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INTRODUCTION BY THE EDITOR

Marion Terry, Ph.D.

Welcome to the twenty-third issue of the *BU Journal of Graduate Studies in Education*, devoted to rural, northern, and Aboriginal education. Our authors for volume 11, issue 2, are current and past BU Faculty of Education graduate students. I thank these educators for sharing their work. Together, they have produced Together, they have produced a collection of articles engendered by their educational and work experiences in Canada and abroad.

- Sylvie Tomoniko's refereed article clarifies how digital environments fuel teenage anxiety, and how learning to navigate social media can lessen the anxiety.
- Amber Sawchuk's refereed article examines how educators can work collaboratively to ensure appropriate inclusive education for students with autism.
- James Sheppard's refereed article recommends collaboration as a means to support inclusionary practices in general education classrooms.
- Kendra McKenzie's refereed article explores strategies to close the academic gap between students living in poverty and those raised in more affluent homes.
- Gina Bradshaw's refereed article offers suggestions for using mindfulness to address student anxiety in the classroom.
- Shane Buck's refereed article reimagines the science classroom as a partnership between Indigenous and Western ways of knowing.
- Cheryl Chuckry's refereed article explains how MTS's Collaborative Learning Team Grants project seeks to address barriers to teachers' professional learning.
- Yunge Pang's refereed article calls Chinese music educators to social justice action by teaching ethnic music and appropriate pedagogies.
- Laura Jeanne Thompson's refereed article challenges teachers to enact an affirmative approach to gender-fluid development in school children.
- Alicia Ballantyne's refereed article untangles the debate over traditional versus reformist mathematics instruction.
- Jennifer Chrisp's special interest paper describes one rural K-12 school's efforts to create equity for its diverse students.
- Eric Lowe's opinion paper recommends infusing all curricula with Aboriginal perspectives as an essential step in the reconciliation process.

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REFEREED ARTICLES

Anxiety at Teenagers' Fingertips

Sylvie Tomoniko

Abstract

Teenager anxiety can be fueled by the online social interactions of today's youth. Comparing one's life with others, coping with bullying behaviour, seeking acceptance from peers, and digital addiction can all have a role in the rising anxiety today's teenagers are experiencing. Educators and parents have an important role to play in teaching teenagers how to navigate their digital environments in a safe and responsible way. Through education, students can be made aware of the risks of social media to their mental health, learn coping techniques and be directed to resources that can help to alleviate the anxiety they may be experiencing.

Online communication, viewing, and interacting with media have a role to play in the increased anxiety levels of today's teenagers. The rise in teenagers' anxiety levels is connected to being exposed to, and interacting with, a variety of digital messages and activities. Teenagers' interpret these messages in relation to their own lives and sense of self. Through media education programs delivered in a school setting, teenagers can become more reflective about their online digital experiences and implement strategies that will help them to reduce their levels of anxiety.

Addressing Anxiety in Teenagers and Its Connection to Technology Use

Anxiety is a part of the human condition and occurs at different moments in a young person's life. However, there may be times when anxiety becomes so prevalent that it starts to affect teenagers' self-esteem, schoolwork, and friendships. The recent rise in use of technology and social networks has fueled unprecedented social anxiety among today's teenagers ("Fewer Girls," 2018, p. 10). Four significant anxiety-causing issues can arise with the use of online technology. Comparing oneself with others, cyberbullying, social isolation, and addiction can all play a role in fueling teenagers' anxieties.

Comparing Oneself With Others

With access to online technology, teenagers are able to be in a constant state of communication and comparison with one another. Anxiety is often triggered when teenagers compare themselves with others ("Is Your Online Addiction," 2016). Teenagers may be browsing on Facebook or Instagram, seeing pictures of beautiful teenagers living seemingly wonderful, perfect lives; there are no pimples rising from their skin, each stray hair is neatly coiffed, chins are defined, eyes are enlarged, and lips are full. Imaging filter tools have erased or reshaped the imperfections teenagers see in themselves and one another. In addition, not only is everyone physically appealing, but everywhere the teenagers look, the lives of their peers are painted with fun times and excitement ("Is Your Online Addiction," 2016). The drab moments of their own everyday lives cannot compete. Teenagers today are becoming obsessed with creating an image of perfection that does not accurately reflect the reality of their looks or their lives. In the school setting, this obsession can be seen in the pressure teenagers put on themselves to look and act as perfect as their online personas. To be accepted as part of a desired social group is a driving motivation for teenagers' behaviours (Charteris, Gregory, & Masters, 2018). Through the lens of social media, teenagers can find unlimited opportunities to

scrutinize and compare themselves with others, resulting in a constant pressure to look and act in the standard expected by their peers.

Cyberbullying

Because of the instantaneous nature of social media, cyberbullying also plays a crucial part in the rising levels of teenager anxiety. Many of the victims, as well as the perpetrators, of cyberbullying do not have positive connections with the school environment and learning (Betts, Spenser, & Gardner, 2017). Though much cyberbullying happens outside school hours, the effects can carry over into the school day, affecting students' perceptions of safety and belonging. In my school, I increasingly deal with peer issues related to negative social media communication by the students. Unfortunately, students who have been bullied online are also more likely to participate in bullying behaviour in the virtual hallways of social media, as a form of retaliation or as an outlet for the pain caused to themselves (Beyazit, Simsek, & Ayhan, 2017). Cyberbullying can also be connected to exploitation of teenager sexuality. Desire to communicate digitally can lead teenagers from flirtatious banter to exchange of sexual images (Charteris et al., 2018). Once released in the digital realm, these images can be knowingly and purposefully redistributed. Because of the very nature of online media distribution, bullying in cyberspace has the potential for a larger audience and longer lasting presence in the life of the victim, causing prolonged anxiety.

Social Isolation

Another significant anxiety-causing issue is feeling socially isolated from friends and peers. Not only do teenagers see images of perfection, they can also see events in which they are not included. On apps such as Snapchat, there are features like Snapmap, which allow the user to see the locations of friends. Seeing friends all gathered in the same location can trigger feelings of sadness and loneliness because the user has been left out of the peer group. It is the fear of missing out that can lead teenagers to check and re-check their social media accounts frequently, sometimes obsessively ("Is Your Online Addiction," 2016). Some online platforms have built-in features to attempt to keep the user at the site and "take advantage of users' vulnerabilities" (Ioannidis et al., 2018, p. 164). In the app Snapchat, for instance, there are features such as Snap streak, which encourage users to communicate daily with their friends. Otherwise, they risk breaking their "Streak," which is a cumulative timeline of daily communication and is often viewed by teens as a safety certificate for a friendship. The need to feel connected with friends and peers is a powerful motivation for teenagers to use social media. Unfortunately, the ease of access to knowledge about events and gatherings, as expressed on social media, can also cause anxiety about being left out.

Teenagers' family lives are also affected by the use of social media and technology such as gaming. Parents who have not grown up with this technological world at their fingertips have little understanding or patience for their child's obsessions with social networking systems (Luders & Brandtzaeg, 2017). Parentally foreign notions such as Snap streak can lead to teenagers choosing behaviours to maintain their social media presence, despite parental input to the contrary. For example, my daughter's friend's phone was recently taken away by her mother; while at school, her friend gave my daughter her Snapchat username and password, and asked her to continue her streaks for her until she received her phone back. Another friend's teenage daughter refused to go on a family weekend vacation to their cabin because there was no Internet access and her Snap streaks would be broken. Such is the grip that technology holds over the psyche of today's teenagers, whereby real-life experiences are being affected by the emotional hold of social media in their lives. This lack of understanding or acceptance of digital use by their child can result in criticism being directed at them. Parents have communicated with me at parent-teacher conferences their frustration in their child's

excessive screen time and unwillingness to shut off devices or videogames. Known as technoference, children feel less warmth to parents who interfere in their technology interactions (Stockdale, Coyne, & Padilla-Walker, 2018). Increased conflict or disengagement with the important adults in the children's lives, coupled with the need to be part of the group as evidenced in online social media experiences, provides a fertile breeding ground for teenager anxiety.

Addiction

Social media use in a prolonged and frequent manner, supplanting other activities in teenagers' lives, is the foundation for the anxiety-causing issue of addiction. Addiction can be a direct result of the previous social media issues: comparing oneself with others and feeling left out. For example, because social networks give teenagers easy access to be "in the know" when something is going on, teenagers can seemingly quench that fear of missing out by frequently checking and re-checking their social media accounts. As a result, browsing on social media can quickly develop into a large addiction. A study by the University of Chicago found that it can be more addicting to use social media than to use alcohol or cigarettes (Goessel, 2012). In addition, there is a natural human desire to belong and be liked by peers. A "like" on Instagram or Facebook, an emoticon on a social media message, or a "Favorite" on Twitter are positive social reinforcements to teenagers and are socially monitored between each other. The need to be accepted and included, as reflected in their social media accounts, can become a time-consuming and constant need for teenagers.

Addiction is also experienced by teenagers as a result of the virtual world of online gaming. Teenagers will sometimes turn to other avenues, such as gaming, to seek positive peer connections (Carras et al., 2017). Because of the highly interactive nature of online games, it is very difficult for a teenager to self-regulate and can result in negative consequences such as isolation and depression (Haagsma, Caplan, Peters, & Pieterse, 2014). Gaming's built-in competition and social nature offer teenagers the opportunity to make peer connections, further encouraging continued and prolonged gaming activity in lieu of other activities (Shen, Liu, & Wang, 2013). Inability to turn away from gaming and social media interactions results in later bedtimes and fewer hours of sleep, which causes fatigue during the school day when the brain is required to be actively engaged in learning (Cain & Gradisar, 2010). A study conducted with college students indicated that achievement in school outcomes was negatively affected by the use of social and electronic media (Guinta & John, 2018). Time devoted to gaming, browsing, and connecting on social media accounts can translate into less time spent interacting with peers, family, and activities in the non-digital world (Scutti, 2018). Technology and social media have transplanted themselves firmly as avenues that can take up large amounts of a teenager's day and, as such, are a time-consuming part of their lives (Burek Pierce, 2017). An addiction to gaming can override other activities to the extent that it has a detrimental effect on several areas of a teenager's life.

Summary

Technology has increased the number of avenues teenagers can use to communicate with each other and, as a result, the risk of having more anxiety-related issues has increased. Technology has opened a doorway for teenagers to connect beyond the walls of the school and home; stepping through this doorway, however, can result in anxiety about perceived realities and questions about the strength of teenagers' social connections. The need to belong and to feel validated by peers is a part of the human condition, but with the world of technology those relationships and perceptions of self can become distorted and rapidly shift. Bullying is no longer restricted to school hallways or during the school day, but can now be inflicted by virtual means without constraints of time or physical proximity. Addiction and social insecurities

influenced by technology can have an effect on teenagers' self-esteem and can negatively affect the face-to-face relationships in school and within families. Without recognizing and devising ways to counter some of the negative associations of online technology use, teenagers' stress and anxiety levels may continue to rise.

Reducing Teenager's Technology-Related Anxiety Through Education

Because of the evolving nature of the digital world, and the important place it has in teenagers' lives, there is a need to educate teenagers about the risk of having increased anxiety due to their online digital interactions and media consumption. Though many of the technology related activities happen outside of school hours, there are ways that teachers can address these issues, and the accompanying anxiety, within the context of the classroom. Programs have been developed to address the cultivation of positive body image, examine media with a critical eye, teach anxiety reduction, and educate students on how to be responsible, healthy digital citizens.

Developing a Healthy Body Image

Helping teenagers to develop a healthy body image, and to examine the influx of media messages portraying certain body ideals, is important to their sense of well-being as they grow and change. The problem of comparing oneself with others, a frequent occurrence because of social media, is addressed through the online resource offered by the Dove Foundation. The Dove Foundation addresses the concept of healthy body image for boys and girls. The "Confident Me" resource has five workshops built around body image ("Dove Self-Esteem Project," 2016). The first two workshops deal with media messages, societal standards of beauty and digital manipulations of images. The remaining workshops challenge students to recognize body talk, to talk about physical features in a positive way, and to make a plan for sharing their learning with their peers. In addition to the school resource, the Dove Foundation also offers a resource designed for parents called "Uniquely Me," which helps parents to develop confidence in their children about their bodies ("Dove Self-Esteem Project," 2016). Lessons on body image, making healthy choices, and awareness of the role of media in determining the standards for beauty, delivered in a school context, are beneficial to raising critical awareness of media messages (Clay, Vignoles, & Dittmar, 2005). Helping teenagers to cultivate a positive body image could translate into a decreased dependence on social media to define what is beautiful and could decrease the anxiety associated with comparing oneself with others.

Balancing Life Choices With Media in Mind

Awareness of how media can be connected to anxiety and the importance of a balanced healthy life are important lessons for teenagers. The more time that teenagers spend on social media increases the opportunity for them to compare their lives with others and causes a higher degree of loneliness (Wang, Frison, Eggermont, & Vandenberg, 2018). This is especially true for teenagers who are more vulnerable (K. Y., 2018). Teachers need to be especially watchful for students who may be susceptible to social isolation and try to incorporate activities that involve positive cooperative interactions with peers in the classroom. Teaching students how to lead a healthy balanced life can help to alleviate this stress. This teaching can be done by addressing physical aspects of a healthy life, such as good nutrition, sleeping habits, and exercise (Yolanda et al., 2016). Teachers can also discuss the mental health advantages of a life that includes a balance of media and other screen-free activities. Encouraging students to explore interests and hobbies that are not digitally connected and make them happy, or help them to feel peaceful, is another option. Understanding the role that media plays on mental and

physical health is essential for teenagers to begin to take steps toward a healthier, more balanced life.

Practising Mindfulness

Teaching the students anxiety-reducing strategies, such as mindfulness, can be beneficial to teenagers. *GoNoodle* (n.d) is a website that has a variety of different movement breaks. Several of these, such as “Bunny Breath,” are related to mindfulness. Mindfulness can be viewed as a person’s reset button. Once completing the activity, students will feel more at ease and ready to move forward. Practicing mindfulness in the classroom teaches students the life skill that they can choose how they react to situations (Lawson, 2018). The grade six classes in our school division are using the Calm App in their health classes. It is a mindfulness app which takes the user through a series of meditations and encourages reflection and growth mindset. The teacher is using this regularly with the students and the hope is that, in time, students will be able to draw upon these mindfulness tools when they are feeling anxious or sad. The use of mindfulness strategies, over time, has a positive effect on a person’s ability to control their moods and helps them by lowering anxiety levels when confronted with a stressor (Basso, McHale, Ende, Oberlin, & Suzuki, 2019). Practicing the mindfulness strategy in an educational setting will give teenagers a tool they can use to reduce their anxiety levels in their daily life.

Strengthening School-Home Communication

Conversations need to be had with students about the effect that digital consumption has on their moods and feelings of self-worth. Teachers can challenge students to have times set aside in their day for non-digital activities, and teach them about how exercise is beneficial not only to their physical health but to their mental health as well (Hrafnkelsdottir et al., 2016). Teachers need to share this information with families so that discussions about the effects of technology use extend to a student’s home environment. In the context of the digital world, parents play a key role in the healthy upbringing of their child (American Academy of Pediatrics, 2018). Students can also be made aware of the Kids Help Phone, which has a phone number where students can speak to a counsellor about issues that may be causing them anxiety (Kids Help Phone, n.d.). In addition to the phone connection, there is a web-based resource at Kids Help Phone. This resource has a live chat feature where students can have a written conversation with a counsellor. It also has a mindfulness section with activities to try, and articles on current topics that may affect teenagers’ lives. Teaching students about the role that media may play as triggers to their anxiety, directing them to people with whom they can talk, and teaching the strategy of mindfulness can help teenagers to develop personal strategies to lower their anxiety levels.

Teaching Digital Citizenship

Cyberbullying is an issue that can be addressed in the school through teaching and modeling good digital citizenship. Teaching students how to be respectful, to act responsibly, and to consider the consequences of their actions when using online media are the foundations of digital citizenship. In a classroom setting, teenagers can learn about the potential hazards of Internet use and how to treat one another over a digital platform. Providing teenagers with a safe forum for discussion allows them to explore and reflect upon their own digital use and how they practice digital citizenship (DeNisco, 2018). To focus on cyberbullying, teachers can use the Kids in the Know program. In this program, there are lessons specifically designed for middle years’ students around the topic of cyberbullying, including developing healthy friendships, digital etiquette, and identifying boundaries for posting comments and images about themselves or others (Cyberbullying Resources, 2016). In addition, Cybertip.ca has made safety

sheets for educators to use with their students about topics such as cyberbullying, app settings and privacy, and self/peer exploitation. The site also directs teenagers where to report incidents involving sexual exploitation (Canadian Centre for Child Protection, 2017). Teaching students what good digital citizenship entails, and how to recognize and report instances of cyberbullying, will help them to communicate appropriately and feel safer in their online interactions.

