types of professional learning that might assist White teachers in working effectively with Indigenous students in North American contexts. In contrast, extensive research has been conducted in New Zealand on the Ministry of Education-funded Te Kotahitanga professional learning project to validate its effectiveness for improving outcomes, specifically for Māori students (Bishop et al., 2012b; Bishop, O'Sullivan, & Berryman, 2010; Hynds et al., 2016; Papp, 2016, Sleeter, 2011).

Culturally Responsive/Sustaining Practices

The powerful effect of teacher professional learning on improved outcomes for low-achieving students highlights its potential to enhance the interface between the predominantly White teaching profession and the growing number of Indigenous learners in classrooms (Darling-Hammond, 2008; Papp, 2016, 2020; Paris, 2016). A large body of research also suggests that a critical dimension of such professional learning is that it be informed by what initially was described as culturally responsive educational practices (Bishop & Berryman, 2006; Bishop, et al., 2010; Castagno & Brayboy, 2008; Cherubini, 2014; Kanu, 2011; Ladson-Billings, 1995a,

1995b, 2014; Orlowski & Cottrell, 2019; Papp, 2016, 2020, Pelletier, Cottrell, & Hardie, 2013;), more recently described as culturally sustaining practices (McCarty & Lee, 2014; Paris, 2012; Paris & Alim, 2014). Proponents of cultural responsiveness broadly adhere to the "cultural discontinuity hypothesis" (Friedel, 2010, p. 5), which assumes that by acknowledging culturally-based differences related to communication, interaction, and learning styles among Indigenous children and Western schools, more equitable educational outcomes for Indigenous learners can be achieved. By highlighting shortcomings in schools and curricula and unmasking mainstream schools as cultural sites, the culturally responsive turn invites educators to embrace "Indigenous people's worldviews, social structures and pedagogy as a legitimate foundation upon which to construct new meanings or knowledge alongside Western traditions and ways of knowing" (Bouvier & Karlenzig, 2006, p. 17). Gay (2002) defined culturally responsive pedagogy as:

> using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively … based on the assumption that when academic knowledge and skills are situated within the students' lived experiences and frames of reference, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly by Indigenous students (p. 106).

Culturally responsive pedagogy is predicated on teacher-student dialogue, without which teachers are left drawing on essentialized conceptions of students and their cultural background. In other words, teachers need both awareness of community and family cultures of their students and an ability to develop pedagogical implications of this knowledge through interactions with their students. Discursive interactions between teachers and students enable learners to make meaningful connections between learning activities and their lives outside the classroom (Ladson-Billings, 1995a, 1995b; Papp, 2016, 2020), as well as providing teachers with windows into what students already know and care about. In such classrooms, knowledge is co-created through power-sharing strategies whereby learners have a voice, raise questions, engage in critical reflection, and take responsibility for their own and others' learning (Bishop, Ladwig, & Berryman, 2014; Ladson-Billings, 1995a, 1995b; Papp, 2016, 2020). Authentic teacher caring is demonstrated through teachers' high expectations for all students and effective instructional approaches that enable students to learn and thrive (Papp, 2016; Valenzuela, 1999). Gay (2010) identified an ideal state that she termed "culturally responsive care" (p. 48), which encompasses a combination of concern, compassion, commitment, responsibility, and action by teachers on behalf of minority students.

Recent work by Ladson-Billings (2014), McCarty and Lee, (2014), Paris (2012), Paris and Alim (2014), and Santamaría and Santamaría (2016) called for a deepening of culturally responsive approaches towards *culturally sustaining practices* (CSP), an approach defined as having the "explicit goal [of] supporting multilingualism and multi-culturalism in practice and perspective for students and teachers" (Paris, 2012, p. 95). These authors suggest that CSP goes beyond being responsive or relevant to the cultural experiences of minoritized youth in that it "seeks to perpetuate and foster—to sustain—linguistic, literate, and cultural pluralism as part of the democratic project of schooling" (p. 95). CSP democratizes schooling by placing "social justice and equity at the forefront of practice" (Santamaría & Santamaría, 2016, p. 4), while "supporting both traditional and evolving ways of cultural connectedness for contemporary youth" (McCarty & Lee, 2014, p. 95).