Monitoring Digital Consumption

Digital addiction is a topic that can be addressed through classroom discussion and by using resources designed to help students recognize and respond to their digital use. Common Sense Media has many resources that can be used to talk to students about Internet addiction, including gaming and social media addiction. There are short videos and articles that can be used as starting points for discussions with teenagers on how technology addiction affects their lives and the importance of developing a healthy self, outside of the use of technology (Knorr, 2018). It is important to have teenagers identify and reflect upon how much of their daily time is connected to digital use. Creation of personal or family media use plans is a starting point for students and families to analyze their media use and how it affects their lives (Yolanda et al., 2016). Students who find themselves exhibiting signs of gaming addiction need to be encouraged to develop hobbies and friendships that are not related to gaming. Even friends who are gaming friends can be helpful in fighting this addiction if there is a connection outside the gaming world, as well (Kneer, Rieger, Ivory, & Ferguson, 2014). In order to educate teachers, parents, and students in our community, our school newspaper, *Cubs Corner*, will be writing a monthly feature on digital citizenship starting in November. One of the messages I hope to get across is the importance of spending time unplugged as a family and the healthy family relationships that can be built (Stockdale et al., 2018). Educational resources can be effective in addressing technology-related addiction when they are designed to have students reflect on their personal digital use, identify consequences associated with excessive use, and plan for incorporating non-digital activities into their lives.

Summary

Through education, teenagers can be engaged in the discussion of how online interactions and media consumption affect their lives. As consumers of media, teenagers need to learn to look at the message that media are portraying about beauty and body image. When faced with anxiety as a result of social media comparisons or being excluded, students can practice meditation as a calming and refocusing strategy. Learning how to consume media in a productive and balanced way helps teenagers to develop skills in digital citizenship and, in turn, to educate their families and peers on the benefits of balancing screen time with other activities.

Conclusion

The online digital world of today's teenagers is not defined by physical boundaries, yet it holds a significant place in their lives because it can have a negative effect on their mental health. Technology and its use, in a variety of on-line capacities, has increased teenagers' anxiety levels. By addressing the role that technology plays in increasing anxiety, educators can work with teenagers to identify elements of their technology use that may be negatively affecting their sense of well-being. Well-designed educational programming, used by teachers in the classroom, will help teenagers to examine media messages and to create and implement strategies to minimize anxiety levels related to online interactions.

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About the Author

Sylvie Tomoniko is a grade five teacher in Neepawa, Manitoba. She is in her 25th year of teaching and is working toward her Master of Education with a specialization in special education. Sylvie enjoys spending time with her husband and children, and being a seasonal field chef for the harvest crew on their farm.

Appropriate Inclusive Practices for Children with Autism

Amber Sawchuk

Abstract

Children with autism have unique needs, and providing them with an appropriate education in an inclusive environment requires collaboration between team members. There are extensive articles available to assist with the planning process; however, the most important source of information for educational planning for a child with autism remains the strengths and abilities of that child. This paper examines resources, guidelines, and specific examples that are available for educators to use, in collaborative methods, in order to ensure that an appropriate inclusive education is provided for a student who has been diagnosed with autism.

Preface

This article contains information about a 10-year-old girl, Izzy (a pseudonym). Izzy was diagnosed with autism at the age of 2. Izzy is in grade 5, and has had speech and language, occupational therapy, and autism specialist interventions from the age of diagnosis. Currently, Izzy completes at level classwork, which is heavily adapted to suit her unique learning needs. Specifically, Izzy does not like to do traditional paper/pencil work. Rather, she prefers to write on white boards, manipulate cut-up sentences, or Velcro letters and words. Additionally, Izzy completes most of her work outside of the classroom. When in the classroom, Izzy makes vocalizations, rocks back and forth, and does other similar stemming activities. Often, Izzy will leave the classroom to go to the quiet space that has been provided for her without adult permission or prompting.

The inclusive practices for a child with autism are determined by the specific strengths and needs of the child. Planning for the appropriate, inclusive education of a child with autism requires knowledge of inclusive policies, autism spectrum disorder (ASD), and the specific complexities of the child. The needs and abilities of the student will determine the appropriate amount of inclusion within a mainstream classroom. Team collaborative efforts to create a comprehensive student profile will facilitate the creation of specific learning goals. These learning goals often include plans for self-regulation, transitioning, communication, and task completion. For these various reasons, appropriate inclusive practices for a child with autism will vary based on the specific needs and strengths of the individual child.

Inclusive Practices and Autism Spectrum Disorder

Appropriate inclusion of a child with ASD requires knowledge of inclusive practice and ASD, and a willingness to collaborate with others. Manitoba's philosophy of inclusion is a way of being that ensures all people feel "accepted, valued, and safe" (Province of Manitoba, 2017, para. 2). Autism is a neurological disorder, which includes symptoms such as difficulty communicating, interacting socially, and engaging in repetitive behaviours (Manitoba Education, 2005). The goal of educators then becomes ensuring that children who have difficulty communicating and interacting socially, and have unique repetitive behaviours, are provided with an education that enables them to feel accepted and valued for who they are.

Due to the extreme complexities that a student with ASD can present, Supporting Inclusive Schools: A Handbook for Resource Teachers in Manitoba Schools suggests working as a

school team to determine the specific interventions and adaptations that a student may require for a successful inclusive education (Manitoba Education, 2014). Izzy (a pseudonym) is a child with autism in this author's school. In addition to the school team that includes her classroom teacher, support staff, and her mother, Izzy's team also consists of an occupational therapist, physical therapist, speech and language pathologist, and autism specialist. All members collaborate in order to determine appropriate, specific goals for Izzy. Working together, the team members apply the policies of inclusion to Izzy's unique needs. Like Izzy, each child who has been diagnosed with autism will present a variety of unique needs, and it is important that all specialists involved with the child contribute to an appropriate educational plan.

Student-Specific Profiles

A specific student profile that is created collaboratively with team members results in a solid inclusive education plan for a student with autism (Brodzeller, Ottley, Jung, & Coogle, 2018). Every child with autism is different, with his/her own unique needs. To have worked with a child with autism provides the experience of solely working with that one child, which cannot be generalized to all children with autism (Manitoba Education, 2005). This uniqueness makes the student profile imperative in the effective planning for a student with autism. The student profile ensures that the team members truly get to know the child, because general strategies, while an important starting point, are not always sufficient (Anglim, Prendeville, & Kinsella, 2018). A student profile can mark the student's abilities in the areas of social skills, communication, repetitive behaviours, sensory, anxiety, and other medical conditions (Manitoba Education, 2005). A close examination of these abilities fosters the creation of a purposeful education plan. The collaboration involved in creating a functional student profile is imperative in determining the process of inclusion for the child (Hedegaard-Soerensen, Jensen, & Tofteng, 2018).

A student-specific plan fosters the creation of appropriate student goals, and it is important that the school team evaluate these goals on a regular basis (Smith, 2012). In Izzy's case, appropriate goals are chosen based on her specific needs and strengths; however, the school team struggles to implement them because Izzy will often refuse to participate. When presented with a new activity, Izzy will leave the table, pace the classroom, and make loud vocalizations. Occasionally, Izzy will take the activity, rip it up, and throw it at the adult who is trying to present it. It is important to evaluate student goals in order to ensure that the student becomes engaged in learning activities, and that the student progresses in accordance with his/her learning goals (Smith, 2012). Inclusion will not be successful if the child is simply sharing a space with mainstream learners, and not working on specific goals (Lupart & Webber, 2012). The student must be shown how to become engaged in his/her education, and progress with learning goals (Smith, 2012). Izzy's school team has found that incorporating her preferred activities into her academics is the easiest way to promote engagement. Izzy loves shopkins, and often will complete a task if there is a shopkin picture attached to it. Inclusion becomes realistic for Izzy when the school team recognizes her motivators and plans accordingly. Therefore, effective inclusive practices will occur when the student-specific profile is used in a purposeful manner to ensure that the child with ASD is engaged in his/her education.

Appropriate Inclusion

There are many benefits of inclusion; however, it is important that the collaborative team recognizes that, for some students, full inclusion may not be appropriate (Smith, 2012). Inclusion can help to teach empathy and acceptance, and can enable children with autism to experience social interactions with similar-aged role models (French & French, 2018; Smith, 2012). The school team must determine whether the benefits of inclusion exceed the stressors that are placed on the student by being in the mainstream classroom (Prizant, 2015). If appropriate, students with autism can be in a mainstream classroom for portions of a day, and

in a separate learning environment as needed (Manitoba Education, 2005). Prizant (2015) suggested that if the student spends a great deal of time socializing outside of school, then there is no need to include that student in the mainstream classroom if this evokes a large amount of stress. The school team can consider the aspects of the student profile in order to determine how often a student with autism should be working within an inclusive classroom.

Children with autism often struggle with self-regulation, which can make transitions, communication, and task completion difficult (Smith, 2012). Self-regulation is defined as how effectively a person recovers from a stressful situation (Shanker, 2017). The regular school day is filled with situations that can be stressful, and some children are affected by these situations more than others. The primary caregiver at school plays an important role in facilitating the steps of self-regulation. Dr. Stuart Shanker (2017) has identified five essential steps in promoting self-regulation for children. The first step is to understand what the signs of stress look like for the child, and attempt to alter the child's response to the stress. An attentive adult will notice a slight change in the child when he/she becomes stressed, and may be able to suggest an alternative behaviour. The second step is to recognize what is causing the child stress, which leads to the third step of reducing the amount of stress the child is experiencing. Izzy often experiences stress from the volume level in a classroom. The louder the classroom becomes, the louder she becomes. Izzy will ask to leave the classroom, or simply walk out, which immediately reduces the amount of stress she is experiencing. Once out of the classroom, Izzy needs a few moments of stemming in order to become regulated; then she is usually able to continue with her expected activities. The fourth step is to reflect on the situation and plan how to prevent it in the future. It is not always possible to eliminate stress from a child's life completely. However, if the child is having a difficult day, the team or primary caregiver can make the appropriate decision to reduce stress. The final step is to teach the child how to return to being calm after a stressful experience. For Izzy, this typically involves a preferred activity such as watching the fish tank, looking at a book, or receiving a tight hug from her trusted caregiver. Once she is calm, she and her caregiver can decide whether they are ready to return to the classroom. Because children with ASD often struggle with self-regulation, the adult is integral to ensuring the successful completion of these five steps of self-regulation.

Specific tasks, such as transitions, communication, and task completion, can cause dys-regulation in a child (Smith, 2012). These are essential parts of a school day, so it is important to teach children strategies to deal with these stressors. Visual schedules can be very beneficial in helping students to have successful transitions and to complete the required tasks (Brodzeller et al., 2017). Similarly, visual cue cards and video or visual social stories can be used to model for students with ASD how to communicate effectively with peers and teachers (Brozeller et al., 2017). Antecedent behaviours, such as "priming" the student with visual or written schedules so they know what to expect, can also help to keep a child regulated (Fleury et al., 2014, p. 72). It is important to have an awareness that transitions, communication, and task completion can cause dys-regulation, so that proper interventions can be put in place to support the student.

Conclusion

There is not one specific practice to follow in order to implement an effective education plan for a child with ASD. Each student with ASD is unique, with his/her own strengths and challenges. As a result of these unique strengths and challenges, it takes a team of people to plan effectively for the inclusive education of a child with ASD. There are policies and general procedures to follow as a guide, and the student needs to be at the centre of the planning. Inclusion does not mean that the child should be forced to be in a mainstream classroom if being in the classroom causes large amounts of stress. It does mean, however, that the child should have the opportunity to learn the skills needed to reduce or manage stressful situations, while experiencing a purposeful, appropriate education. The unique needs of a child with ASD will chart the inclusive education course that is most appropriate for educators to follow.

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Collaboration as a Means to Support Inclusion

James Sheppard

Abstract

Inclusion has been an integral part of school policies worldwide for decades, yet the application of inclusionary principles depends on the attitude and skill set of the individual teacher in the classroom. Changing the requirements of pre-service teacher training, combined with the development of an inclusive ethos in school divisions will address the philosophical inconsistency regarding inclusion in classrooms. Allocating increasingly limited professional development funds toward school-based collaborative teams, rather than “event-based” professional development held off-campus, will create a cohesive, sustainable model to ensure teacher growth and entrench inclusionary practices in general education classrooms.

The success of inclusionary practices in schools is dependent on the varying attitudes and subsequent actions of classroom teachers. The result is that students with disabilities do not achieve the same academic outcomes as their peers on a consistent basis. While teachers acknowledge that differentiation has the greatest likelihood of meeting the needs of diverse learners, the realization that an increasing number of students require significant adaptations to be successful is not often met with enthusiasm (O'Rourke, 2015). This attitude is present in both pre-service and practicing teachers, and can be addressed by a more purposeful practicum experience in the former, and an establishment of an inclusive ethos with the latter. A more optimistic approach toward special needs students will enable teachers to create a more inclusive classroom (Monson, Ewing, & Kwoka, 2013). My experience has shown that a change in attitude is not enough; the acceptance of special needs students in general education classrooms must be supported by effective and manageable strategies to ensure academic success. Teachers are inundated with professional development opportunities that promise results; however time and money dictate the extent of learning opportunities that are accessed. Few school divisions can afford to send all of their educators to the professional development sessions they require. Purposeful teacher collaboration has the capacity to develop teachers' differentiation skills (Mulholland & O'Connor, 2016). Collaboration also has the potential to shift teachers' attitudes regarding inclusion toward a more positive perspective.

Fostering Positive Attitudes Regarding Inclusion

The attitudes toward inclusion among school staff can vary, with teachers' beliefs shaped by past experience or length of tenure. The approach to change these attitudes is dependent on the stage of career for the teacher in question. Pre-service teacher attitudes toward students with disabilities can be addressed by changing student teaching requirements. For practising teachers, school divisions must attend to their organization's vision statements regarding the education of special needs students, substantiating the words of the vision with an ethos of inclusion.

Pre-Service Teachers

In Manitoba, pre-service teachers may have very little understanding of the need to differentiate instruction; they have not faced the profound challenges of creating an inclusive classroom while maintaining high academic standards (Jordan, Glenn, & McGhee-Richmond, 2010). Their own public school experience may have provided little opportunity to interact with special needs students, or reinforced the view that those students should be excluded from the general education classroom. This unintentional ignorance is further exacerbated by student

teaching placements that are random; a series of practicum placements may not provide any opportunities to work with special needs students. The end result, in many cases, is teachers beginning their careers influenced by preconceived beliefs about inclusion, rather than by understanding the diverse needs of the students in their classroom (Robinson, 2017).

Pre-service teacher attitudes can be reshaped in favour of inclusion by more purposeful practicum placements. Currently, student teaching assignments in rural Manitoba are often dictated by available supervising teachers rather than by a structured plan that will ensure teacher candidates have the opportunity to work with special needs students or train in an inclusive classroom. I propose that alongside a compulsory course focusing on special education strategies, pre-service teachers must complete an extended practicum placement that ensures teacher candidates participate directly in planning, implementing, instructing, revising, and reporting on goals set out in a student's Individual Education Plan (IEP). This placement would be in addition to the traditional practice of providing student teachers experience teaching in general education classrooms based on their grade level or specialist focus. Swain, Nordness, and Leader-Janssen (2012) conducted a study wherein pre-service teachers completed a 20-hour practicum experience specifically working with special needs students, in addition to coursework; their findings indicated that this model may promote understanding and provide students with an opportunity to realize "the significance of individualized instruction" (p. 80). Such a profound change in teacher training would require a considerable coordination amongst universities, school divisions and the provincial government. A pilot program based on the 2012 study would be an ideal model upon which to develop a more realistic practicum experience for teacher candidates. Pre-service training needs to adapt to satisfy the needs of teacher candidates (Allday, Neilson-Gatti, & Hudson, 2013), and student teachers must successfully meet the challenge of diversifying instruction prior to completing their education degree. Providing pre-service teachers with an opportunity to practise these skills in a structured environment will enable them to begin their careers with a more positive perspective on the challenges they will face in creating an inclusive classroom (Zagonda, Kurth, & MacFarland, 2017).

Experienced Teachers

Vision statements endorsing inclusive school policies have been in place for decades, yet many experienced teachers have not fully embraced the philosophy. The purpose of vision statements in relation to special education is to address the societal barriers to inclusion: the belief that students with special needs are a detriment to the education of "regular" students in the general education classroom. A vision statement promoting inclusion can ring hollow with classroom teachers who have seen similar statements come and go over the course of their careers. A vision statement is meaningless if the words are not reinforced by visible and effective action by all members of the school division.

Experienced teachers' attitudes toward inclusion can be recalibrated with the establishment of an ethos set by divisional and school leaders (MacFarlane & Woolfson, 2013). Instructional leaders must go beyond the standalone vision statements, in order to ensure that inclusion becomes the characteristic of the school division and is visible in all aspects of work with students, particularly at the school level. The burgeoning inclusive ethos needs to become a moral code to guide teachers in their work with special needs students. The expectations set out by school principals have a significant impact on teachers' willingness to work with special needs students (MacFarlane & Woolfson, 2013); therefore, a clear directive regarding the importance of differentiation of instruction is critical to ensure that it becomes a characteristic of the school. A steadfast adherence to an ethos of inclusion will result in instructional coherence (Bernhardt, 2017), which will change teachers' attitudes regarding working with special needs students.

Collaboration To Facilitate Effective Professional Development

Providing effective professional development opportunities on the subject of inclusion continues to be difficult, despite the recognition that a number of teachers lack competence in this area (Rajovic & Jovanovic, 2013). The challenge becomes greater when one understands that the vast range of individual student needs prevents an effective single approach to ensure inclusion. Students with the same diagnoses require different strategies (Smith, 2015), and some students may require interventions to address academic and behavioural needs. Complex cases such as these demand multiple strategies to support social-emotional and cognitive challenges present in an individual child. Furthermore, inclusion is a moving target: students' needs change over time, as do curricula, support staff allocations, budgets, resources, and stakeholder expectations. Just when teachers may have "figured out" how to support an individual special needs child in a certain time and place, all of the variables change: the student, the classroom structure, and the support. Therefore, teacher training regarding inclusion cannot be static; it must be constantly updated as new strategies emerge. Constantly training every teacher in current inclusionary practices is an expensive proposition; the solution is to utilize the human capital within the school and develop a collaborative model of professional development.

Limited Professional Development Budgets

School divisions are currently faced with the task of balancing budgets with increasing costs and decreasing resources; as a result, professional development funds have decreased significantly in many school divisions, including my own. The 2018-19 budget passed by the Rolling River School Division (2018) identified a reduction of the professional development budget as an element of its divisional budget; therefore, it is imperative that all professional development expenditures at the school and divisional level align with the strategic plan set out by Manitoba Education and Training. The traditional model of teacher professional development saw educators leave the school to attend "P.D. Days," with the requisite expenses of travel, meals, hotels, and substitute teachers to cover their absence. The expense is justified if the teacher finds the professional development helpful, but frequently educators return from these sessions frustrated at the lack of information that can be directly applied to their own classroom setting.

In-School Teacher Collaboration

The solution is to move away from expensive, off-site professional development days and focus on creating collaborative opportunities at school. Collaboration has the potential to be the most effective strategy to support inclusion (Chao, Lai, Ji, Lo, & Sin, 2018; Mulholland & O'Connor, 2016), and educational leaders need to develop a model that ensures the instructional capacity and experience of school teams is accessed by all members of the teaching staff. There is a dangerous assumption that once teachers are provided with an opportunity to work together, effective collaboration is the inevitable result. Some teachers may naturally possess the skills to work alongside colleagues on a project, with the requisite patience and compromise required; however, an effective collaborative team needs to balance collegial behaviour with a willingness to challenge each other. A strong team cannot forsake inclusion and improved teaching and learning in favour of amity and consensus (Schmoker, 2006). Inclusive strategies must be taught alongside collaboration skills, particularly with special educators whose primary function is working with classroom teachers to improve student outcomes (Zagonda et al., 2017). In my school, the best solution is for me to allocate my limited professional development funds primarily to pay for substitute teachers. Teaching staff wishing to collaborate would submit a request for release time, and supply teachers would be hired to

allow staff to meet during the regular school day. During the first collaborative periods with their colleagues, specific strategies regarding collaboration skills would be taught and modelled to the staff by special education teachers who already have the training and experience in this regard. The special education teachers would take the time to set “ground rules” and expectations ahead of time, so that the subsequent collaborative periods will become more effective and productive. Teachers would then have the opportunity to collaborate for an extended period of time at school, developing strategies to support the special needs students in their classroom.

Conclusion

Creating inclusive classrooms will continue to be a challenging endeavour for general education teachers. Their attitude toward the difficult task will be a primary indicator of their likelihood of success. In an era of declining financial support for professional development, school leaders will need to seek out the most efficient and effective opportunities for teacher growth. School-based collaborative teams have the potential to draw upon the collective experience of the teaching staff in order to ensure academic success for all students. When teachers aspire to differentiate their instruction, and requisite release time is provided, teachers can then be trained how to collaborate effectively. The end result will be a sustainable and fluid process for ongoing professional development and greater academic success for special needs students.

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The Effects of Poverty on Academic Achievement

Kendra McKenzie

Abstract

Poverty has become one of the most prevalent indicators of academic achievement in our schools today. As the number of students raised in poverty increases, it is vitally important that educators be aware of the effects of poverty on student behaviour and learning capacity in the classroom. Educators must incorporate proven strategies in order to help close the gap in academic achievement between those raised in poverty and those raised in more affluent homes.

Academic achievement can be predicted by socioeconomic status (Cedeño, Martinez-Arias, & Bueno, 2016; Reardon & Portilla, 2016). In Manitoba, a single parent with one child earns as much as \$7,000 below the poverty line (Brandon, 2018, para. 1). Children raised in poverty are more apt to experience emotional and social challenges, chronic stressors, and cognitive lags due to significant changes in brain structure in areas related to memory and emotion (Brito & Noble, 2009; Jensen, 2009). The first and best strategy for increasing student effort and motivation is to nurture strong relationships between students and their teachers (Budge & Parrett, 2018). Developing programs that embody respect, embed social skills, and promote inclusive classrooms can assist in closing the achievement gap for students facing emotional and social challenges (Jensen, 2009). For students dealing with chronic stressors, decreasing the likelihood of lower academic achievement can be accomplished by recognizing the signs of poverty, empowering students, and altering the classroom environment. Building core skills, providing assessments that identify the true root of the problem, and recruiting caring and empathetic staff will assist those students with cognitive lags and changes in brain structure to close the gap in academic achievement. It is imperative as educators that we are aware of the effects of poverty so that we can implement these strategies and decrease the likelihood of lower academic achievement.

Common Challenges Viewed in the Classroom

There are many challenges faced by children raised in poverty. Some challenges are long-term obstacles such as chronic stressors and changes in brain structure that effect emotion and memory. Other challenges are more situational causing emotional and social struggles. The mental health issues include high levels of depression among parents and children living in poverty (Jensen, 2009). Students who have experienced emotional and social challenges may demonstrate acting-out behaviours during their school day (Jensen, 2009). They may also be impatient and have poor impulse control. Their behavioural responses may be limited due to having a caregiver who was not sensitive to their needs as an infant. Jensen (2009) pointed to several reasons for this phenomenon. Many of these students have come from homes where they may have had a teen mother. Parents or guardians are often overworked due to working more than one job to make ends meet. This situation, in turn, causes parents or guardians to inflict harsher discipline and be less sensitive to the feelings and needs of their children. Parents or guardians who have experienced difficulties with school in their pasts are less likely to attend parent-teacher interviews or to be involved in any extra-curricular school activities. Poor emotional health, caused by the lack of parental support, may cause an increase in disruptive behaviour in the classroom.

In addition, children raised in poverty may not have been taught to be polite and may not be socially gracious (Jensen, 2009). They may lack the ability to empathize with others. This lack of empathy, in turn, makes it difficult for these students to work well in cooperative groups with

their classmates. This inability to work well with classmates often results in students becoming unwanted participants in groups, adding to their feelings of inadequacy and resulting in the students giving up on a task just before they successfully complete it. Poor social skills, which result in a lack of acceptance from peers, may cause decreases in academic performance.

Children living in poverty see many chronic stressors, including unsafe neighbourhoods where there are high levels of crime, parents who are making minimum wage which causes a financial strain on the family, parents who are separated or divorced, siblings living in different households, and households that are overcrowded (Johnson, Riis, & Noble, 2009). All of these stressors create a void in the lives of children raised in poverty, and result in academic and behavioural issues in school. These students have a higher level of absenteeism, they struggle with focus and concentration, they have significantly more difficulty in comprehension and memory, and they struggle with motivation (Jensen, 2009). In addition, living in homes where there is little parental interaction, fewer books to read, and fewer chances for cognitive stimulation will decrease the children's confidence which, in turn, will lead to future academic failure (Cedeño et al., 2016). Chronic stressors will cause students to underperform in school and either give up or become disinterested in their school work (Jensen, 2009). For all of these reasons, chronic stressors have a significant effect on academic achievement.

Lastly, children raised in poverty are more apt to experience cognitive lags due to significant changes in brain structure in areas related to memory and emotion. Poverty may make it difficult for parents to purchase toys and books to promote cognitive stimulation for their children, thereby causing the children to have a lesser vocabulary and a more directed speech (Johnson et al., 2016). Developmental delays are more prevalent for children raised in poverty as opposed to those raised in more affluent homes. Poor performance on tests when asked to show their knowledge, behavioural problems in the classroom, mental health issues, and emotional problems are also viewed more frequently in those children who have been raised in a lower socioeconomic home. Children raised in poverty experience changes in brain structure in areas related to memory and emotion (Brito & Noble, 2009).

Living in poverty upsets brain development and will result in behavioural problems in the classroom (Dike, 2017). Stress causes our bodies to release a chemical called cortisol (Jensen, 2009). The buildup of cortisol in our body results in sending weaker neuron signals to the prefrontal cortex and the hippocampus. Both the prefrontal cortex and the hippocampus are crucial for learning, cognition, and working memory. Recurring stress can result in shrinking of neurons in the frontal lobes of a child's brain. This area of the brain is responsible for the child's ability to make judgements, plan, and control impulsivity. It can also cause damage to the hippocampus, which may, in turn, cause a reduction in learning capacity. The amygdala is also affected by the effects of stressors in the body (Jensen, 2009). The amygdala is the area of the brain that is responsible for controlling emotions. All of these alterations to the neurons in the brain cause an imbalance in the healthy status of the brain. This imbalance, in turn, may shape the patterns of communication and language. Children raised in poverty who have significant changes in brain structure are faced with many academic and behavioural challenges. Children raised in poverty experience many emotional and social challenges, chronic stressors, and cognitive lags due to significant changes in brain structure in areas related to memory and emotion, which result in lower academic achievement and more behavioural issues in the classroom.

Solutions To Close the Achievement Gap in the Classroom

In order to conquer academic and behavioural challenges faced by children raised in poverty, teachers need to develop strong relationships with their students, embody respect in their interactions with students, embed social skills in lessons, promote inclusive classrooms, recognize the signs of poverty, empower students, alter classroom environments, build core skills, provide accurate assessments, and recruit caring and empathetic staff. Building caring

and supportive relationships with students is the first and best strategy to increase student effort and motivation (Budge & Parrett, 2018). Many children raised in poverty come to school without the necessary social-emotional responses needed to be successful at developing relationships with their peers and teachers (Jensen, 2013). Children raised in poverty need to develop relationships with teachers who give them a reliable and positive role model that they can count on and trust. Inappropriate emotional responses in the classroom can be diminished and engagement increased by taking the time to nurture a strong student-teacher relationship. This relationship between the student and his/her teacher is the precursor to any learning happening in classrooms (Budge & Parrett, 2018). If the student does not perceive that this relationship exists, there will be no learning. There is a saying that students will not care what the teachers know until they know that the teachers care. Students who know that their teachers care about them will be more likely to follow what their teachers are modelling, and will feel more confident taking risks and trying out new behaviours in the classroom. This relationship can be nurtured by offering the student the opportunity to learn how to be respectful and develop appropriate social skills. Providing an environment where the students feel included and valued as members of their classroom community will also help to improve their overall mental health. These efforts can assist in closing the achievement gap for students facing emotional and social challenges (Jensen, 2009).

Embodying respect in the classroom involves showing respect to all the students in the classroom, especially when it may seem it is not warranted (Jensen, 2009). We cannot expect respect from students who have never developed the skills, or had the background, to show us respect. Providing students with choices and input into their assignments will be more effective than using authoritarian directives. Allowing students to be involved in the decision making in the classroom will help them to feel empowered and decrease the likelihood of disruptive behaviour. All of these strategies will help students to develop respectful behaviour, and decrease the likelihood of behavioural problems in the classroom.

Another way to increase student engagement and decrease disruptive behaviour in the classroom is to embed social skills in the lessons taught to students. The process of embedding social skills can be as simple as teaching students raised in poverty to take turns, to say thank you to their classmates, and to learn the correct social etiquette when meeting someone new for the first time (Jensen, 2009). Meeting someone new involves making eye contact, shaking hands, saying hello, and making small talk. Developing social skills will assist children raised in poverty to work more effectively in situations of cooperative learning. Explicitly teaching school expectations, as well as enforcing these expectations, can decrease disruptive behaviour and increase student engagement (Gietz & McIntosh, 2014). These expectations can also be taught through the use of the online Positive Behaviour Interventions and Supports program, also known as PBIS. PBIS helps to keep the school climate positive and acknowledges students for their appropriate behaviour. It also provides consistent consequences for rule violations. Using PBIS in schools has contributed to higher student achievement, higher student engagement, and improved student social relations.

Promoting inclusive classrooms wherein students feel that they are part of our school and our class is a powerful way to increase engagement and effort in students raised in poverty (Jensen, 2009). Providing students raised in poverty a safe place where they feel supported and safe will ensure that their needs are being met and will, in turn, raise student achievement (Budge & Parrett, 2018). Inclusion in our classrooms gives all students the opportunity to learn in a community where all students are viewed as equals and where we value diversity (Katz, 2012). In learning communities such as these, students feel safe, that they belong, and that they are a part of something meaningful. Celebrating effort and not just achievement will increase student engagement as it changes the focus from reaching milestones to a mindset of growth and change (Jensen, 2013). It is important that we remember to have clear communication with parents that education should be a priority in all homes, no matter the socioeconomic status, in order to ensure that all students are given the same opportunities to learn to their full potential.

Early intervention strategies will ensure that students living in poverty will have an increased chance for higher academic performance in an inclusive classroom (Jones, Wilson, Clark, & Dunham, 2018).

Decreasing the likelihood of lower academic achievement can be accomplished by recognizing the signs of poverty, empowering students, and altering the classroom environment. These solutions can be effective for students dealing with chronic stressors to decrease negative behaviours in the classroom (Jensen, 2009). Recognizing the real reason behind demonstrated behaviours, such as apathy and rudeness, is crucial to discerning that the discipline process is positive, and will increase the chances of more positive behaviours in the future. It is important not to criticize impulsive behaviours before we know the real reasons behind the behaviours we are witnessing in the classroom. Teachers need to be aware of the fact that students living in poverty have very minimal control over the length and intensity of the stressors in their lives, that they may not have the required social supports to deal with the effects of the stressors, and that they may be living in a situation where their stress is worsening. It is important to provide these students with outlets, such as games and social supports, to vent their frustrations. Implementing these strategies will help to decrease the likelihood of lower academic achievement in the classroom for children raised in poverty.

Empowering students will help them to feel as though they have some control over the stressful and overwhelming environment they may currently find themselves in. Teaching students ways to act differently to decrease their stress levels will help them to fill a tool belt with strategies to regain control of their feelings of being overwhelmed. Strategies to reduce stress can be physical (yoga and exercise), or mental (guided relaxation and meditation) (Jensen, 2009). It is also helpful to teach students how to set realistic goals, and how to break goals into smaller steps, in order to celebrate small achievements along the way. Goal setting will help them focus on what they want and develop the necessary steps to achieve that particular goal. Teaching students how to rectify a situation they have created in the classroom is also a valuable addition to their stress reduction tool belt. Students who have been disruptive in class need to make restitution to their classmates by doing something positive for the class. Decreasing the level of stress in the lives of children raised in poverty will help to increase positive behaviour in the classroom.

Altering the school environment will help students who are resistant to change become more able to choose positive behaviours while in the classroom. Academic success is strongly associated with how a student perceives his/her school environment (Geitz & McIntosh, 2014). Altering the school environment can include incorporating strategies such as providing students more time to complete homework in class or after class in order to decrease stress, providing time for students to work collaboratively, including multiple intelligences into lessons to benefit all types of learners, and incorporating celebrations of achievement into the classroom (Jensen, 2009). All of these strategies will help a child raised in poverty to become more cooperative in the classroom.

Closing the gap in academic achievement for those students with cognitive lags due to changes in brain structure can be accomplished by encouraging teachers to be caring and empathetic in their interactions with students. It is vital that teachers choose the correct assessment to identify the primary root of academic and social struggles that a student is facing. Providing opportunities for students to develop the core skills necessary to be successful in school is another way to close the gap in academic achievement for those children raised in poverty (Jensen, 2009). There are several core skills that students will need in order to succeed in school, including long- and short-term memory, focus, attention, problem solving, processing, hopefulness, sequencing, self-esteem, perseverance, and social skills. Identifying which skills are lacking, developing a plan of action to attain those skills, and providing access to the required resources are the first steps to building missing core skills. Adding these core skills to their repertoire will assist in closing the gap in academic achievement for children raised in poverty.

Pinpointing the assessment needed to identify the true root of the problem will also help to increase a student's academic success (Jensen, 2009). Using the correct assessment is crucial to the identification of a student's strengths and weaknesses. Following through with the results attained from the assessment is vitally important in ensuring that the students will get the supports they need to increase their chance of success and the tools to overcome that particular identified weakness. The correct assessment will accurately identify the problem and increase academic achievement for children raised in poverty.

One of the most effective ways to increase academic achievement is to recruit the best staff to teach in the school (Jensen, 2009). Teachers who are caring, love challenges, are flexible, and who love children will be the most effective in the classroom. These teachers are looking for supportive administrators, finding new ways to hone their skills through professional development and out-of-town conferences, searching through professional journals for the newest ideas, and implementing new strategies in their classrooms on a daily basis. Recruiting teachers with these skills will not be easy, but it will be the foundation of increasing academic achievement in the school.