Research Methodology and Theoretical Framework

A multiple instrumental case study design was adopted as our methodological approach since it facilitates the exploration of a contemporary phenomenon within real-life settings through a variety of data sources (Yin, 2013). According to Stake (1995), an instrumental case study allows researchers to select a case that will focus on a specific issue through a thick and rich examination that will "maximize[d] what we can learn" (p. 4). The case is selected not necessarily because of its intrinsic nature but because it allows the researcher to explore a particular phenomenon of interest that is especially prominent within that setting. The multiple instrumental case study involves studying a number of cases simultaneously or sequentially in an attempt to generate a still broader appreciation of a particular phenomenon in multiple contexts. The two cases examined here were schools in very different geographic locations where teachers had engaged in intentional professional learning to increase their effectiveness in working with Indigenous students (Papp, 2016, 2020). That professional learning prompted significant changes in pedagogical and curricular approaches, which yielded extraordinary improvements in student learning over a four-year period. So, our multiple instrumental case study is centered on documenting and exploring links between teacher professional learning, pedagogical and curricular innovations, and improved educational outcomes for Indigenous students in two different school contexts.

Other features of a case study method identified by Creswell (2013) include the following: data is gathered in the setting where the participants experience the issue; the researcher as the vital instrument who is reflective and collects all the data through methods that include interviewing participants, observing behaviours, and examining documents; the study is emergent while the focus remains on learning the participants' meanings and acknowledging multiple perspectives and views; and data analysis utilizes inductive and deductive logic to derive a holistic account of the issue under study.

Ontologically, our research aligns with the interpretivist paradigm, which seeks to create knowledge by trying to understand individual and shared social meaning, and is guided by constructivist beliefs. Underlying assumptions informing constructivism are that "knowledge is socially constructed by people active in the research process and that researchers should attempt to understand the complex world of lived experience as much as possible from the point of view of those who live it" (Schwandt, 1998, p. 221). A constructivist design "focuses on the perspectives, feelings, and beliefs of the participants" (McMillan & Schumacher, 2010, p. 237), enabling exploration of the depth, richness, and complexity that these participants assign to lived experiences in an "attempt to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2011, p. 3). The qualitative case study methodology employed here enables participants to socially construct knowledge based on their lived experiences while providing us as researchers with an opportunity to interact with the participants to gain a better understanding of the socially constructed truths dependent on the participants' perspectives (Baxter & Jack, 2008). In that way, this multiple instrumental case study sought to "explicitly seek out the multiple perspectives of those involved in the case[s], aiming to gather collectively agreed upon and diverse notions of what occurred" (Lauckner, Paterson, & Krupa, 2012, p. 5). Our purpose was to "thoroughly describe complex phenomena in ways to unearth new and deeper understandings of the phenomena" (Mertens, Cram, & Chilisa, 2013, p. 245).

Constructivist assumptions also guided our approach to exploring teacher and student

learning, since we see all learning as an inherently social process where knowledge is constructed through personal experiences and reflection, mediated through social interactions (Piaget, 1978; Vygotsky, 1987). In the case of teacher learning through professional development activities, we assumed that educators learn through their interactions with other professionals, facilitators, and the content being presented, and then translate that learning into innovative practices through reflection and in interactions with their students in their classrooms (Kozlowski, 2017).

Research Questions

Three broad research questions informed the data collection: How did teacher professional learning initiatives evolve at these schools? In what ways did teacher professional learning opportunities enhance the cultural responsiveness of educators within these schools? How did enhanced teachers' cultural responsiveness impact student engagement, attendance, and learning at these schools?

Site Selection

The school sites that were purposefully chosen were identified as unique cases (McMillan & Schumacher, 2010) since they catered to large Indigenous student populations. In both cases, the schools had experienced notable improvements in credit completion and graduation rates within a few years of implementing teacher professional learning strategies for their respective teaching staff. They were thus deemed unique by comparison with other schools with similar student populations and were appropriate for a multiple instrumental case study.

The Wharekura[5] school in New Zealand was selected because it had implemented a national teacher professional learning program in 2009 and saw a dramatic improvement in student achievement not only for Māori students, but for all students (New Zealand Qualifications Authority [NZQA], 2014; Papp, 2016; Wharekura, personal communication, August 4, 2015). In 2014, the school population was 420 students and housed grades 7 to 13, with the middle school (Grades 7-9) comprised of approximately 90% Māori students and grades 10 to 13 about 55 to 65% Māori students. A socioeconomic lens ranks New Zealand schools by decile rating, with the most affluent ranked at decile ten and poorest documented as decile one. Wharekura ranked at decile two.

The Saskatchewan site, identified here under the pseudonym Young Persons' High School (YPHS), was a high-school catering to approximately 300 exclusively Indigenous students, 56% of whom were living independently, and 20% of whom had children of their own (Lessard, 2015; Needham, 2015; Papp, 2020; CG, personal communication, November 17, 2016). The majority of students were non-traditional learners, and many had experienced failure, sometimes repeatedly, in other schools. In some cases, the students had been in four to six different high schools before coming to YPHS.