Conclusion

Poverty is a reality today and will continue to be a significant factor in our society. There will always be a split in society between those who have and those who have not. Students raised in poverty are indeed more apt to experience emotional and social challenges, mental health issues, chronic stressors in their everyday life, and cognitive lags due to significant changes in their brain structure in areas related to memory and emotion. If we are truly committed to closing the achievement gap between students raised in poverty and those raised in more affluent homes, we need to use the most current research, alter our classroom environments, empower students, teach social skills, embody respect, create inclusive classrooms, and recognize the signs of poverty. Our first and best strategy for decreasing the achievement gap due to poverty is to build strong relationships between students and teachers. Teaching students mental and physical strategies to alleviate stress will decrease the stressors experienced in school, and give them strategies to deal with chronic stressors experienced at home. Changes caused in brain structure are irreversible, but we can close the gap through specialized instruction and providing students with a safe place to take risks in their education (Cedeño et al., 2016). Identifying which basic core skills students are missing and getting them the appropriate social supports will help to increase academic achievement. Teachers can make a difference by making changes to their instructional methods and being aware of the risk factors.

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The Importance of Mindfulness for Anxious Students

Gina Bradshaw

Abstract

Anxiety is a large issue among youth. Physical and mental symptoms can develop from anxiety, and educators must recognize these symptoms in their students. The stigma that is attached to mental health can make it difficult for students to receive support and treatment. Mindfulness is a way that educators can address anxiety in their classroom. Mindfulness teaches students to understand how their brain reacts to stress, and how to train their brain to interrupt anxiety. Mindful breathing and listening are two strategies that help students self-regulate themselves. A mindfulness program will provide students with tools to help reduce stress and anxiety.

Everyone has experienced some sort of anxiety in his/her life (Peters Mayer, 2008). In fact, anxiety is very normal. Anxiety affects students' mental and physical state, which educators must recognize before it develops into depression (Climie & Altomare, 2013). Unfortunately, there is a stigma around mental health, and that can prevent students from gaining access to strategies and treatments (Cowan, 2014). Kabat-Zin (2003), the pioneer of mindfulness, developed a mindfulness-based stress reduction program to help reduce stress, pain, and illness. Mindfulness can alleviate students' anxiety (Viafora, Mathiesen, & Unsworth, 2015). There are many benefits to learning mindfulness strategies, and there has been an increase in research about how mindfulness positively affects students. Along with mindfulness, it is beneficial for students to understand how the brain reacts to stress, and how the brain can be trained to respond appropriately. From there, students learn specific mindfulness strategies such as breathing, listening, and eating. It is up to educators to address mental health and implement a program such as mindfulness.

Problems with Student Anxiety

Since anxiety affects students' physically and mentally, it could lead to depression, which may be left untreated due to the stigma around mental health. Anxiety can mask itself as "part of normal developmental changes or personality" (Cowan, 2014, p. 15), which is why so many educators miss the warning signs. If educators ignore anxiety, it can have severe consequences for the students (Headley & Campbell, 2013). For students with anxiety, school can be a nightmare. It is an environment that involves tension, deadlines, judgment, evaluation, and fitting in (Peters Mayer, 2008). The mental and physical symptoms of anxiety can be exhausting and uncomfortable (Peters Mayer, 2008). A test can cause a student to wake up that morning feeling nauseous and begging to stay home from school. Test and homework anxiety are very common, along with refusing to attend school and stress over being apart from the caregiver. Mentally, students may have a loss of concentration and feel overwhelmed. Physical symptoms can present as hyperventilation, bodily tension, headaches, or a pounding heart. These intense feelings and symptoms can affect all developmental areas of a student's life, particularly at school).

In a 2012 survey conducted by the Canadian Teachers' Federation, along with the Mental Health Commission of Canada, 59% of teachers believed that depression was a "pressing concern" (Froese-Germain & Riel, 2012, p. 10). In that same survey, 21% of teachers reported that they had seen students bullied because of their mental health (Froese-Germain & Riel, 2012, p. 14). Many people are unaware that anxiety that is left untreated can develop into depression, particularly for teens and young adults (Lyons, n.d.). Since anxiety has become so prevalent in students, it is no surprise that depression rates are increasing (Lyons, n.d.).

Students with anxiety and depression may feel helpless and hopeless (Cowan, 2014). Many of these students have had suicidal thoughts (Findlay, 2017). Students need access to supports, and often it is left in a school's hands to initiate treatment. Mental health supports may not even be considered by parents until the school offers to provide support (Cowan, 2014). At the same time, there are parents who are reluctant to share their child's mental illness with the school (Cowan, 2014). It is crucial that educators recognize anxiety in students and support them before it is left untreated and develops into depression (Climie & Altomare, 2013).

There is a stigma attached to mental health and accessing mental health treatment (Cowan, 2014). I was afraid to tell anyone that I was using a counsellor. It took me three years to build up the courage to access help. The stigma that is attached to mental illnesses prevents many people from accessing supports (Froese-Germain & Riel, 2012). Students who are identified with a mental illness may be bullied by their peers because of the negative connotation associated with it (Froese-Germain & Riel, 2012). Although everyone has experienced anxiety, teachers can be skeptics when it comes to students' anxiety (Cowan, 2014). Being skeptical of students' anxiety is harmful because they may not feel comfortable to ask for help or they may feel shame. Students need an adult to trust so that they can begin to self-advocate for themselves (Cowan, 2014). Teachers need to be comfortable talking about mental illness within the classroom, in order to alleviate the stigma that surrounds it.

Mindfulness as a Means to Reduce Anxiety

I believe that mindfulness is a practice that educators should implement in classrooms to reduce anxiety by teaching students to pay attention to the present moment, understand how the brain responds to stress, and practice mindfulness strategies. Stressors from home or school can affect students' "learning, behaviours, and overall academic performance" (Harpin, Rossi, Kim, & Swanson, 2016, p. 149). Mindfulness-based stress reduction and its positive effects have been researched for over 30 years in the medical and health care field (Solar, 2013). Recently, researchers have stated that programs that strengthen students' mental and emotional health are needed (Viafora et al., 2015). Many schools already have interventions put in place to assist students with emotional distress, and mindfulness would complement any of those programs (Solar, 2013). When used in addition to other interventions, mindfulness may provide students with the confidence to manage their behaviours in a school setting. There are already programs designed to teach mindfulness specifically to students. Mindful Schools has a course designed for educators to implement mindfulness within the classroom. The course is designed to work with other programs that address the social and emotional needs of the student (Mindful Schools, 2015¹). Schools that incorporate mindfulness are "calmer, less distracted, and respond more appropriately to each other" (Solar, 2013, p. 45), which serves to reduce student anxiety.

Mindfulness is explained to students as "simply paying attention . . . to what's happening inside and outside of oneself, in this present moment" (Viafora et al., 2015, p. 1179). Students are taught to have complete awareness of their thoughts and feelings in each moment (Solar, 2013). Once students become aware of their thoughts and feelings, they have the ability to choose an appropriate response, which is empowering for them. Mindfulness also assists students with conflict resolution (Mindful Schools, 2015). I spend a lot of time each day assisting students to solve problems. These problems range from engaging in conflicts with other students to not understanding concepts being taught. Emotional distress happens very quickly

¹ Mindful Schools. (2015). *Module notes: Mindfulness & education overview*. Retrieved from an online course on mindfulness, not available to the general public.

for some students when they are faced with a problem. Mindfulness teaches students to self-regulate their emotions and other responses (Viafora et al., 2015). A more effective “learning and working environment” is created when students are taught mindfulness strategies to pay better attention (Solar, 2013, p. 45).

Students with an anxiety disorder may use their disorder as a reason for not fully engaging to certain aspects of schools. I have had parents tell me that their children can be excused from certain activities because it makes them anxious. What these parents and students do not realize is that they can train their brain to respond to stress and anxiety appropriately, rather than avoiding what triggers anxiety (Mindful Schools, 2015). Students will buy in to mindfulness if they know that they have this ability. Educators need to help those students “shift gears in the brain and nervous system” (Mindful Schools, 2015, p. 6). The Mindful Schools curriculum teaches students about the specific parts of the brain, and how mindfulness can change how the brain reacts and responds. Mindfulness increases a student’s self-awareness of feelings that arise during situations that they know will cause them anxiety (Kabat-Zinn, 2003; Talathi & Mhaske, 2017; Viafora et al., 2015). For example, if physical education class causes a student anxiety, the student will be able to recognize the anxiety and use a strategy that will help him/her to participate. By teaching students about how the brain can be trained to respond to stress, they will fully engage in a mindfulness-based stress reduction program.

Teaching and practicing new mindfulness strategies such as listening, breathing, eating, heartfulness, and movements (Viafora et al., 2015) may assist students to self-regulate their emotions (Harpin et al., 2016). To gain context for the students, these strategies can be used to explore specific themes. Some examples of themes could be mindfulness while writing an exam, mindfulness of enjoyable experiences, or sending kind thoughts toward oneself or to others (Viafora et al., 2015). When students have understood the importance of each mindful strategy, the students will be able to acknowledge what caused an emotional response (Solar, 2013). Deciding what to do after a conflict or emotional response can be a new concept for many students (Solar, 2013). Students who have practiced mindfulness at school are more likely to practice it outside of school and to recommend it to others (Viafora et al., 2015). In my opinion, the most powerful aspect of mindfulness is that the students learn not to feel shameful about their emotions or responses, but to accept what happened and how they felt (Solar, 2013). Teachers who teach mindfulness strategies in the classroom noted a difference in students being able to regulate their emotions, behaviours, and perform better academically (Harpin et al., 2016).

Conclusion

Anxiety is currently one of the most prevalent mental health disorders in young people (Higgins & O’Sullivan, 2015). Educators must recognize the mental and physical symptoms of anxiety in students, or else it could possibly morph into depression. There is a stigma that is attached with any mental health issue, and schools must address anxiety (Froese-Germain & Riel, 2012). Mindfulness is one way that schools can address anxiety. Research indicates that mindfulness is a feasible option to assist students with stress and anxiety (Harpin et al., 2016). When anxiety occurs, the “decision-making” part of the brain is affected (Mindful Schools, 2015, p. 6), and students should understand how the brain can be trained to interrupt anxiety. Mindfulness takes regular disciplined practice for there to be a chance at anxiety reduction (Kabat-Zin, 2003, p. 148). Specific strategies such as mindful breathing and listening should be taught so that students can learn how to self-regulate their stress and anxiety. Anxiety has become a large mental health concern in students, and schools should implement mindfulness to teach students to understand and regulate their anxiety.

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Reimagining the Science Classroom: Building Indigenous and Non-Indigenous Partnerships

Shane Buck

Abstract

This article examines factors that are limiting the effectiveness of science education among Indigenous learners. The science classroom requires a fundamental change in its structure. There needs to be an increased focus on defining and examining Indigenous knowledge, on incorporating activities that meet relational needs by using traditional Indigenous ways of knowing, and on the appropriate synthesis of multiple cultural views within the Western science curriculum.

The scientific method can be an incredibly enjoyable endeavour, being hands-on while also providing structure. My six-year old son loves working with me on different science experiments. He enjoys experiencing how things work, classifying and quantifying, and the structure provided by the scientific method. However, the formal science classroom has not really changed much since I became involved in education in the mid-eighties. While in some urban areas this may be satisfactory, in the predominantly Métis school where I work, learning is hindered because science education needs to change. The curriculum should be less focused on formal classification systems and more focused on students' experiences and fostering a sense of belonging. To begin meeting the needs of Indigenous learners, one must understand their perspective and how to meet their needs within those experiences. Finally, the science classroom can be enhanced by embedding and balancing Indigenous practices with Western science knowledge. My son may be thriving in a very structured science environment, but I am no longer sure that it is the best way to learn or to teach science in all situations.

Problems in the Science Classroom

Imagine that within every effective school there is a community that fosters the diversity and well-being of each individual. Within these schools, the administrator invites partnerships with the community, parents support their children by helping them to reach their goal, educators welcome students while providing an environment free from discrimination, and all students arrive with an eagerness to learn and cooperate with each other. While I believe that many schools are attaining most, if not all, of these positive characteristics, there are schools that are having difficulty sustaining these characteristics. These schools are unable to provide diverse students with meaningful relationship because trust is hindered due to the lack of meeting the needs of Indigenous students, caused in part by cultural barriers and lack of knowledge of many educators. The current philosophies within the Western science classroom do not provide support or equal opportunities for every learner, because there is little to no connection with different cultural views. The school is not effective and fails its students.

I learned early in my career that building relationships and fostering students' sense of belonging is vital to be a successful teacher. However, it is becoming clear to me that there are characteristics that shape relationships into something deemed professional, and restricts conversations that focus more on curriculum than on the individual (Brendtro, Brokenleg, & Bockern, 2002). My way of thinking centres on my experiences, how I grew up, and what I was taught throughout my education. I had always felt safe in my environment, having been given many privileges that, on occasion, I take for granted. Safety, I now know, should be the foundation for building community and fostering relationships. The sense of belonging for many of my Indigenous students is not being fulfilled because safety is lacking in their home lives.

Safety is more than just being free of experiences that can harm a student physically; it emotionally connects them, implores them to trust another person, and is necessary for students to have positive relationships (Brokenleg, 2016). I will still value curriculum and incorporate it in diverse ways, but there is more to teaching that I need to learn and bring to the table. Although it will be difficult to make the shift from a curriculum- and percentage-based science classroom to one that is more focused on students' relational needs (Van Bockern, 2018), I know that it is becoming increasingly important to make this change.

Educators must be balanced, respect individuality, and accept differing cultural traditions. Canada's school system attempts to incorporate a shared belief system, it must eliminate all forms of discrimination and provide equivalent opportunities to all learners (Halstead, 2007). Perhaps inadvertently, Indigenous students' needs have been stifled in the Western science classroom. These individuals have not been able to learn within their traditional setting, and have often had their prior teachings subdued in order to maintain the Western characterization of what it means to be scientifically literate (Aikenhead & Elliott, 2010). In addition to these factors, Indigenous students value socialization with their peers in order to learn from one another and promote independence from adults (Rahman, 2013). Structuring education to include peer learning contradicts the idea that the curriculum provides all the structure needed for optimal learning. Teachers often focus on diversifying the curriculum in order to promote learning for all, but in turn are hindering the learning of their Indigenous students as they require more peer directed socialization. Teachers have been taught early in their career to provide differentiated instruction, but rarely have they developed skills necessary to give up their "power" and enable students to learn from their peers through cooperative and conversational partnerships (Brendtro et al., 2002). The notion that as a teacher I am promoting, perhaps inadvertently, the suppression of my Indigenous students is a scary thought and one that I am willing to reconsider moving forward.

Current philosophies in science attempt to provide goals that are attainable by all individuals, provide a framework that promote positive student engagement, and meet the needs of the scientifically literate. The science action plan focuses on three main goals: improving student's scientific literacy by providing meaningful activities, supporting schools with the motivation of students, and enabling teachers to enhance student engagement by making science relatable to the ongoing demand of jobs in science (Manitoba Education and Training, 2017). The problem with these goals is that educational opportunities do not incorporate meaningful Indigenous practices and strategies into the classroom, and there is no widespread acceptance of them. The curriculum encompasses many historical contributors to science, but has few ideas coming from the Indigenous community. Rarely is there recognition of Mother Earth as the teacher, of using all of their senses to explore nature, and of fostering learning of the world around them (Hatcher, Bartlett, Marshall, & Marshall, 2009). In order to move forward, the science curriculum needs to adapt and synthesize Western ways of knowing with the knowledge presented to us from Indigenous Worldviews.

It is abundantly clear that moving forward the education that I will be offering in my classrooms will extend beyond what I have learned in my own education. I will focus more on strengthening individual relationships in my classroom, by making meaningful connections with my Indigenous students. I must continue to learn more about the needs of my students and foster an environment that focuses on emotional safety. I will motivate myself to learn more about making meaningful connections between the perspective of Western science and Indigenous ways of knowing. This is impossible in our current conventional Western classrooms because not all are able to maintain their identities, but instead are forced to form new ones that are defined by the goals and experiences within the educational system (Rahman, 2013). Positive change requires incorporating effective and sustainable goals that protect cultural values and ensure well-being that extends beyond the curriculum.

Addressing Problems in the Science Classroom

Hope is not lost. Our education has a number of increasingly valuable and sustainable practices that can be done to ensure success for all. The partnerships between the school system and the community can be enhanced if we strive to understand our context of common goals, while enhancing our inner being through appropriate culture and spiritual developments (Halstead, 2007). These common goals start by creating trusting and respectful relationships that accept diverse backgrounds and cultures. In order to further these relational links, students should be encouraged to explore science by building on individual experiences and interacting with nature. Finally, it is important to respect diversity and integrate Western science curriculums with Indigenous Worldviews. Classroom goals should be balanced between multiple Indigenous and non-Indigenous teaching strategies. These changes in my science classroom will provide exciting experiences for all, ones that ensure positive growth with trusted relationships and create a healthy environments.

Indigenous content in our school systems has been met with a myriad of positive and negative factors that have made it difficult for non-Indigenous participants to connect in a consistent and meaningful way. A main component that is lacking is the framework that intertwines the new culture within the context of the pre-existing one without damaging what makes each culture special. In order to form respectful relationships in the science classroom, we need to embed the “two-eyed seeing” notion. This notion promotes the positive values from each culture at the same time by viewing each perspective separately, then finds a common goal by using both lenses (Hatcher et al., 2009). If we truly respect ourselves and celebrate our differences by providing a safe space free from prejudice, we will harness genuine trust and form incredibly powerful partnerships with all students. Once teachers have established trust, we will be positioned to structure our classroom in such a way that meets the educational needs and learning styles of our students.

Once meaningful relationships are paramount in the classroom, the focus shifts to other essential needs that may be suffocated by a student’s experiences. Often, Indigenous students have had their needs overlooked, because they have been placed in a classroom that is different from their own cultural views. To prevent further isolation of Indigenous learners and to pursue being an effective science teacher, I must first recognize that we reside within the historical and current homelands of Indigenous peoples (Calderon, 2014). Through my acknowledgement, I may help to break down some cultural barriers that have been preventing my students from developing their needs. I also need to be aware that combining two cultures does not mean losing the parts of each culture that make meaningful connections for our students, but rather should focus on providing alternate outcomes that strive to excite conversation and promote diversity (Habib, Densmore-James, & Macfarlane, 2013). While the outcomes learned through using the scientific method are vital to Western science, experiential learning is vital to Indigenous learners. These two ideologies do not compete and can be used together by providing opportunities to learn from the land or within sharing circles. Incorporating multiple cultures at the same time will require educators to change how they fundamentally teach. They will need to attend professional development opportunities to learn about the values within each culture, while understanding the diverse learning styles within those cultures. Educators will then need to implement strategies focused on the diverse needs, instruct in a way that implores both independence and connectedness, and communicate effectively by being aware of the nonverbal cues that may be potentially harmful and disrespectful in some cultures. If I want to teach science effectively, I must refocus. I must continue learning about the needs of my Indigenous students, and provide them time to express their knowledge in a meaningful way. I must also incorporate ways that will blend my Western scientific knowledge within the context of Indigenous belief systems.

Science education has the capacity to change within the framework of inclusion by balancing educational perspectives from Western society with those found within Indigenous

communities. Restructuring my classroom to enhance the understanding of land in Western science classrooms as being empirical and calculated, while also providing discussions and sharing stories about the spiritual nature of the world, is one aspect of teaching that I can change immediately, thus meeting the needs of all learners. If I marry the ideas of Western science with the Indigenous idea that land is alive, connects everything, nurtures growth from within ourselves, and can teach and shape us (Datta, 2018), I can empower my Indigenous learners. The science classroom would also be enhanced if I enabled students to feel valued for their culture and to take ownership and pride in their community. I would also need to do this without implying that I am an expert on Indigenous culture or using Indigenous teachings without appropriate background knowledge (Freeman, McDonald, Morcom, 2018). If I were to incorporate traditional Indigenous practices, such as sharing circles focusing on Indigenous storytelling, I may reduce the learning disparity between Western and Indigenous students by providing valuable experiences for all learners (Datta et al., 2015).

Looking forward a few years, my classroom will be changed at its roots, and I will be a more effective teacher. I will communicate better in the lessons that I share. I will no longer focus solely on the empirical and measureable aspects of the science classroom, but also include Indigenous storytelling and ways of learning that involve the care and fostering of how students view themselves, how they interact with their peers, and whether they are making mature and healthy decisions that will better the community as a whole (Whitaker, 2004). The relationships in the classroom are based on trust and respect for diversity. All students' needs are being met through a combination of appropriate teaching practices that focus on individual learning styles and acknowledge that our differences are what makes each one of us special. The classroom will be further enhanced by exploring the world around us through multiple cultural perspectives, enabling individuals to share their unique stories. Attainable goal-setting is paramount in education and, if there are to be positive partnerships between the Indigenous and non-Indigenous communities, the science classroom needs to adhere to a two-eyed seeing notion. Each culture has merit, and applying strategies from each culture is important for sustainable growth and harmony among these cultures.

Conclusion

When I imagine a science classroom, I envision students with a curiosity that extends beyond the work that is in front of them. I see students who ask thought-provoking and insightful questions, then develop strategies to solve those problems. It never occurred to me that I was not emotionally connecting with all of my students, thus not enabling all learners to generate those insightful questions. I was unaware of how decolonization has impacted our Western school system, the implications that it has in my science classroom, or how my students' learning has been negatively affected. I am relieved to find that there are Indigenous teachings and concepts that can be incorporated into the current science curricula, which may help to reduce the negative effects and stifling nature of Western science among Indigenous students. My son and I shall embark on a new adventure: one that provides an enhanced way of learning science that will free us from prejudices, while gaining valuable insights into the world around us.

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About the Author

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Removing Barriers to Professional Learning

Cheryl Chuckry

Abstract

The professional learning journey for teachers can be either a challenging or a fulfilling one, depending on the conditions in each educational setting. One new initiative at the Manitoba Teachers' Society, the Collaborative Learning Team Grants project, seeks to address barriers such as fixed mindsets, a lack of time, and the absence of praxis, in order to enable professional growth through instructional leadership, collaborative inquiry, and sustained focus on learning over time.

As a Staff Officer at the Manitoba Teachers' Society (MTS), it is my role to address potential barriers that can impede teachers' professional growth. Three particular challenges are the impact of a fixed mindset, the absence of praxis in their professional community, and the question of limited time. These roadblocks can cause teachers to lose motivation and disengage from the work of improving instructional practice. In my work with educators across the province, I therefore advocate professional development that incorporates three key enablers of learning: instructional leadership, collaborative inquiry, and focus (Katz & Dack, 2013). This year, through the launch of the Collaborative Learning (CL) Team Grants project at MTS, I will explore both the barriers and counteractive practices in order to enhance professional development opportunities for teachers in Manitoba.

Three Primary Barriers to Professional Learning

Three primary barriers hinder teachers' professional learning: the presence of a fixed mindset, the devaluing of praxis, and a lack of time. A fixed mindset is the belief that abilities cannot be changed (Katz & Dack, 2013). This mindset can lead to a lack of awareness, with teachers stuck in the first stage of learning where they are unconsciously unskilled, not knowing what they do not know (Adams, 2016). Since it is a natural tendency for human beings to take mental shortcuts, a fixed mindset can also affect metacognition and the attention to biases in thinking, which will interfere with learning (Katz & Dack, 2013). These teachers' level of awareness is diminished, interfering with the acquisition of new knowledge and skills for teaching. Although teachers will inevitably experience moments of fixed and growth mindsets, awareness of both states of mind enables educators to adjust their thoughts and actions, moving toward an understanding that mistakes are valuable learning opportunities (Dweck, 2015).

Praxis is the belief that teachers should have opportunities to reflect while learning, so they can then apply it to their teaching (Knight, 2011). Praxis is lost when educators look to outside organizations or attend professional learning sessions that are not relevant or that do not have any practical application (LaPointe-McEwan, DeLuca, & Klinger, 2017), resulting in a return to the teaching methods that feel the most comfortable (Gutierrez & Heui-Baik, 2017). Finally, when we do not believe that the concept of praxis is important, we put teachers in a passive role, making it difficult for them to apply ideas within their own classrooms (Burbank & Kauchak, 2003). Without praxis, learning is not meaningful, relevant, or applicable to problems of practice.

Time can become another barrier to professional development. Teachers are consistently challenged by finding and organizing time, securing paid release time, and determining how much time they will have and whether it will be enough (Peterson, 2008). They therefore may be hesitant to participate in professional learning, particularly when it involves spending time on research (Gutierrez & Heui-Baik, 2017). In addition, teachers may feel isolated if they have little time to dialogue with colleagues about the instructional practices that they learn in professional

development sessions (Hadar & Brody, 2010; Peterson, 2008), and they may not have sufficient time to analyze the classroom evidence that can determine whether this new learning is positively affecting student achievement (LaPointe-McEwan et al., 2017). Educators may also experience anxiety because of the time pressures related to missed instructional hours (Young, Cavanagh, & Moloney, 2018). Only when issues related to time, praxis, and the fixed mindset are resolved is it possible to enhance professional learning for teachers.

Three Key Enablers of Professional Learning

One way that the Manitoba Teachers' Society is enabling professional learning for teachers is through the CL Team Grants initiative. This project aims to address barriers in professional development by incorporating supports for instructional leadership, collaborative inquiry, and focus. These grants are awarded to teacher teams who would like to engage in educational research around problems of practice to improve student learning. In addition, the groups selected receive support in the form of instructional coaching by an MTS facilitator. Each team receives guidance throughout the inquiry process to assist them in sustaining their focus on a question of study, exploring current research, creating a plan, reflecting upon and interpreting data, and sharing their learning as a team.

Instructional leadership, as provided by the MTS facilitators, is a key enabling factor in supporting professional growth (Katz & Dack, 2013). This is because leadership in the form of instructional coaching can help teachers break through the barrier of a fixed mindset. This opportunity for educators to examine their thinking about their beliefs and practices, facilitates a shift toward a growth mindset (Aguilar, 2013). This enables teachers to raise their level of awareness, observe themselves and others without judgement, focus on learning opportunities, and understand that their effort and attitude determine success (Dweck, 2006). Consequently, teachers develop a meta-awareness about themselves as learners, leading to more intentional reflective practice (Osterman & Kottkamp, 2004). This intentionality creates an appreciation of professional dialogue as a means for growth (Katz & Dack, 2006) and a learning stance that enables exploration and application of new knowledge and skills (Fullan, Quinn, & McEachen, 2018). Therefore, instructional coaches, like the MTS facilitators, support the development of both a growth mindset and an inquiry stance.

With the support of instructional leaders, teachers are more likely to adopt an inquiry stance that results in curiosity about student performance data, prompting them to examine the information available to improve instruction (Lamb, Philipp, Jacobs, & Schappelle, 2009). Instructional coaches play an integral role in the inquiry process because they assist teachers in exploring and planning to address problems of practice (Knight, 2011). The resulting inquiry stance involves both action and reflection, culminating in a change of practice (Halbert & Kaser, 2016). The instructional leadership and coaching provided within the CL Team Grants project addresses the need to support teachers in developing a growth mindset that makes inquiry possible to improve their learning and that of their students.

The CL Team Grants project also aims to enable meaningful professional learning by creating a culture of collaborative inquiry that honours the concept of praxis, the belief that learning should be practical. The project does this by responding to three motivational needs for teachers in professional development: competence, autonomy, and connection (Osterman & Kottkamp, 2004). Meeting the need for competence is important because when teachers experience success in reflective practice, they believe that they can reach their goals and avoid pitfalls. Fulfilling the need for autonomy is equally important because it results in self-directed learning that empowers teachers (Franks, Jarvis, & Wideman, 2011). Finally, addressing the need for connection, through the creation of a culture of collaborative inquiry, motivates educators to want to make a difference through their collective effort (Franks et al., 2011). Collaborative inquiry meets teachers' need for connection through dialogue and collaboration, making it one of the most successful forms of professional learning (Danielson, 2016; Fullan et

al., 2018). Through professional dialogue, educators develop a collective growth mindset that leads to collective efficacy, the belief that, as a team, they can improve student performance (Lipton & Wellman, 2012). This is significant because collective efficacy is the factor that has been found to have the greatest influence on student achievement (Donohoo, 2017). The feelings of competence, autonomy and connection that teachers can experience when working together lay the foundation for the creation of a culture of collaborative inquiry needed for professional learning.

Collaborative inquiry is a form of high quality professional development because it is rooted in problems of practice (Planche & Donohoo, 2018). It moves learning forward by providing a way for educators to work together to engage in deep reflection that will change their knowledge, their way of thinking, their beliefs, and their practice (Katz & Dack, 2013). In a culture of collaborative inquiry, the principle of praxis comes alive, and teachers choose what they want to learn, and how they want to transform their teaching together (Knight, 2011). The connection with colleagues creates a support system that assists teachers in exploring and sustaining the implementation of new teaching approaches (Fullan et al., 2018). When teachers feel competent, independent, and connected to one another, the concept of praxis is honoured, and that is the goal of the MTS CL Team Grants.

Focus is the third key enabler of professional development that the CL Team Grants initiative seeks to offer to help teachers maximize the use of their time for professional learning. Teacher teams who receive a grant through MTS benefit from a sustained focus on job-embedded work over an extended period of time instead of simply experiencing the one-hour workshop model. This ongoing focus on professional learning is a feature of effective schools (Weston, 2018). When teachers have the opportunity to explore a particular professional learning topic for a prolonged period, it is an important investment of time that results in improved student achievement (Darling-Hammond, 2008). With the support of MTS instructional coaches, teams move through a facilitated process that involves the use of discussion protocols and guidance around how to use their time the most efficiently. When teams make good use of their precious time, they can maintain a clear focus on learning priorities (Lipton & Wellman, 2012). The CL Team Grants project also provides adequate time for teachers to delve into problems of practice, to explore new strategies and to implement new teaching approaches, an important principle of effective professional development (Gulamhussein, 2013). With the support of the MTS facilitators, as well as the grant provided for release time and resources, teachers have the time to focus collaboratively and meaningfully on problems of practice.

Conclusion

In my role as an advocate for and a facilitator of meaningful learning experiences for teachers across Manitoba, I am currently focusing on three problematic barriers and three key enablers for professional growth and development of teachers. Through the Collaborative Learning Team Grants initiative, these issues and supportive practices are being further explored to determine whether the Manitoba Teachers' Society is meeting the learning needs of teachers in the province. Three hurdles in professional development that the Society is seeking to better understand are the presence of a fixed mindset, the lack of praxis in learning cultures, and the troublesome issue of time. These realities can deter teachers from engaging in and reflecting on their learning, preventing professional growth. When confronted with these challenges, educators feel frustrated, which leads to a lack of motivation and engagement. In order to address these issues, MTS aims to provide professional development experiences that incorporate three key enablers of learning for educators: instructional leadership, collaborative inquiry, and focus. Focusing on these key enablers of teacher growth is an important investment, since this is what ultimately leads to improved student learning (Katz & Dack, 2013). Through the launch of the CL Team Grants project at MTS, there is a unique opportunity to

remove barriers in order to create enhanced professional learning experiences for teachers in Manitoba.

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About the Author

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Social Justice and School Music Education in China

Yunge Pang

Abstract

China is a multi-ethnic nation. However, formal education often neglects differences in ethnicity, and school music education tends to marginalize the musics of ethnic minorities, owing to the government's political ideology of maintaining national unity. Thus, ethnic musics incorporated in teaching materials are often politicized and tokenized, and pedagogies used for teaching ethnic musics in classroom teaching tend to be oversimplified. Addressing social justice in music education is centrally concerned with equity, which I suggest can be promoted by positive changes, including institutional changes, education for music teachers that incorporates learning ethnic musics and pedagogies appropriate to teaching these musics.

China is a multi-ethnic nation, and the ongoing internal immigration is diversifying students' cultural backgrounds. While the diversity of student cultures and ethnicities are not reflected in the content of school curricula, school music education tends to marginalize the musics of ethnic minorities, and social justice in education has rarely been seriously discussed in China's mainstream discourse. The absence of attention for socially just music education can be attributed to the government's political ideology: maintaining the unity of the nation by assimilating minor ethnic groups into the state. As a result, Chinese ethnic musics have not been well-incorporated into the formal school music education, which is reflected in two major aspects: a tokenized and politicized representation of ethnic musics in school music teaching materials, and oversimplified music pedagogies adopted for minority musics. With a view to promoting equity in music education, I recommend institutional changes at the macro level, education for music teachers that incorporates learning ethnic musics and pedagogies appropriate to teaching them.

Social Justice and School Music Education in China

Traditionally, social justice refers to the equal distribution of resources and assets (Cribb & Gewirtz, 2003), before its dimensions were extended by Nancy Fraser (1999) and Iris Young (1990), who both held the opinion that not only economic redistribution, but also cultural recognition, should be taken into consideration in defining the concept of social justice. No matter in which sense the term is used, equity stands at the center (Benedict, Schmidt, Spruce, & Woodford, 2015). Commitment to social justice reflects a major interest in creating a world that is more humane (Woodford, 2015). However, the issues associated with social justice can be masked and neglected by policies and propagandas, and thus, inequity is perpetuated.

Socially just education features a combination of teaching content and pedagogies in schools, with a view to promoting equity among people from different groups in a society (Roberts & Campbell, 2015). School music education, with its role in the reproduction of mainstream cultural interests and values, is of great importance for the examination of issues associated with equity (Matthews, 2015; McCarthy, 2015; Wright, 2015). Benedict et al. (2015) concluded that for music teachers, engaging in socially just music education is not only a process of enriching knowledge and broadening horizons as educators, but also a manifestation of concerns with equity for those who are excluded from a society.

In China, the need to address issues associated with equity in music education is based on the nation's multi-ethnic reality. Comprised of 56 officially recognized ethnic groups, China is culturally, religiously and linguistically diverse. The largest Han group makes up about 92% of the overall population, and the remaining 8% are splintered into 55 ethnic groups totaling more

than 120 million people. Most of the minority ethnic groups have their own languages, cultural heritages, and religious beliefs. Geographically, more than half of the ethnic minority communities reside in the west and areas close to the border within the Chinese territory. However, as China is now experiencing massive waves of internal migration, and minority groups that used to lived together in homogeneous groups are getting more mixed, the cultural backgrounds of students in the classroom are becoming more diversified (Banks, 2014). China's multi-ethnic reality, coupled with the ongoing internal migration, make the discussion of issues related to equity in music education more urgent than ever before.

However, in China, socially just music education has rarely been the major focus (Ho & Law, 2015). China's educational system features a highly standardized and centralized structure, with the priorities of reinforcing the unity of the nation (Zhang, 2017). Accordingly, cultural diversity is only celebrated in a superficial way, and schools downplay the content associated with ethnic minority cultures and musics. In order to promote equity in music education as a key aspect of social justice, I suggest the acceptance of multiculturalism, education for music teachers that incorporates learning ethnic musics and pedagogies appropriate to teaching them, as major approaches toward socially just music education.