Participant Selection

Participant selection was purposeful and convenience-based in both cases. In Saskatchewan, seven participants, including a division administrator, two school administrators/teachers, and four classroom teachers volunteered to participate in our research. Two were female, and five were male, three had teaching experience ranging from 8 to 15 years, and the other three ranged

from 23 to 30 years. Two teachers self-identified as Indigenous. The length of time the participants taught together at that school ranged from four to six years. In New Zealand, interviews were conducted with seven participants. Three were classroom teachers and administrators; two were classroom teachers, one was a restorative facilitator, and one a resource teacher of learning and behaviour. One participant self-identified as of Māori descent. Teaching experience ranged from 10 years to over 32 years, and the staff was together for a minimum of five years.

Data Collection and Analysis

Consistent with the case study approach, multiple methods of data collection, including documentary analysis, site-based participant observation, and individual semi-structured interviews that lasted approximately one hour were employed to develop a "holistic understanding of the phenomena under study that is as objective and accurate as possible" (Kawulich, 2005, p. 92). The principal researcher conducted research in New Zealand in 2015, and in 2017 completed data collection in Canada. Data from interviews were particularly valuable in accessing the voices of teachers and administrators at both sites in understanding ways in which the professional learning impacted their practices, and in documenting the impact of these changes on Indigenous student outcomes. Documentary sources, including divisional and school improvement plans, were consulted to understand the broader context in which the schools operated, and data from standardized tests provided empirical evidence of impacts on Indigenous student performance in both settings.

We followed the five-stage data analysis spiral outlined by Creswell and Poth (2018) that began with managing the data, reading and writing memos, describing, classifying codes into themes, interpreting, and representing and visualizing the data. Interviews were transcribed verbatim and presented to the participants for accuracy and member checking. Charmaz (2017, 2020) stressed that those people conducting research put reflexivity into practice. Charmaz (2020) further recommended "paying attention to language helps researchers to position the data in their cultural context, and hence enrich the resulting analysis" (p. 170). Hence, the researchers adopted the coding style of *in vivo* to honour the participants' voices. Saldana (2013) explained that in vivo coding is a verbatim coding and is congruent with Indigenous approaches to research in that it gives priority and honor [to] the participant's voice by coding with their actual words (p. 91).

Emerging Themes

Merriam's insight that "conveying an understanding of the case is the paramount consideration in analyzing the data" (1998, p. 193) led to the delineation of themes across the two cases. These included the importance of whole systems reform initiatives, supported by strategic hiring and school-based leadership. This led to greater professional and moral commitment to improving educational outcomes for Indigenous students; the development of various teacher professional learning initiatives to enhance cultural responsiveness among educators with a focus on embedded and 'catalyst teacher' approaches, sustained by ongoing reflection and monitoring; the use of these professional learning opportunities for the development of innovative pedagogical approaches and strategies aligned with Indigenous cultural values; and the powerful impact on Indigenous student engagement and learning affected by the creation of culturally affirming,

personally relational, and academically meaningful school experiences animated by intentional teacher professional learning.

Whole School Initiatives

In both Saskatchewan and New Zealand, attending to disparities in educational outcomes among Indigenous students has been consistently articulated as a leading imperative for school systems for more than a quarter-century (Cottrell, 2010). Within a broader context of neoliberal reform and accountability measures, policymakers in both jurisdictions have embraced whole systems approaches to school improvement as a means of addressing inequitable educational outcomes. According to Campbell (2015), the "quest of whole system educational improvement is to support all students to learn, all teachers to teach, all education leaders to lead, and all schools (and systems) to improve" (p. 3). This is achieved through strategic planning and benchmarking at ministerial, divisional, and school levels. Intensive professional development for teachers and school leaders encourages the implementation of innovative curriculum and instructional resources, reinforced by the use of data to inform practice and ensure accountability (Campbell, 2015; Fullan, 2010). Drawing on culturally responsive education theory and school effectiveness research that highlighted the centrality of good teaching and whole-school approaches in improved learning, the New Zealand Ministry of Education initiated Te Kotahitanga research in 2001. The findings of that research subsequently guided the creation of a teacher professional learning tool, the Effective Teacher Profile (ETP)[6], based on delineated teacher competencies.

Shortly after the principal of Wharekura school was appointed, he oversaw staff changes by hiring more culturally responsive educators and then made an application to the Ministry of Education to bring the Te Kotahitanga program to the school. Through intense ongoing professional learning, the participating teachers were encouraged to engage in discursive (re)positioning, strategic goal setting, the implementation of culturally responsive pedagogies, the re-institutionalization of the decision-making processes within schools to promote student empowerment, the development of distributed leadership, the inclusion of the Indigenous community, and the effective use of evidence of student performance (Bishop et al., 2014).