Challenges to Socially Just Music Education in China

School music curricula and pedagogies can be considered as embodiments of mainstream values and cultural interests (Wright, 2015). However, musics of Chinese ethnic minorities have not been well-incorporated into the school teaching materials, and the representation of ethnic musics in the wide-used textbooks is often tokenized and politicized. Besides, the pedagogies applied to teaching ethnic musics tend to be oversimplified.

Teaching materials often reflect interests of the dominant group in a society, and thus, contribute to social reproduction and the reinforcement of social hierarchy (Banks, 2006). Zhang (2017) examined musics incorporated into school textbooks, and suggested that when taught in an appropriate manner, authentic musics are conducive to strengthening ethnic identity, since these musics are composed and practiced by cultural insiders and rooted in original living traditions of minority people. However, in the music textbooks that are widely used in elementary and middle schools, authentic minority musics rarely exist. Instead, the alleged minority musics taught in schools were composed after the establishment of the PRC in 1949 by the Han musicians, who were in charge of designing music textbooks (Zhang, 2017). These newly created musics, which feature a combination of traditional folksong styles with lyrics that are reinvented, have been represented in a way that could easily mislead students into believing the originality and authenticity of these musics. Besides, knowledge associated with minority musics and cultures are insufficient compared to the content that centers the Han cultural heritage. While musics incorporated into school teaching materials reflect the ideology of the dominant group, minority musics are significantly marginalized in school music curricula.

Another salient issue with music teaching materials is that the representation of ethnic musics tend to be tokenized and politicized. Cultures should not be viewed as static, since they are constantly in the dynamic process of changing (Hess, 2018). Nevertheless, Chinese minority cultures are reduced to a limited number of symbols in the music classroom. For example, musics specifically selected to represent ethnic cultures distort reality by portraying ethnic minority people as always happy and satisfied with their lives (Zhang, 2017). Images of grassland and horses are always associated with Mongolian songs, while the traditional musical instrument, the *dongbula* lute can be easily related to Xinjiang music (Baranovitch, 2003). These stereotyped representations of minority musics not only give rise to misunderstandings and distorted perceptions about ethnic minority people among students, but also reinforce ethnic stereotypes.

Furthermore, classroom music that aims at representing ethnic minority cultures is, to a large extent, politicized (Brand, 2003). The politicization of ethnic musics is reflected in the

patriotic themes explicitly indicated in some of the musics included in the teaching content (Zhang, 2017). Mu (1994) suggested that “revolutionary folk songs,” which refers to the adapted traditional ethnic musics that “praise socialism, communism, the government and its policies,” make up the majority of repertoires incorporated into school teaching materials (Mu, 1994, p. 305). While sustaining the unity of the nation has been the utmost goal for the government, musics selected to represent ethnic minorities fail to celebrate cultural pluralism, but rather serves as a means for disseminating political propaganda.

The oversimplified music pedagogies applied to the teaching of traditional ethnic musics, which greatly limits students’ experience with learning ethnic musics, is another challenge facing school music education. In China, music teaching at elementary and secondary level mainly takes the form of music appreciation and singing (Brand, 2003), and there is rarely any in-depth connection made to the cultural backgrounds from which the musics originate. Even though learning to play ethnic musical instruments is encouraged by the Minister of Education, owing to a lack of music teachers’ education and limited credit hours for instruction, students scarcely have opportunities to learn to play these musical instruments. The tokenized and politicized representation of ethnic musics, coupled with the oversimplified music pedagogies, remain major challenges facing school music education in China.

Suggestions for Bringing Social Justice Into Chinese Music Education

In order to promote equity in music education as a key aspect of social justice, I recommend the acceptance of multiculturalism in school music education, education for music teachers that includes learning ethnic musics and pedagogies appropriate to teaching these musics. Dealing with issues associated with injustice requires pondering over potential changes at the macro level in a society (Väkevä, Westerlund, & Ilmola-Sheppard, 2017). In China, promoting equity in music education calls for a removal of political propaganda contained in musics, and applying a multicultural approach through the incorporation of genuine ethnic musics.

Multicultural music education features the teaching of music from various ethnic backgrounds with a view to understanding cultures, customs, and pedagogies related to the musics (Karlsen & Westerlund, 2015). Multiculturalism in music education is centrally involved with the implementation of culturally relevant teaching, which centers the teaching of musics relevant to students’ background (Roberts & Campbell, 2015). With a goal of bringing forth societal changes by means of empowering students of diverse backgrounds, multicultural music education is also concerned with the inclusion of national ethnic minorities whose cultural heritage is excluded from the formal education (Roberts & Campbell, 2015; Hebert, 2010). Owing to its privilege of celebrating ethnic musical heritage, multicultural music education can be a powerful tool for the promotion of equity. Therefore, pursuing socially just music education should be premised on the implementation of multiculturalism at the institutional level.

Music teachers’ education also plays a significant role for promoting equity in school music education. Central to this idea is significantly reducing prejudice and cultivating the habit of critical reflection. Music teachers should make effort to foster positive attitudes toward ethnic minority students and their cultural backgrounds, since their viewpoints can greatly influence how national ethnic minorities and their cultures are perceived among students (Banks, 2006). Music educators should also be aware that prejudice originates from irrational patterns of understanding the world that is premised on bias, which can contribute to the formation of arbitrary judgement on people based on their socially constructed identities, for example, race, gender, and ethnicity (Mara & Salvador, 2017). Matthews suggests (2015) that identifying prejudice calls for the examination of unjustified assumptions, and the transformation of these internalized biases; on the contrary, violence may occur when deep-rooted prejudices are present (Matthews, 2015). Accordingly, the reduction of prejudice should be the foundation of music teachers’ education.

Unjustified teaching practice limits the opportunities of encountering the abundant musical heritage of human world, and meanwhile disadvantaging certain groups of students in a less conspicuous way (Matthews, 2015; Westerlund & Karlsen, 2017). Thus, cultivating the habit of critical reflection is another important facet of music teachers' education. Critical reflection, which is centrally concerned with fighting against stereotypes, unjustified beliefs, and empowering students by addressing their musical needs, invites the examination of exclusion and inequity in the classroom (Cooke, 2015; Matthews, 2015). Critical reflection on music teaching practice is a vital step toward creating an ideal environment for the celebration of musical diversity.

Being critical also refers to the contemplation of the process of knowledge construction and policies. Music teachers should be alerted to the fact that knowledge is not neutral, but rather "historically specific evolutionary phenomena," that is constructed according to the need of justifying and neutralizing certain values and beliefs (Matthews, 2015, p. 243). It is thus of great importance for music teachers to ponder over music traditions that are privileged in their classrooms, and to challenge their taken-for-granted music teaching practice (Karlsen & Westerlund, 2015). Being critical also means reflecting on policies implemented in school music education. Schmidt (2015) suggests that policies, which tend to disadvantage certain groups of people while privileging the dominant groups of a society, should be evaluated as a science that is constantly in need of deliberation and critique. The reduction of prejudice, coupled with critical reflection in music teachers' education, are core steps toward a more equal environment for music classrooms.

Pedagogic development, which features the diversification of teaching methods and teaching musics from their own epistemologies, is another major facet that is in need of improvement. Oversimplified music teaching methods not only greatly limit students' experience with musics, but also obstruct possible avenues for promoting cultural understanding. Diversified music pedagogies, on the contrary, facilitate the creation of an inclusive and participative environment in the music classroom (Benedict et al., 2015). Accordingly, music teachers should consider how to incorporate various teaching methods that cater to students' needs.

Teaching musics from the musics' own epistemologies is also crucial for pedagogy development. Hess (2018) suggests that musics should be understood from their own cultural context and epistemologies, so that common human emotions shared in musics of different origins can be explored and honoured. However, one of the major problems concerning the teaching of minority musics in China is that these musics are not represented from their original cultural context, but rather the perspective of the dominant group. In this respect, minority musics are portrayed in a way that reflects understandings and perceptions of cultural outsiders. This tendency is what Westerlund and Karlsen (2017) refer to as "ethnicize musics," through which stereotypes about musics and people are reinforced (p. 79). Therefore, music teachers need to pay attention to the cultural context of musics taught in the classrooms, and develop pedagogies to facilitate musical understanding based on the epistemologies of where the musics originates.

Conclusion

Addressing issues associated with social justice in music education is based on China's multi-ethnic reality. Challenges facing school music education can be summarized as politicized and tokenized representation of ethnic minority musics in the teaching materials, and oversimplified music pedagogies applied in the classrooms. With a view to promoting equity, school music education needs to make positive changes. At the institutional level, the political ideology contained in ethnic musics should be removed, and give way to multicultural approach. Music teachers' education, which features reducing prejudice and cultivating the habit of critical reflection, stands at the center of pursuing socially just music education. Diversifying teaching

methods and teaching musics from their own epistemologies are also major facets of pedagogical development.

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Supporting Gender Development: A Call to Action for Educators

Laura Jeanne Thompson

Abstract

The author recently completed a three-year program in early childhood education in BC and became interested in the evolution of gender development in the early years. Findings of this policy and programs research reveal that the work has been done by upper levels of the provincial education system, but the created programming has not translated into the classrooms as a ubiquitous element of planning for students' learning opportunities or environment in their growth toward their personal identity. Greater effort is essential to support full potential in efficacy to the enriching of children of all ages in their journey of self-awareness.

Historically speaking, educators have been a fundamental driver of social perspectives change, and thus it is essential that educators become more proactive in implementing and also advocating an affirmative approach to gender-fluid development in children and adolescents. Over at least the past decade, renowned researchers in child and adolescent development have found the traditional social constructs of gender roles to be detrimental to the well-being of gender-independent children. In response, Health Canada has introduced an evidence-based gender spectrum perspective of child and adolescent development. The *Canadian Human Rights Act* as amended in 2012 recognizes gender as an aspect of human diversity, equal to other characteristics such as race, religious beliefs, and cultural practices. Educators have day-to-day contact with children and their families and, in effect, have remarkable potential for influencing a sociocultural shift away from limited gender-binary perspectives and for providing knowledge toward broader awareness in validation of the value of the individual, regardless of gender-spectrum expression. Thus, gender-affirmative care models need to be integrated in the roles of educators, curriculum planning, and learning environments in schools as consistent best practice, rather than remaining exclusively a situational response approach.

Leading professionals who specialize in supporting families of gender-independent children and adolescents have published rigorous work regarding the sociocultural need for intentional deconstruction of gender-binary social roles to evolve toward a gender-diversity perspective (Ehrensaft, Glanmette, Storck, Tishelman, and Keo-Meier, 2018). Gender development specialists such as Pyne (2014), Ehrensaft et al. (2016), and Edwards-Leeper, Leibowitz, Lurie, Lurie, & Sangganjanavanich (2017) advocate a shift in professional practice to affirmative-based policies supportive of gender expression variation as a naturally occurring phenomenon (Ehrensaft et al., 2018) of self-identification. Their research points to an emphasis on adopting a multifaceted concept wherein gender may be fluid and not binary (Edwards-Leeper et al., 2017). These academics and their colleagues have become the public voices of the issues and obstacles, and even the dangers, faced by gender-expansive children and adolescents.

Pyne's (2014) research has evolved from his first-hand work with families and their children growing in exploration of gender roles, whom he describes as "gender independent" children (p. 1). Pyne has been a significant advocate in the gradual shift of Canadian medical and mental health practices involving children variant in their gender development to using an affirming model, perhaps including some treatment elements, rather than solely a medical model. His perspective is embracing of the naturalness of gender discovery as part of human development. One of the overall messages from his work speaks of the change in focus for intervention being on the sociocultural context of the individual, rather than exclusively on the child as an element of the progress in gender diversity perception among professionals.

Ehrensaft et al. (2018) wrote from a long career, magnified by personal experience, in nurturing gender-expansive children and adolescents and their families. Over the course of her journey with families struggling with sociocultural expectations of their communities, including

her own, she has been on a mission seeking greater understanding of gender role development, conceptualizing gender pathways, and the pathology of gender dysphoria. Ostensibly, over the last two decades, the treatment approach to adolescents whose gender expression is nonconforming with cultural conventions has focused on individual intervention. The end-point purpose of the treatment was to be supportive of the child in ultimately identifying predominantly with one or the other of the traditional gender binary. However, this model of treatment is an oversight of where the need for change truly lies. The causes of pathological gender dysphoria, in actuality, originate from the world around the child, their sociocultural environment, in which gender as an evolutionary process is not understood. Ehrensaft et al. described it as a child's mental mapping of gender self-perception being primarily reflected through the social mirror of family, school, and friends. Therefore, the potential for the child's well-being becoming damaged and eventually dysphoric must be recognized as an issue of contextual intervention and not solely about treating the individual.

As the literature research for this essay ensued, the affirmative-care model as professional best practice became apparent as a repeated theme. Edwards-Leeper et al. (2016) put forward the evidence revealing the effectiveness of a gender-affirmative care model in recognition of building resilience in gender-independent children and adolescents, and their families, and furthermore as a viable mechanism for fostering change in societal perspectives. The essence of their work prepones an ideology of a balanced and nuanced approach to gender roles exploration that takes into consideration the complexity of childhood gender-identity development over time. The affirmative-care model as a collaborative approach supports not only the gender-expansive child but also the child's family, school and community in broadening gender role expectations.

The effect of these and many other studies, particularly longitudinal research, has been a generalized paradigm shift in support services models from a cultural-norms approach of gender conformity to an evidence-based gender-affirmative care approach that positions nonconformity within the realm of wellness (Pyne, 2014). The evidence generated through the work of these and other gender development researchers over the past two decades has succeeded in positively informing perspectives of support providers in that they described children who grow up to be healthy adults who are affirmed in their gender identity (Katz-Wise et al., 2017).

National and provincial laws, policy, and public services frameworks have been positively influenced by the recent findings in gender identity research. The Canadian Human Rights Commission, Canada Public Health, and Manitoba Education are examples of governing bodies that have revisited and revised policies and codes to reflect gender-diverse inclusivity. As stakeholders in societal well-being, their progressive action has brought relevant public services branches into similar states of engagement in evaluation of policies and protocols. Through acknowledging their responsibility for action, their overt leadership has generated momentum in sociocultural adaptation toward a broader qualification of equality.

The *Canadian Human Rights Act* was amended in June 2012 to include gender identity as a characteristic of human diversity congruent to race, colour, religious belief, and other characteristics of self-identification (Manitoba Education and Training, 2017). The consequence of this amendment was the initiation of a transformation in adherent organizations and public services. A conversation amongst mid-level national academia affiliations became focused on evolving the terminology, concepts, and practice directives through a lens of gender-affirmative care. The establishment of an affirming ideology grounded in generally accepted foundations in language and processes has resulted in the validation of all human beings as valuable members of their communities regardless of their gender identity or gender expression (Egale Canada Human Rights Trust, 2015). Furthermore, parameters identifying harassment and discrimination based on gender expression have led to public adoption of the gender-spectrum frame of reference in advancement of basic rights and accessibility in shared public spaces.

Not surprisingly, Canada Public Health endeavoured to advance a precedent concept of gender development as a continuum wherein there are a variety of identities and expressions

(Public Health Agency of Canada, 2010) possibly markedly previous to these and other national and provincial bodies. Health services providers, including mental health, have conventionally been the care providers for children and adolescents considered to be nonconforming of gender due to the previously accepted medical model approach. Pediatricians, psychologists, psychiatrists, counsellors and clinicians theorized gender-variant behaviour as pathological in origin, and thus medical treatment to correct this illness was the generally ordained practice. It is no wonder, then, that the organic nature of gender exploration and expression may have been first realized by practitioners in this field.

By the beginning of the 10s-decade, Public Health was promoting a more ethically oriented perception based genuinely on scientific research that linked gender-variant development to a multitude of factors, including neurological, hormonal, biological, social, and relational influences (Public Health Agency of Canada, 2010). Public health was early to recognize the impetus of educators and schools in the sociocultural perspective change toward gender-expansive children. Their directives to educators and schools convey a shared responsibility in raising awareness and in challenging gender norms within programs and community initiatives. They also convey the necessity of schools to provide a safe, nurturing environment for all students, inclusive of all gender identities (Public Health Agency of Canada, 2010).

Egale Canada Human Rights Trust and Manitoba Education and Advanced Learning (2015) collaboratively created a resource to provide inclusive strategies in helping schools become safer and more accessible from the perspective of diversity of sexual orientation and gender identity. As educators develop proactive non-binary teaching attitudes and language, the school community as a result evolves as a place of gender-diverse inclusion. This nationally distributed resource emphasizes the significant value in the integration of diversity attitudes and practices in learning environments and experiences as the mechanism in dispersing the agency of change. Furthermore, when educators adopt practices that promote awareness and understanding of, and respect for, people of all sexual orientations and gender identities (Egale Canada Human Rights Trust, 2015), the result is an inclusive and accepting community of individuality. This resource is dedicated to advancing student-led programs, events, and groups in order to instigate sociocultural change through our future citizenry.

The accumulating inventory of government research-based resources and organizational advocacy-focused written materials is trickling into general societal spaces that perpetuate the acceptance of a gender diverse ideology. Though gradual, a movement toward replacing historical gender conformity attitudes is infiltrating the everyday experiences of the general population. Political thrust for change is visible in offices, schools, public services facilities, community common places, and an increasing number of businesses. Services and resource support, community validation, people's attitudes in honouring diversity are banding together to foster changing gender constructs in a gender spectrum paradigm.