Teachers who participated in the research quickly recognized that the commitment to improving Māori achievement at schools they had previously taught at was primarily lip service. Alice, a teacher, commented it was "something we talked about, and we really should do it, but nothing happened." In contrast, at Wharekura school, "we live it; we breathe it." The teacher participants identified the influence of the principal as critical both in initiating and sustaining their commitment to ensuring more equitable outcomes for Māori students: "He is passionate, and his passion filters down to us. But it is not just the passion. He is walking the walk, that we talk about, and we learned the philosophy behind it [the ETP]".

At YPHS in Saskatchewan, persistently low academic achievement became the catalyst for reform. The transformation began as an iterative process after a review of data on attendance, enrolment, attrition, credit completion, and graduation rates. The division leader created a strategic plan that led to significant staffing changes, and the new team was provided with resources and encouraged to take new approaches and implement innovative ideas. Greg, the division administrator at YPHS, explained that this was a form of "disruptive innovation and upsetting complacency into more of a sustainable leadership." The next stage was to introduce innovative strategies and a positive direction. The administration and teachers were supported at the divisional office, and Greg stated, "When you brought in a new team it was helping them see

the possibilities, resourcing their innovation, no idea was a bad idea … trying to build enthusiasm for being there". An instrumental part of the support was through a collaborative approach to teacher professional learning at the school.

Teacher Professional Learning to Enhance Cultural Responsiveness

At Wharekura school, the Te Kotahitanga research guided the development of the professional learning tool, the Effective Teacher Profile (ETP), consisting of six observable characteristics, articulated in the Māori language, that teachers were encouraged to display in the classroom. These include (a) *Manaakitanga*: building and nurturing a supportive environment that is culturally responsive; (b) *Mana motuhake*: caring about each student's classroom performance and helping the child to develop identity, independence, and group identity; (c) *Whakapiringatanga*: creating a safe learning environment; (d) *Wananga*: engaging the Māori students as Māori; (e) *Ako*: using a variety of teaching strategies to promote interaction among learners and to build relationships; and (f) *Kotahitanga*: collaborating to improve Māori education achievement through monitoring and reflecting (Bishop et al., 2010; Bishop et al., 2014).

Coaches from the Ministry of Education provided embedded professional learning to Wharekura teachers with a focus on strategies concentrated on relationship-based pedagogy, culturally responsive teaching, and inquiry-based learning. After training and implementation, all teachers were observed by a trained facilitator. Teachers were provided with feedback and recommendations to improve Māori student interactions (Fiona, personal observation and communication, June 24, 2014). Bishop et al. stated, "The students' narratives of experiences are used to provide teachers with the opportunity to reflect upon the experiences of others involved in similar circumstances to themselves, including perhaps for the first time, the students" (2012a, p. 696). In addition to the regular teacher ETP assessments, teachers frequently met in co-construction meetings to discuss their shared students and monitor the students' progress, and areas of concern were addressed collectively. Reflection of this nature allowed supports to be put into place for students that required extra assistance in reaching educational goals.

At YPHS, teacher professional learning evolved in a less structured but equally effective manner. It began under the direction of the school administrators, with the principal and vice-principal collaborating with teachers to research best practices for teaching Indigenous students as a form of action research. Participants noted that Indigenous ways of knowing and learning were at the heart of the weekly search for culturally responsive teaching practices. An informal learning community approach was initially adopted, where staff organized book studies and then discussed what could be implemented in their classrooms. Adam, a science and math teacher, felt the sessions were beneficial, and "we would actually talk about the kind of things that would happen in the classroom, and that would generate collegiality and familiarity among the staff, support from one another, and sharing of ideas." Through the weekly activities, a shift from theory towards practice in adopting techniques that emulated traditional Indigenous pedagogy occurred, with a focus on cultural infusion in the curriculum, relational pedagogy, and inquiry-based learning approaches, supported by resident Indigenous Elders. The weekly meetings provided an opportunity for ongoing reflection on what was working in the classrooms for the Indigenous students, and a regular review of data on attendance and credit completion allowed monitoring of the success of implementing culturally responsive pedagogy.

Teacher professional learning at YPHS was translated into practice by the adoption of the

instructional leadership model, with administrators in the classrooms co-teaching with the teachers. Based on early positive results, teacher professional learning was intensified by applying the catalyst teacher model (Bryk & Schneider, 2003; Needham & Cottrell, 2016), where a particularly effective and passionate teacher was released from regular teaching duties and assigned to work with other staff members as a coach and mentor. She was tasked to partner with the teachers, create resources to assist her colleagues, and co-develop new relational and inquiry-based pedagogical approaches that infused Indigenous cultural values and strategies into all aspects of the school.

Relationship-Building Pedagogy

Relational pedagogy requires teachers to develop a sincere and genuine interest in their students, not just as learners but as human beings deserving of the best that teachers can provide and capable of being successful both academically and in life (Allen, 2017; Papp, 2016, 2020). This kind of authentic relationship assists teachers in engaging students with the curriculum by encouraging the students' voices and focusing on what the students are interested in knowing.

Through deliberate teacher professional learning, participants from both sites came to feel it was critical to know their students, not just as students, but as Māori, Cree, or Dene students. In both contexts, the teachers were encouraged to focus on the student to become familiar with their personal and family circumstances before teaching (Papp, 2016, 2020).

The New Zealand teachers spoke of beginning the school year and not teaching for the first week or two, depending on the grade level and the familiarity of the students with each other and the teacher. Alice, one of these teachers, shared, "We are building those relationships. If we started off straight away to teach, we would start building conflict with students, and the kids would develop conflict among other students." The activities could include adventure-based learning, cooperative games, sports, arts, or music. Edward, another New Zealand teacher, commented, "it is about breaking down the barriers and to get people interacting with each other. I participate because that is really important."

Participants at both sites commented that they did not require classroom management techniques and that disruptive behaviour was uncommon because of the mutual respect established between students and teachers. At YPHS, Emily explained that "when you have a strong relationship with a student, there is no discipline needed" by a teacher. Dan, another YPHS teacher, explained that respect for the teacher would be "even so much that students will defend teachers in the face of other students." At Wharekura, Alice, another teacher stated:

> I have opened myself up to my students. Letting the students know who I am rather than me just being the teacher … The kids know me, and I know my kids. I could list at least ten things about each of my kids in my class.

Similar relationships were also built with the students' parents through constant contact and texting.

The incorporation of the ETP at Wharekura brought about a subtle change in the attitudes of the teachers and the interaction between the teacher and the student. Charles, holding a dual role of teacher and principal, described relationship building as "being very aware of the interaction between the teacher and the student all the time and the type of questioning that is happening, so the students are actually having to think and are engaged in that type of dialogue" instead of the

teacher telling the students. He remarked about listening and responding to the students' voice, embracing "the concept of power-sharing with the children and the elements of self-determination." Power-sharing demonstrated a respectful relationship between the student and the teacher and a commitment to non-hierarchical and caring relationships. Edward, a teacher, and the vice-principal, observed:

> It is about me teaching in a way that the kids know very quickly that I am open to what they think, and I value what they think … I can close that down very quickly by the way I speak, the way I act or if I don't follow up on their ideas … The trust has to be built by letting them know that I am willing to listen.

At YPHS, the approach was to encourage dialogue between students and teachers, resisting the traditional style classroom where the teacher monopolizes power, is the expert, and teaches by transmission. Adam observed, "[It was] more about building those relationships and getting to know one another than it is about the [classwork] science that we are going to do in class—Spend time getting to know each other first before classwork."

Teacher professional learning strongly discouraged harsh and critical evaluation. The teacher Emily stated:

> How students learn—if they are comfortable with you, they know you, you are not threatening to them, there is no judgment there … when you ask them a question in any class, in any course that you are teaching—they will try. They will give you an answer because they don't fear. They don't fear the ridicule or judgment or humiliation, and so their learning is greatly increased by that relationship.

A striking difference was that interactions at YPHS were described as being non-hierarchical, with a non-authoritarian approach between teachers and students, where everyone was on a first-name basis. Teachers such as Dan explained that "It [first names] is usually something that you reserve for friends and family" and allowing students to call you by your first name was "a way of inviting them to be family." Another teacher, Adam, described other schools in Saskatchewan as being "Very cut and dry, cold and institutional instead of more casual" and described some teachers to be "emotionally removed." At Wharekura, in contrast, student-teacher interactions, although supportive and caring, remained more formal with students calling their teachers Mrs., Mr., or Miss.

Culturally Responsive Pedagogy

In both cases, a significant focus of teacher professional learning was on cultivating culturally responsive curricular and pedagogical approaches. At Wharekura, the philosophy of the school was built on a culturally responsive pedagogy of relations with three core values revolving around Māori terms. The terms and their meanings formed the basis of the pedagogy and discursive interactions and were woven throughout teaching strategies. Māori values were used to discuss appropriate classroom behaviour, and teachers referred to *Manaakitanga*, meaning respect, *Whanaungatanga*, meaning belonging and family, and *Hirangatanga* meaning excellence in effort. These values and Māori terms were sacred words, and conversations about these values were taken seriously. Betty explained that teachers "use[ing] the Māori language in the school had been a factor in building relationships with the Māori students and educational success" which was defined within the Māori context with the goal to have Māori students succeed as Māori

people. If teachers are dealing with a behaviour that is not acceptable, Gail, a restorative facilitator, described interactions: “Are we showing Whanaungatanga [belonging and family]? Is this how we act? It is just another way of teaching them the correct behaviours or the behaviour we want to encourage them to use”.