Educators in Manitoba's public school systems have access to a plethora of documented research on the gender identification element of childhood and adolescent development. Systematic documents entailing frameworks and teaching strategies have been created by professional groups to facilitate gender diversity integration in learning environments and program planning. It is incumbent upon administrators, school boards, divisional specialists and clinicians, and classroom teachers to ensure a learning environment with learning experiences that provide a scope of safety and inclusivity. Recently, organizational studies have been conducted in evaluation of the level of educator efficacy.

Manitoba Teachers' Society evaluated the level of knowledge mobilization in which public education was evolving in equitability. Taylor et al. (2015) conducted the study to measure the perceptions of school climate as experienced by classroom teachers. The year of data collection (2012-13) coincided with the related amendment to the *Canadian Human Rights Act*. This study incorporates professional education in terminology and promotes the attitude that an individual's gender may or may not correspond with social expectations associated with the sex that was assigned at birth. The educators in the study overwhelmingly strongly agreed (94%) that the

responsibility of sustaining an inclusive, safe, and supportive learning environment belonged to all school staff (Taylor et al., p. 79). Interestingly, only 78% of participants agreed (Taylor et al., p. 96) that they could respond effectively to gender discriminatory incidents.

Partially in response to the results of the Manitoba Teachers' Society study, and additionally to task educators in being purposely proactive, Manitoba Education and Training oversaw the development of a diversity-inclusive frameworks document. These guidelines were composed by a collaborative group of many stakeholders from a broad scope of professions and partner organizations, all relevant to public support services for children and families. The introduction of these directives incorporates the amended section of the *Canadian Human Rights Act* to elevate professional conduct to a higher level of inclusive practice in order to provide safety in learning environments that support gender diversity exploration and the organic evolution of gender spectrum identification. As a part of the inferences for educators, this document advocates fluidity of gender identity as a natural occurrence of identity formation (Manitoba Education and Training, 2017). In fact, this concept is expanded further to describe the strict nature of gender roles and sex role stereotyping in society as being the problematic issue, not the child's gender expression. The suggestion is that educators can create space for all students to find support and be valued through the integration of challenges of gender stereotypes in learning opportunities within an affirming classroom climate.

The underlying inference is that educators are perhaps the most qualified and most influential voice for changing society's gender categorical attitudes. Classroom experiences for students must have a greater focus on appreciating the unique qualities each child presents and in building healthy relationships as key to strengthening our future communities. The American Academy of Pediatrics (AAP) covers the essential role that schools play in a sociocultural shift in gender development ideology. Because schools are in the forefront in most communities, the AAP supports educators and school administrators in advocacy and implementing policy (Rafferty, 2018). The revision of AAP policy recommends the perspective of a gender-affirmative care model in supporting children and adolescents in a multidisciplinary approach, including places and programs for learning.

Diane Ehrensaft (2016), a highly revered and much published gender specialist, believes schools to be second in line, next to families, in their capacity to support gender-expansive children in realizing their authentic selves. Evidently, educators need to increase their awareness of gender creativity as an aspect of healthy childhood identity development and focus on fostering learning environments and experiences that nurture gender authenticity. It seems there is a resounding societal call to educators for an adjustment in professional attitudes not only to respond affirmatively to individual gender-expansive children but to incorporate challenges of gender role stereotypes into classroom learning, and to integrate nonbinary gender concepts in their language and role modelling.

A significant number of educators seem to be failing to meet the challenge put forward. Small indications of affirmative attitudes can be seen in school environments, such as gender-neutral bathrooms and resource group posters. Even then, these accommodations are more likely in spaces for older learners but are invisible where the children who are primarily engaged in gender exploration spend their days. When asked, the majority of school staff teams have a responsive protocol and strategy for students who disclose at school. The overall impression at this point is that public schools still hold a mental health issue perspective, a situational problem that requires an interventive reaction. The reality is that educators have missed the point of their calling in this domain of human development, the specific specialty of their field.

Educators and public school service providers have a markedly influential role in the sociocultural paradigm shift that will expand the traditional gender-role definitions. By proactively implementing an affirmative approach to gender-fluid development, educators and school service providers become stronger activists in encouraging sociocultural change. Based on vigorous research, experienced specialists are recommending that learning environments and experiences must ubiquitously foster validation of all gender spectrum expressions as evidence-

based best practice. I adduce that a summary of this matter is best described in the *Guide for Sustainable Schools in Manitoba*, wherein schools are to be models of social inclusion, health and well-being, in order to enable all learners to participate fully in school life while instilling a long-lasting respect for human rights, freedoms, culture and creative expression, and challenging prejudice and injustice in all its forms (International Institute for Sustainable Development and Manitoba Education and Advanced Learning, as cited in Manitoba Education and Training, 2017). The evidence has been analyzed, the strategies have been documented, and the challenge is declared; hence, it is time to move forward in action.

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Untangling the Math Debate

Alicia Ballantyne

Abstract

The question of how best to teach mathematics has been up for debate for decades. Traditionalists push for a back-to-basics type education, while reformers seek to teach students for understanding. At the same time, many teachers are dealing with their own feelings of anxiety about math. While it often appears that this debate must end in an either-or solution, perhaps the best way forward would be to seek a balanced solution. Teachers could be supported through this process of change with a combination of quality professional development and opportunities to engage in professional learning communities. Finding a way to strike a balance and end this debate will give teachers the opportunity to provide their students with a comprehensive mathematics education.

Over the last several decades, the question about how to teach mathematics best has been debated heatedly (Hattie et al., 2017). The debate, dubbed the math wars (Schoenfeld, 2004), is the argument between two seemingly polarized sides on how mathematics should be taught. On one side are the traditionalists, who promote a back-to-basics education (Ansari, 2016; Urback, 2017). On the other side of the debate are the reformers, who advocate building understanding of concepts (Ansari, 2016). Further complicating the debate is that many teachers, particularly in primary grades, deal with math anxiety (Gonzalez-DeHass, Furner, Vasquez-Colina, & Morris, 2017) and low self-efficacy in teaching mathematics (Novak & Tassell, 2017). While what is portrayed in the press appears to be an either-or (procedural versus conceptual understanding) scenario, perhaps the best way forward would be to seek a balanced approach to mathematics education (National Council of Teachers of Mathematics [NCTM], 2014).

Ways to support teachers in finding an increased sense of confidence could be found through quality professional development (Thames & Ball, 2010), and developing professional learning communities that promote a focused culture of learning (DuFour, 2004). Change, while necessary, can be difficult; however, there are solutions to help ease the process.

The Math Wars – Trying To Swing the Pendulum

The math wars debate is one that seems to pit traditional back-to-basics curriculum against building understanding of mathematical concepts, leaving anxious educators in the middle, lacking confidence in their ability to support their students. Frequent news reports on the topic of mathematics education broadcast falling test scores (Aumel & Hirshfield, 2018), and claim that the curriculum and discovery learning are the culprits (Urback, 2017). Discovery learning is a phrase often used by the media, yet by their own admission it “is a term rarely uttered by anyone within the education system and does not appear anywhere in [the] math curriculum” (Flanagan, 2018, para. 18). Despite the reports, Canadian students are among the top ten countries assessed on the recent PISA assessment, and students in all provinces, except Saskatchewan, “performed at or above the OECD average” in 2015 (O’Grady, Deussing, Scerbina, Fung, & Muhe, 2015, p. 35). Manitoba’s students do have a lot of room for growth, because they scored well below the Canadian average in mathematics on the recent PCAP in 2016 (O’Grady, Fung, Servage, & Khan, 2018). It is important to remember, however, that the focus of the PISA and PCAP is directly linked not to a particular curriculum, but rather to the way students apply their knowledge (Ansari, 2016). The question of where the issue lies, and how to solve it, is not as simple as demanding a changed curriculum.

How to teach specific curricular outcomes is part of the debate, with each group trying to push the pendulum of educational methods to their side. The media frequently highlight those advocating for a back-to-basics approach that involves rote memorization and learning procedures (Anderssen, 2018). However, the current research into mathematics education shows that students learn best through a combination of teaching strategies that depend on the student, the student's prior knowledge, and the learning goal (Hattie et al., 2017). Students learn curricular outcomes best through non-traditional methods (such as an increased focus on student discourse and collaboration), by building both conceptual understanding and procedural fluency (NCTM, 2014; Rittle-Johnson, Schneider, & Star, 2015) in a differentiated manner (Hattie et al., 2017). This means that students need fluency (flexibility in seeing relationships and strategy use) as well as mastery of basic math facts, not just memorization (Kling & Bay-Williams, 2015). They need to know both how to perform procedures and why they work (Rittle-Johnson et al., 2015). In other words, what students need is a balance of basic skills and understanding, not the either-or scenario often given. While how students learn best is indicated in the research, for teachers to know how to facilitate this learning can seem daunting and complicated, particularly in light of their own feelings and experiences with math.

Many elementary school teachers report high math anxiety, negative feelings toward mathematics, and low self-efficacy when it comes to teaching mathematics (Knaus, 2017; Novak & Tassell, 2017). Multiple studies have shown that teachers pass down these attitudes and beliefs to their students, causing poor achievement in the next generation (Chang, 2015; Gonzalez-DeHass et al., 2017). When students have math anxiety, it affects their working memory and can lead to avoidance of math (Ramirez, Chang, Maloney, Levine, & Beilock, 2016). Preservice teachers who have had math anxiety in the past have stated concerns about their ability to teach new concepts and strategies (Stoehr, 2017). Comparatively, teachers with high self-efficacy in teaching mathematics are more likely to be willing to try new or different teaching approaches, and are willing to use multiple teaching strategies (Chang, 2015). Perhaps this anxiety is why teachers who are not comfortable with mathematics revert to teaching the way they learned, through lecture-style teaching and worksheet practice. The math debate is not just news fodder for a polarizing story, pitting traditionalist against reformer; the consequences are far reaching because they impact teachers, and as a result students, in terms of their feelings about and confidence with mathematics.

Moving Forward by Striking a Balance

Rather than trying to push the pendulum in one direction or the other, supporting teachers through professional development and professional learning communities to strike the right balance between procedure and understanding is perhaps the best thing that educational leaders can do (Anderssen, 2018; Ansari, 2016). One of the biggest challenges at the heart of this debate is that teachers are trying to change the system that they themselves learned from (Zager, 2017). While discovery learning does not exist in the curriculum, inquiry-based learning does (NCTM, 2014). Unlike the free-for-all that discovery learning is portrayed to be, inquiry-based learning relies on a teacher who knows the curriculum thoroughly, has a strong sense of students' learning goals, and is capable of guiding his/her students to a deeper understanding of mathematical concepts (Zager, 2017). A balance of building conceptual understanding, along with learning procedural skills and developing mathematical accuracy and fluency, makes for a rigorous math education (Hattie et al., 2017). Teachers, who usually have learned in a more traditional way, including memorizing facts and formulas, sometimes have difficulty developing the kind of mathematics knowledge for teaching that is required to provide this balanced, rigorous type of mathematics experience (Hill & Ball, 2004).

Supporting teachers to make the shift in their own understanding and professional practice through professional development is an ongoing process. Changing teachers' beliefs about mathematics, and their own self-efficacy in teaching it, takes time (Knaus, 2017). Engaging in

continuing professional development targeted at understanding the mathematical content for teaching is one solution for improvement (Hill & Ball, 2004). Learning through professional development is common practice throughout the teaching profession. Ensuring that the focus of professional development is on making connections between teaching practice and understanding math content for teaching is key (Cueto, Leon, Sorto, & Miranda, 2017). There is an important difference between understanding math content knowledge as computational ability and understanding the content as it is used for teaching (Hill & Ball, 2004). This distinction is important for professional development facilitators to understand, because mathematics teachers also need the latter type of learning in order to be successful at improving student achievement (Thames & Ball, 2010). For example, when teachers participate in learning opportunities that provide time for them to explore concepts by using manipulatives and pictorial representations, they develop a deeper understanding of the content they need to teach and they increase their confidence (Vinson, 2001). While student learning results from many factors, including the teacher's knowledge of and responsiveness to his/her students' learning needs (Hattie et al., 2017), the teacher's own understanding of mathematical content for teaching is a critical piece for success (Hill & Ball, 2004).

Engaging in collaborative professional learning and dialogue can be a good step in the right direction to reducing math anxiety and increasing self-efficacy (Chang, 2015). Positive feelings about the subject can be transmitted from teachers to their students (Allen & Schnell, 2016). In the same way that teachers work to break concepts down into manageable chunks of information for students to learn and understand, leaders need to think about how to facilitate change in a meaningful, manageable way. Providing opportunities for teachers to explore the mathematical content they are expected to teach, and helping them to make connections between curricular goals and teaching practice, are crucial (NCTM, 2014). Giving teachers time to engage in reasoning, and determining why particular procedures work, are part of finding balance (Hill & Ball, 2004).

Another important shift is to change the culture of our schools from one of teaching in isolation to one of professional learning communities that engage in pedagogical dialogue (NCTM, 2014) and focus on learning goals (DuFour, 2004). In the past, teaching has been an isolated profession; teaching typically happened behind closed doors (Admiraal, Lockhorst, & van der Pol, 2012). Part of being a professional is viewing oneself as a lifelong learner and seeking to learn and improve one's practice (NCTM, 2014). When teachers collaborate in order to shift the focus from what they are teaching to how students are learning (DuFour, 2004), they can focus on the mathematical content as students might learn it. An effective school culture is one that has a shared belief in its own efficacy, collective responsibility to students' learning, and confidence in the ability to improve (NCTM, 2014).

Administrators play a key role in setting the culture of learning in a school. When the message sent by administrators is one of support and understanding, the culture and focus of a school can improve (Marynowski, 2016). Administrators can also build culture by supporting meaningful professional development that builds teachers' understanding of curricula (Admiraal et al., 2012; NCTM, 2014). This shift in culture to one of collaborative practice and goals (Admiraal et al., 2012; DuFour, 2004) provides opportunity for professional dialogue that can build some of the mathematical content for teaching that educators may be missing. Perhaps if teachers no longer feel as though they are in the middle of a tug of war, but rather feel supported through a culture of professional development and dialogue, they will have the confidence to move forward with providing the balanced mathematics education that students need.

Conclusion

The debate about mathematics education continues, with no easy solution. Teachers are on the receiving end of conflicting information. The traditionalists, via the media, are demanding

traditional teaching methods and curriculum (Urback, 2017). On the other side are those who promote building conceptual understanding (Ansari, 2016). Compounding this confusion are teachers' own negative feelings about mathematics and a lack of self-efficacy (Gonzalez-DeHass et al., 2017). Having the courage to learn and move forward with a balanced approach can be a challenge, but one that is achievable. Ongoing, quality professional development could be one solution to improving both teachers' knowledge about math education (Thames & Ball, 2010) and their self-efficacy (Knaus, 2017). Providing teachers with opportunities to engage in discussion and collaborative work is another possible solution (DuFour, 2004). One thing is clear, though: if the stakeholders in this debate do not strive to work together and find a balance, it will be the students who continue to miss out on a comprehensive mathematics education.

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About the Author

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SPECIAL INTEREST PAPER

Creating Equity in a Diverse Rural School

Jennifer Chrisp

McCreary School,² a rural community school with an average enrolment of 150 students from kindergarten to grade 12, provides a learning environment for a population of diverse students in Turtle River School Division, Manitoba. At the same time, the school incurs significant challenges for creating a school and classroom environment that is equitable for all students. The diverse background that makes up an individual student (including, but not limited to, ethnicity, socioeconomic status, and cognitive and physical ability) contributes to the creation of a sample of minority students within the school population. School-based data have shown a relationship between the minority population and lower social and academic achievement. These barriers combine to produce learning obstacles that must be carefully considered in order to bring about change so that success for all learners may be achieved through equitable opportunities. The teachers at McCreary School have collaborated to make a plan for change at both the school and classroom level, in order to create an increase in equitable opportunities for every student. The teachers determined that change is required in three domains: meeting individual students' basic physical needs, supporting students academically at the school and classroom level, and supporting students socially at the school and classroom level. While the range of diverse students poses a challenge for creating an equitable learning environment for all learners, several solutions have been put into effect by teachers, in order to work toward creating and maintaining equity at both the school and classroom levels.

The Challenges of Creating Equity

Every student brings a diverse set of characteristics and skills, and each child should be considered unique (Katz, 2012). A number of external factors influence a child's success in school. Some of these factors, as experienced in McCreary School, are ethnicity, socioeconomic status, and cognitive and physical ability. Students who experience these factors may have more of an academic struggle because the "dominant identity takes precedent over all others in school" (Tuters, 2015, p. 693). When students have characteristics from more than one category, it becomes increasingly more difficult to create an equitable learning atmosphere for diverse learners.

Social disparity is frequently experienced by students who come from a cultural background different from the background of the majority of students in the school population. Data show that "more than one in seven children is living in poverty" (Canadian Teachers' Federation, 2017, p. 1). Minority students find difficulties fitting in with peers or creating and/or maintaining friendships. They struggle to be part of the school community, and as a result attempt to conceal their minority status (Chen & Keats, 2016). Minority students often stand out socially because they are culturally different. These differences lie in their clothing, food, shelter, beliefs, and values. The struggle to meet the basic life needs takes priority over education in minority population students.