The school offered a variety of Māori specific classes in language, performing arts, traditional carving, and *Whakairo* academy (Māori arts). The students organized festivals at the school and invited other schools to attend. One special Māori celebration was the *Matariki*, a celebration of the Māori New Year. Students were provided with guidance from the school Elders regarding protocol for the celebration.

At YPHS, the approach to teaching became more flexible, and participants noted they adopted the philosophy that it takes as long as it takes for students’ learning. By embracing the inquiry approach to teaching, students worked together in learning communities, a collaborative approach that was consistent with traditional learning approaches. Emily stated, as teachers, “We work in partnership. Life is like that, isn’t it? So, you have to learn how to cooperate and who has the best skills [to get the work done together].”

There was also a strong focus on experiential learning activities, again as consistent with traditional Indigenous strategies. Ken, the principal, was adamant that the school was “making sure we were placing value on being true and authentic to First Nations knowledge and content in the curriculum.” Traditional teachings revolved around equality and respect, and Emily explained “that was part of it and to have that equality, and no one is greater than or less than” as student-student or student-teacher. Through circle time, teachers and students had a chance to share their challenges, and everyone had a voice without judgment. The regular ceremonies, especially drumming circles and sweat lodge ceremonies, assisted students in finding their identity as Indigenous people and developing a sense of pride in their heritage and history. Ken, as the principal, confirmed that being in a school that was predominantly Indigenous also had a positive effect on the students and contributed to their learning. Ken concluded that “while in other schools, the dynamics could be intimidating, they felt like they belonged here. There was a sense of family, a sense of belonging, and pride in their culture and identity.”

Impact on Student Outcomes

The result of developing culturally responsive and relationship-based pedagogy through whole systematic and intentional teacher professional learning at both schools was dramatic. In 2009, the Wharekura school implemented the Te Kotahitanga program, “and the improvement in student achievement at the school was recognized to have benefited not only Māori students but all students of that school” (personal communication, August 4, 2015, as cited in Papp, 2016, p. 4). The independent data collected on Grade 12 Māori students by New Zealand’s National Certificate of Education Achievement (NCEA) indicated that in 2009 the school had a 32.4% achievement level, while the national Māori achievement level was 52.9% and the national level of all Grade 12 students of 65.6%. Five years later, in the 2014 academic year, the school achieved a 70% student achievement level for Grade 12 Māori students, surpassing the Māori national standards at 67.8% and nearly matching the national level of 75.4% (NZQA, 2014; Papp, 2016; Wharekura, personal communication, August 4, 2015).

The research conducted at YPHS focused on approximately 300 students in grades 9 to 12 from 51 First Nations across Saskatchewan, of which 56% were living independently, and 20% had children of their own and between 2010 and 2014, the credit completion improved from 31%

to 81%, attendance increased from 52% to 77%, and graduation rates increased from 3 to 55 students (Lessard, 2015; Needham, 2015; Papp, 2020; CG, personal communication, November 17, 2016). Data suggests that the improved educational outcomes for both groups of Indigenous students resulted from similar transformational initiatives, primarily teacher professional learning that focused on culturally responsive and relational pedagogies that affirmed Indigenous students by infusing Indigenous culture into the curriculum.

Discussion

This qualitative study adopted a multiple instrumental case study approach to explore, from the perspectives of teachers and administrators, how teacher professional learning that focused on culturally responsive teacher practices and relationship-based pedagogy altered classroom dynamics and improved educational outcomes of Indigenous students at two selected schools in Saskatchewan, Canada, and New Zealand. Data revealed the perspectives, feelings, and beliefs of the participants and allowed for interpretation of phenomena in terms of the meaning participants brought to them. Themes emerging from the data are now aligned with secondary literature to identify findings from our inquiry.

Whole Systems Approaches

Although the increasing use of national and international assessments and accountability approaches have generated significant controversy (Darling-Hammond, 2010), this research attests to certain benefits of these approaches. In particular, it was data generated from standardized tests in the Saskatchewan and New Zealand contexts that initially focussed attention on the fundamental disconnect between Indigenous students and schools, forcing system leaders to assume greater accountability, as a result of the gaze of government and the public, for the success of Indigenous students (Cottrell, 2010; Cottrell, Preston, & Pearce, 2012). The resulting whole system innovations were made possible through the animation of transformative and distributed models of leadership "instituting changes in the educational environment of schools—structures, culture, pedagogical practices—that resulted in more inclusive and more just experiences for all students" (Shields, 2010, p. 584).

Leadership

Participants' insights on the importance of leadership in promoting greater cultural responsiveness in the two study sites align with a large body of leadership literature which favours forms of transformational and instructional leadership, where the principal acts as a guiding light for the values a school aspires to, and certain leadership qualities "cause others to do things that can be expected to improve educational outcomes for students" (Robinson, Lloyd, & Rowe 2008, p. 70). As this case study demonstrated, the modeling of the principal is especially critical when promoting professional learning initiatives that require teachers to critique their culturally-located practices (Tuuta, Bradnam, Hynds, Higgins, & Broughton, 2004). Fundamentally, the actions documented here began with administrators who saw the potential of schools to serve as spaces of social and cultural transformation and who were willing to challenge traditional pedagogical and curricular practices by engendering a climate of shared learning, experimentation, and risk-taking (Timperley, Wilson, Barrar, & Fung, 2007). Importantly,

however, the principals encountered in this multiple case study positioned teachers as agents rather than subjects of change, with opportunities through evidence-based and inquiry-based professional learning to exercise their collective professional judgment around appropriate pedagogical and curricular innovations (Campbell, Lieberman, & Yashkina, 2017; Papp, 2016, 2020). In this way, a balance of teacher's voice and system coherence was achieved whereby teachers were provided the opportunity to imaginatively renew their practice for moral and professional purposes (Hargreaves & Fullan, 2012).

Collaboration and Reflection

Data from this multiple case study highlights the efficacy of collaborative approaches to teaching and learning and the power of teacher co-learning to improve outcomes for traditionally marginalized students (Darling-Hammond, 2008). Through systematic and intentional professional learning and formal professional learning communities, teachers who participated in the research engaged in cooperative learning activities, evaluated the results, learned from one another, and reflected on action plans to improve their teaching practices continually. The common goal of improving student academic achievement and personal wellness was based on a broad understanding of student achievement, in addition to equity, engagement, learning, well-being, and many other outcomes, with recognition of the diversity of students' contexts and needs (Timperley et al., 2007). This confirms that teacher professional learning that allows for discourse or the exchanging of ideas and learning through critical discussion and provides an opportunity for critical reflection that strengthens the connection between teacher and student learning can contribute significantly to more effective teaching practices and improved student outcomes (Darling- Hammond, 2008; Timperley et al., 2007).

Teacher Transformation

Although data from this study demonstrates the impact of teacher professional learning on improved Indigenous student outcomes, there is evidence that the teachers themselves were also profoundly impacted by the learning initiatives. Opening themselves to culturally responsive tenets encouraged these White teachers to contemplate and implement fundamentally different relationships with students and their families, where notions of expertise and authority had to be renegotiated and democratized. The initiatives also induced these educators to confront deeply-held epistemic and ontological assumptions about curriculum and pedagogy, to acknowledge that culture, language, race, and class influence perspectives on what counts as knowledge and in the process of constructing new, more comprehensive understandings of knowledge (Harris, 2002). In effect, the process of decolonizing the schools required a transformation in the educators' conceptions of themselves as teachers and learners and a fundamental re-evaluation of what constituted legitimate and worthy knowledge.

Transferable Insights

A limited capacity to transfer insights from a particular case to broader contexts is a recognized feature of case study methods. Nevertheless, approaches documented in this case study delineate some exemplary practices for sustainable teacher professional learning. The system, division, and school leaders committed to maximizing opportunities for all students to learn are essential, as is

their willingness to mobilize appropriate resourcing to ensure sustainability at the design and implementation stage (Timperley et al., 2007). School leadership capable of inspiring teachers to engage in ongoing learning for personal and professional growth and student benefit, with the courage and creativity to facilitate time and place for teacher experimentation and initiative, are also critical. The best teacher professional learning is directly connected to teachers' working contexts and problems of practice; so, actions that are practical, relevant to teachers' needs, and contribute to achieving valued student outcomes are recommended (Croft, Coggshall, Dolan, Powers, & Killion, 2010). It is also clear from this research that effective professional learning that achieves significant change cannot be undertaken in a short period, so "prolonged interventions are more effective than shorter ones, and combinations of tools for learning and reflective experiences serve the purpose in a better way" (Timperley et al., 2007).