Academically, classroom assessments show a significant gap in the results when comparing students from a majority to a minority population. In McCreary School, the number of self-declared Aboriginal students is considerably fewer than those who do not self-declare as

² This author has a letter from the Turtle River School Division superintendent, giving her permission to make specific references to her school and school division in this article.

Aboriginal. The correlation between students who self-declare as Aboriginal and scoring lower academic results is significant, and “all indicators are that Aboriginal populations have dismal educational outcomes” (Lawton, Philpott, & Furey, 2011, p. 98). School-specific data for the 2016-2017 school year show that self-declared Aboriginal students in grade 3 scored an average of 20% lower across all four sub-competencies in the provincial grade 3 numeracy assessment, and an average of 26% lower across the three sub-competencies in the grade 3 provincial reading in English assessment. Likewise, results from the provincial grade 7 number sense and number skills assessment reveal that across all five sub-competencies, self-declared Aboriginal student scores were an average of 14% lower compared to non-Aboriginal students. The grade 8 provincial assessment for reading comprehension and expository writing shows that self-declared Aboriginal students scored an average of 23% lower across all six sub-competencies when compared to students who did not self-declare as Aboriginal (Turtle River School Division, 2017, pp. 1-8). These data give substantial evidence to support the fact that there is a large discrepancy in learning achievement between majority and minority students.

Some of the causal theories linked to lower academic success in minority groups include transiency, a high rate of absenteeism, an increased rate of poverty (with contributing factors such as inadequate housing or nutrition), a lack of parental support or academic resources at home, and a lack of engagement in the classroom (Chen & Keats, 2016; Lawton et al., 2011; McIsaac, Read, Veugelers, & Kirk, 2017). Minority students experience a lack of financial resources that “translate[s] into many students having a very poor quality diet and struggling with concentration and learning” (Tuters, 2015, p. 690). Often, these students are not ready to start kindergarten because they lack the basic kindergarten readiness skills, both socially and academically. This gap in learning continues to expand into the later years of school, creating an even larger variance between the majority and minority.

Strategies for Creating Equity

Creating and maintaining student success through an equitable approach to education may be a challenge; however, teachers at McCreary School have come together to produce a school plan with goals that outline the steps necessary to start the process of change. Three areas have been identified, for which support is being implemented: meeting students’ basic needs, meeting students’ social needs, and meeting students’ academic needs. Targeting these three areas increases the chances for all students to experience equity and, as a result, success in school.

Meeting the Physical Needs of Students

Before success in social or academic constructs can be achieved, it is critical that students have their basic physical needs met. For each child, basic physical needs are “inextricably linked to long-term prosperity” (McIsaac et al., 2017, p. 214). As much as possible, McCreary School strives to support students in meeting their basic needs. Every morning, a breakfast program is offered to all students. Nutritious options from all four food groups are provided. Students in kindergarten to grade 12 have the opportunity to mingle during breakfast, developing a sense of belonging with each other. Students who arrive late to school have complimentary food options available at the office when they sign in. Several times throughout the year, the school staff cooks hot meals for the students. During special occasions, such as Christmas, staff members donate food and cook a traditional Christmas dinner for all students to enjoy. The entire school comes together in the gym and eats this meal together. The older students volunteer to help the younger students. A strong sense of school community is created during these times, particularly for students who may not have this opportunity at home. The school and teachers provide daily snacks to those students who may come without. Clothing, especially in the winter, or a change of clothing for physical education, is supplied by the school

for students in need. If a family is unable to purchase school supplies, the school provides those students with supplies. The school attempts to connect families with various community agencies (such as the local church, the second-hand store, and public and mental health) that may be able to provide additional resources. McCreary School will continue to find additional ways to help children meet their everyday basic needs, so that they have a stronger chance to experience social and academic success.

Creating a Sense of Belonging for All Students

Teachers at McCreary School recognize that “building a climate of acceptance and social inclusion for children is essential” (Lindsay, Proulx, Scott, & Thomson, 2014, p. 116). McCreary School is aware of cultural diversity and makes efforts to prevent any type of cultural discrimination (Goddard, Johansson, & Norberg, 2010). McCreary School strives to ensure that all students feel welcome, safe, and part of the school community. As part of the school plan, every student was asked to identify at least one adult in the school with whom they feel comfortable to confide in. The staff collaborates and works toward maintaining positive staff morale, creating an environment where respect and positivity are modelled to students through positive staff interactions. Furthermore, the staff seeks to build positive student-staff relationships. Many of the staff members, both teachers and support staff, greet students at the door every morning and at dismissal in order to encourage a sense of belonging for all school members. The belief that all children should be treated with acceptance, kindness, and respect in order to promote an atmosphere of acceptance and inclusion is a principle shared by all staff.

McCreary School encourages all students to participate in extra-curricular activities in order to become a part of the school community beyond the classroom. The school does not charge any fees for extra-curricular activities so that all students, regardless of their socioeconomic status, are given the opportunity to be part of the school atmosphere. All students from grades 7 to 12 are encouraged to participate in at least three extra-curricular activities of their choice throughout the year. To meet the interests of all individuals, several options are given to students – sports teams, academic clubs, social clubs, peer advisory clubs – giving recognition to a variety of individual strengths and challenges (Brenna, Burles, Holtlander, & Bocking, 2017). Participation by each student is tracked through Maverick Points. The Maverick Points system has shown a gradual increase in student participation in extra-curricular activities over the last two years. Teachers will continue to encourage all students to take part in extra-curricular activities in order to increase the positive school community climate.

It is important for the local community to feel a sense of belonging and investment within the school. Having parents on board in order to achieve student success is paramount. The school has found multiple opportunities for community involvement throughout the school year, in both the school and community. Multiple school events are open to the public, including (but not limited to) a Remembrance Day service, Christmas concert, spring carnival, spring festival, and family game night. Students become involved in the community on various occasions, such as going to the personal care home to sing, participating in community-wide scavenger hunts, and conducting a town-wide clean-up. Creating opportunities for community involvement builds parent-teacher-student relationships that are crucial in supporting student success via a team approach.

To increase awareness and inclusion of minority ethnicities and culture, particularly the Aboriginal culture, McCreary School has applied for and received the Aboriginal Academic Achievement Grant. The funds from the grant have enabled students to participate in various Aboriginal cultural activities. Last year, students had the opportunity to participate in crafting moccasins, going to the Festival du Voyageur, viewing an interactive Aboriginal-themed play, experiencing Aboriginal cuisine, and creating soapstone carvings. The goal of having students experience Aboriginal culture is to bring a higher sense of inclusion to the Aboriginal student

population, and to increase Aboriginal cultural awareness and respect by non-Aboriginal students.

Social acceptance is crucial not just within the school but also within each classroom. Children need to feel a sense of belonging by both their teachers and peers. Some of the early years classrooms at McCreary School have begun having classroom check-ins or class meetings. The class meetings give students a voice to express what they most enjoy and what they would like to see changed. The students are given a chance to come up with their own solutions, creating an increase in student accountability (Katz, 2012). The early years classrooms have created spirit buddies for students, whereby each student has another student to confide in. Every student has someone to talk to for a few minutes every day, effectively creating a higher sense of belonging for each student (Katz, 2012). The division social worker visits the school on a weekly basis and provides support to individuals and classrooms. Students engage in sessions where empathy, compassion and respect are of utmost importance. To encourage these same values, Respect Education is taught in the middle years classes. At the high school level, the teachers work alongside the students to facilitate positive peer relationships. Social success is a crucial area of focus at the classroom level.

Supporting Academic Success for All Learners

Academically, the school has created various opportunities for teachers to support all students in being successful. Teachers are currently being given professional development days to meet as professional learning communities (PLCs), with a focus on inclusion and differentiation to meet the needs of all learners. Teachers believe strongly that “with an increase in student need there is a higher need for resources in the school and classroom” (Wiltse, Johnston, & Yang, 2014, p. 210). Consequently, the school principal has to make important decisions about how to distribute financial resources to support all teachers and students in an equitable approach (Pollack & Zirkel, 2013). Additional resource support has been added to several classes where extra student support is required. The early years’ classrooms have embraced play-based and explorative learning, encompassing student interest and therefore increasing student engagement. A shift in focus for all teachers from content-based to critical thinking and 21st century skills has taken place over the last couple years. The principal plays a supportive role in guiding teachers to create inclusive and equitable classrooms that support academic achievement for all scholars.

The classroom, where students spend the majority of their school day, has arguably the most influence on academic success. Professional development in the area of inclusion is key, “to help teachers better understand what such practices might look like” (Woodcock & Hardy, 2017, p. 683). Additionally, teachers focus on differentiating instruction, activities, and assessment to meet the learning styles of all students, in recognition that good teaching practice is not a “one-size-fits-all” model (Davies, Herbst, & Reynolds, 2008, p. 53). It is important to offer students choice, pay attention to their interests, and listen to what they believe they need to achieve their goals, because “student voice can support teachers in reframing classroom practice” (Kane & Chimwayange, 2014, p. 65). With the classroom focus on inclusion and differentiation, an increase in student achievement is slowly being noticed in McCreary School.

To support students who struggle academically, it is critical to provide extra opportunities to increase their knowledge and understanding so that they, too, may experience success. In McCreary School, as proven by school-specific data, many of those students are Aboriginal. Lessons are now infused with Aboriginal perspectives and the Seven Teachings, in order to foster engagement by these minority students. With an increase in student interest, attendance is slowly increasing, leading to increased student achievement for students who may otherwise struggle with their learning.

Teachers in McCreary School are providing students with additional opportunities to increase their knowledge and understanding, particularly in literacy and numeracy. Early literacy

intervention support is provided to give students a boost in their reading. Resources, such as levelled books, are given to students to take home for extra practice. A free program, "Kindergarten Here I Come," is offered to all students in pre-kindergarten to prepare them for school, providing "an excellent opportunity to hone precursor social and academic skills that facilitate kindergarten and school entry success" (Pagani, Jalbert, Lapointe, & Hébert, 2006, p. 209). Giving students as much practice as possible in academics is an excellent method to increase literacy and numeracy knowledge and understanding for all students. Within the school and individual classrooms, various opportunities are being provided by teachers in order to support all students to achieve success.

Conclusion

McCreary School's diverse student population, despite the various challenges it may face, is starting to experience more equity in learning. Diversity poses challenges for creating equity, because students in the minority (ethnicity, socioeconomic status, and ability) typically experience a more difficult path to attainment of success, as indicated by school-specific data. The teaching staff at McCreary School agree that a more equitable learning atmosphere must be created within the school and classrooms. In generating the school plan, the staff identified three areas where changes need to occur. Meeting the basic daily needs of children, and changes at the school and classroom level in both social and academic domains, are critical for creating a sense of acceptance, safety, and achievement. The range of diverse students presents a challenge for creating an equitable learning environment, for which teachers are working hard to provide a range of equitable opportunities to support success for all students.

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OPINION PAPER

Teaching Aboriginal Studies in Manitoba

Eric Lowe

Aboriginal perspectives should be infused throughout Manitoba's school curricula because understanding traditional knowledge is important for the success of all learners. *Aboriginal* is an all-inclusive word, which for Manitoba includes the Dakota, Anishanabek, Oji-Cree, Cree, Dene and Metis peoples, each with different cultures. *Non-Aboriginal* includes all other nationalities with their own cultures. Because of these cultural differences, integrating Aboriginal studies can present many challenges. However, it is essential for the reconciliation process in Canada to build bridges that will bring everyone together, while respecting their individual differences.

Manitoba curricula need to be updated to include the history of Aboriginal cultures whose traditional knowledge has been devalued by non-Aboriginal cultures. It is time to focus on creating awareness for the Truth & Reconciliation process to begin. Understanding Aboriginal viewpoints develops a respect for the various aspects of Aboriginal cultures: language, clothing, dwellings, knowledge, values, ceremonies, ways of living and learning, etc. Aboriginal people need to rediscover their own identity for the survival of their cultures.

Many challenges affect students' academic success. Inadequate school funding is followed closely by weak leadership from school administrators, and insufficient parent and community support. On-reserve schools receive lower funding than off-reserve schools, which reduces the availability of resources such as books, videos, learning materials, instructors, staff wages, and gratuities for Elders. All children in Manitoba deserve the same education, but northern schools do not have access to the same resources as other schools, particularly technology and electronics. Without increased funding and other types of support, we cannot address Aboriginal students' lack of interest in their learning process which is reflected in their poor attendance. These negative influences limit academic success and subsequent career and job opportunities, leaving generations of people unemployed and continuing to live on social assistance.

Northern Aboriginal communities have difficulties attracting suitable teacher candidates. They have a negative reputation for hiring only new graduates or teachers who (for whatever reasons) have not found jobs down south. These teachers tend to leave after only a couple of years, which makes creating lasting, meaningful relationships with students difficult. It can also lead to feelings of abandonment in students. High teacher turnover, lack of local job opportunities, and low self-image lead to an inability to see one's own potential, which causes students to feel that education is not important. Chronic absenteeism begins in the early years and worsens in high school. Many community members have an adversarial relationship with school. Generations of not prioritizing education means that many families do not value school. If teachers want their students to be invested in education, the teachers need to be invested in the students' families and communities. School administrators play a key role in enculturating new teachers so that Aboriginal students have a brighter future to look forward to.

Elders can be a valuable resource. Elders provide traditional cultural knowledge, often through storytelling. Elders can guide educators with correct protocol and respectful ways so that they know what is appropriate to teach (and how) and what is not, such as the Sundance ceremony. However, finding a knowledgeable Elder to come in and talk to the students about traditional Aboriginal culture and ways of life may sometimes be difficult, especially when schools lack the funding to thank the Elders for their services.

Several Aboriginal communities in Manitoba have created culture infusion experiences. For example, the Aboriginal Content Centre in Wanipigow School is an outdoor education program in conjunction with the Ojibwe language immersion program. Students learn to fish, hunt, and

clean game, and they learn about plants and animal calls. The On-The-Land students learn how to make traditional tools for making shelters, building fires, drying fish, making bannock, cooking over an open flame, tea making, and constructing tipis. With songs, dances, and storytelling, students learn the Seven Sacred Teachings. Students in the afterschool programs participate in traditional Ojibwe games and sports like lacrosse for the younger children. These cultural experiences give youth a place to come together and discover who they are as Ojibwe.

Cross Lake Education Authority owns a cabin called *kisipanakak*, about 5 kilometers outside of Cross Lake. Students learn survival skills like building shelters, making fires, hunting, and trapping. These activities provide knowledge on how to live off the land and learn more about nature. The Cree knowledge keeper tells stories and sings songs (in Cree). On The Land-based activities include trap setting, snow shoe racing, starting a camp fire, and bannock making. The students also pluck, singe, and cut up geese and ducks by to make soup.

Frontier School Division has cabins for students to explore the outdoors. Activities include storytelling and hands-on activities such as making dream catchers, bannock making, and beading. Students can also learn about traditional knowledge and ceremonies such as the pipe ceremony, drumming, and singing. Students learn to make fried bannock over the fire. They learn how to snare a rabbit and that the best tasting rabbits are caught only during the winter. They learn about traditional medicines used by Aboriginal people for hundreds of generations.

In the Dakota “culture camp” at the old buffalo jump near Saskatoon, everyone wears traditional clothing, such as women’s ribbon skirts. The youth prepare and share traditional Dakota foods. They discuss and practise traditional knowledge, songs, and dances related to all natural life, including the eight Dakota teachings and the creation stories. Young men learn to skin a deer or tan a hide. Girls learn to sew star blankets (traditionally used to honour another person), weave baskets, and make beadwork crafts. Students also learn new words in the Dakota language and practise speaking together.

These examples are important because they celebrate not just First Nations knowledge but the differences between First Nations cultures. Culture camps rely on the experience of Elders. Non-Aboriginal educators may have good intentions but do not have the traditional knowledge to feel comfortable teaching a culture that is not their own. Community resource people can play an essential role in filling the gaps both in the classroom and outdoors in culture camps.

Infusing Aboriginal perspectives throughout Manitoba’s school curricula will acknowledge history and cultural differences that have been devalued and delegitimized. Non-Aboriginal students will also become more sensitive toward Aboriginal issues as they develop awareness of the social inequalities that Aboriginal people live with on a daily basis. As On-The-Land and Aboriginal afterschool activities become entrenched in school programming, Aboriginal students may be increasingly motivated to attend school and the dropout rates may slowly decrease, with all of the other personal and societal benefits that are associated with educational success.

Time is of the essence, however. Aboriginal Elders are dying off and we must work fast to ensure that their knowledge and stories are not lost. Aboriginal-infused Manitoba curricula could continue to pass these stories on, as Aboriginal Elders have done for generations. This will begin a process of meaningful learning in our schools, which will give all students, parents, and teachers a better understanding of the whole picture. This will increase students’ self-esteem and school retention. Teaching Aboriginal studies is important, and Aboriginal perspectives need to be integrated in the Manitoba curriculum.

About the Author

Eric Lowe is an art educator with 16 years as a Brandon School Division teacher and 12 years as a BU sessional lecturer. Eric has three M.Ed. degrees from BU – in curriculum, administration, and special education. His dedication to Aboriginal perspectives has been fueled by his graduate studies and his work with PENT and CBE students at BU.