Concluding Thoughts

The findings of this research confirm the capacity of teachers to act as agents of change and highlight the potential of teacher professional learning to serve as a powerful catalyst for educational reform and innovation, ensuring that schools can indeed benefit students who have historically been underserved by public education. In the two schools at opposite ends of the world encountered in this study, predominantly White educators adopted strikingly similar approaches to disrupt deeply entrenched historical educational patterns through intentional teacher professional learning. With social justice priorities at the forefront of their practice, they rejected deficit explanations and assumptions, and viewed Indigenous students as both deserving of success and eminently capable of learning. Informed by cultural responsiveness theory, they sought to use Indigenous students' cultural attributes, experiences, and perspectives as assets and conduits for more effective teaching (Gay, 2002). White educators' engagement with Indigenous cultures at both sites led to the adoption of more caring and egalitarian interactions with students and their families, and these innovations facilitated learning that was additive rather than subtractive, enabling students to make more meaningful connections between learning activities and their lives outside the classroom (Papp, 2016, 2020; Paris, 2016). A remarkable transformation in student engagement and dramatic empirically-documented improvement in academic outcomes was visible within a short time for students at both sites.

Because of commonalities between Saskatchewan, New Zealand, and many other international contexts with similar Indigenous histories, demographic trajectories, educational inequities, and post-colonial tensions, the implications of this study are potentially broad and significant. We see this identification of intentional, strategic teacher professional learning as an essential addition to research on effective, culturally responsive, and culturally sustaining practices in schools serving Indigenous and other disadvantaged students. Although much attention and handwringing has been devoted to closing the Indigenous education achievement gap, these case studies draw attention to the need to consider the imperative of opening the opportunity gap by creating optimum conditions for Indigenous student success.

Findings also have implications for leadership preparation, particularly regarding the critical role of leaders in supporting teacher-driven efforts to facilitate culturally responsive practices. Our research should also be of interest to teacher educators, as it delineates the kinds of teachers and teaching practices made increasingly necessary by the growing diversity within classrooms in these and similar contexts.

Lastly, this comparative of case studies suggests that the search for equitable academic

outcomes for Indigenous students, although typically framed in deficit terms, actually represents an enormously exciting opportunity for public education in these contexts and beyond (Cottrell, 2010; Papp, 2016, 2020). Ensuring that Indigenous learners derive commensurate benefit from K–12 education is currently one of the leading drivers of innovation in Saskatchewan and New Zealand schools, challenging teachers, administrators, policymakers, and governance personnel to reflect profoundly and improve profoundly on all educational practices. But, in addition to calling existing systems to do better, our research suggests that the growing Indigenous presence in classrooms also offers educators the potential to embrace Indigenous peoples' worldviews, social structures, and pedagogies as a legitimate foundation upon which to construct new meanings, alongside established Western curricular knowledge. Such an exciting opportunity to reimagine schools rarely presents itself!

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Notes

1 Saskatchewan: Saskatchewan is one of Canada's three Prairie Provinces with an enormous landmass, an abundance of natural resources, an extreme climate, and a relatively sparse population of just over one million people.

2 New Zealand: New Zealand is a small island nation in the South Pacific, with a population of 3.6 million people. Close to 75% trace their origins to Europe (mainly the British Isles) and are commonly referred to as Pakeha.

3 Indigenous Peoples: The terms Indigenous, Aboriginal, and First Nations are used interchangeably and is not intended to minimize the diversity among the many distinct populations of peoples indigenous to Canada and New Zealand. When using direct quotes, the original author's terminology will be used.

4 Colonialism: Colonialism and imperialism were interconnected in the European imperial quest for territorial and economic expansion in a "chronology of events related to 'discover', conquest, exploitation, distribution and appropriation" (Tuhiwai Smith, 2008, p. 21). Colonies were formed to subjugate the Indigenous populations and access resources and served as a means of imposing European cultural Western norms on Indigenous populations.

5 Wharekura: Wharekura is a pseudonym used to maintain the anonymity of the school. "Wharekura" in Māori means "house of learning" or "school."

6 Effective Teacher Profile: The basis of the professional development tool used, the Effective Teacher Profile (ETP), was developed from academic literature that adopted an agentic position through culturally responsive pedagogy that builds relationships between teachers and their students (Bishop, O'Sullivan, & Berryman, 2010).

7 This paper draws on data collected by the principal researcher, Theresa A. Papp, in completion of a manuscript doctoral dissertation at the University of Saskatchewan. Aspects of that data, including some participants' quotations, have been previously cited in the following publications: Papp, T. A. (2016). Teaching strategies for improved education outcomes for Indigenous students. *Comparative and International Education 45*(3), 1–14 and Papp, T. A. (2020). A Canadian study of coming full circle to Aboriginal pedagogy: A pedagogy for the 21st century. *Diaspora, Indigenous, and Minority Education: Studies of Migration, Integration, Equity, and Cultural Survival 14*(1), 25–42.

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