Literature Review: Promoting Successful School Programming for Students Living in Poverty

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Abstract

The purpose of this paper is to highlight the need for effective educational programming for students living in poverty. The reviewed literature outlines research that stresses the importance of self-regulation and working memory in learning, particularly for students living in poverty. As well, the paper provides a review of the research regarding the value of building relationships within classrooms, schools, and communities in order to encourage academic and social-emotional growth for students. Within the paper, the promotion of academic programming that integrates kinesthetic activities and social-emotional learning is also examined. Finally, the discussion section provides a focus and direction for the author's current and future practice as she aspires to be a change agent within her school for students who are experiencing poverty.

As professionals, we are constantly searching for current research that focuses on enhancing student growth and creating positive learning environments for all of the students in our classrooms and our schools. The many insights that I have gained from my teaching experiences in grades 1 through 8 have left me with a passion to learn more about how all students learn, especially students who are living in poverty and dealing with chronic stress.

To explore these issues, the following paper reviews my evolving learning experiences emanating from a study of current research and literature of the effects of poverty on the brain. I began my research by searching the keywords of "poverty" and "stress." The articles that I selected included research from American and Canadian studies; however, preference was given to quality journal articles that contained Canadian content. As I learned more in each research article, my searches expanded, building on topics from the previous studies that I wanted to learn more about. Within the reviewed research, I discovered studies that provided successful research-based initiatives that will assist me in implementing programs that increase student and parent engagement. In improving my understanding of the current research, I am striving toward my goal of continually enhancing student achievement for all of the learners in my classroom, while using an affirming approach.

The following literature review provides an overview of current research on the effects of poverty on learning and the brain, including research examples that address the positive effect of developing and promoting relationships in order to assist students living in poverty, and strategies for promoting student growth by implementing effective programming. To conclude, I discuss how I will integrate this new knowledge within my professional role.

Understanding the Effects of Poverty on Learning and Teaching

For educators, the implications of student stress that may be brought on by living in poverty can be noticeable in our classrooms. When thinking of the current statistics regarding child poverty in Manitoba, we must be aware, and have an understanding, of the experiences and challenges that many of our students deal with as they enter our classrooms. As recently reported by Campaign 2000, Manitoba's current child poverty rate is 29%, which is the highest among the provinces and 10% above the national rate (Frankel & Lewycky, 2014). This statistic reminds us to acknowledge that within our classrooms we will have students living in poverty who could be exhibiting signs of poverty-related stress. We must accept individual students as they come to us, and program accordingly for them from their areas of strength.

Statistics Canada uses a low income cut-off (LICO) measure to describe poverty. To be recognized as living in poverty in Canada, families must spend 20% of their income toward

meeting their basic needs (D'Angiulli & Schibli, 2011, p. 1). Having noted that, in their article regarding high achievement and the impact of poverty, Burney and Beilke (2008) reminded readers that there can be differing definitions of poverty in research literature. They also reminded the reader not to consider income as the lone factor when defining poverty, because that does not sufficiently depict all of the differences between those who have resources and those who do not. Burney and Beilke added that to define poverty is complex, and that both the length of time that a family has been in poverty and the poverty level of the family when the child was younger than five can influence student achievement. An important reminder for teachers, however, is that not all children living in poverty will react negatively or be unhappy (D'Angiulli & Schibli, 2011). Nevertheless, for many of our students, poverty will affect their performance in our classrooms.

The Effects of Poverty in Schools

D'Angiulli and Schibli (2011) summarized the significance of poverty and how it can affect the neurological development of children. In their article, D'Angiulli and Schibli provided examples of corresponding student behaviours that could be exhibited in a classroom. Students may exhibit attention and concentration difficulties, have trouble blocking out distractions, exhibit trouble with recall, display higher emotional reactivity, and have difficulties forming peer relationships.

In addition to the above review of the research, White (2012) conducted a qualitative study to discover what teachers regard as the effects of poverty on students, how they respond to poverty in the classroom, and what they view as necessary to support students in overcoming barriers related to poverty. In the results, White described participant discussion points about the meaning of child poverty and how it affects students. Students coming to school hungry arose repeatedly in the group dialogue. Teachers in the focus group stressed the importance of offering subsidies for meals in a way that students would not be singled out. Participant teachers also explained extra challenges faced by students living in poverty. These challenges included students presenting with learning difficulties, students entering school not ready for the demands of kindergarten, students learning English as their second language, and students exhibiting with low attendance rates that in turn affected their learning. One of the biggest issues encountered by the focus group teachers was the unmet health needs of students.

Within her research, White (2012) also identified cuts to educational services and the negative attitude of some members of the school community toward families in poverty as being barriers to supporting students. In order to provide support for students, the participants in the research study stressed the importance of inclusive classrooms, of schools that care, and of strong community connections in order to promote learning. Connections with our students can create open lines of communication, which in turn can promote student achievement and help to offset poverty's negative effects on learning.

The Effects of Poverty on the Brain

The article by D'Angiulli and Schibli (2011) provides a brief overview of how stress from living in poverty can affect the brain. The stress hormone cortisol affects the hippocampus and prefrontal cortex parts of the brain. These parts of the brain influence memory, planning, attention, and organization. Living in chronic stress can also result in emotional memories being more easily accessible than factual knowledge, which can then affect how, or if, new learning takes place in the classroom. Of particular interest in the article is the reviewed research on the effect that living in poverty may have on the brain's ability to filter out irrelevant information: higher socio-economic status (SES) students, on average, tend to be able to block out distracting information better than low SES students. D'Angiulli and Schibli also reported that low SES students' inability to block out irrelevant information may contribute to delays in oral

language and literacy development. As educators, it is imperative that we program accordingly for our students and remember to not treat students from a deficit approach, but to plan from areas of strength.

To understand the effects of poverty on the brain, it is important to understand the role of working memory and self-regulation on learning. Within their research, Evans and Fuller-Rowell (2013) used the following definition of working memory: "a temporary storage mechanism that enables human beings to retain a limited amount of information for a short period of time" (p. 688). This short-term storage, needed for information to be transferred into long-term memory, is imperative for basic skills such as language, reading, and problem-solving. As well, Evans and Fuller-Rowell described self-regulation as the ability to remain in emotional and behavioural self-control with competing social and physical demands. They predicted that children who have greater self-regulating capacity will experience fewer effects of poverty on chronic physiological stress and working memory. Evans and Fuller-Rowell referenced previous research that documents how childhood poverty and chronic stress can harm children's executive functioning capacities, including working memory.

The participants in Evans and Fuller-Rowell's (2013) study were 241 young adults with an average age of 17.33 years. The study consisted of half female and half male participants with thorough data collection on the duration of childhood poverty exposure, allostatic load, working memory, and self-regulatory behaviour. Evans and Fuller-Rowell defined allostatic load as "an index of cumulative wear and tear on the body caused by repeated physiologic mobilization in response to environmental demands" (p. 689). Approximately half of the sample in the study was below the American poverty line, and the other half grew up in average SES American families. The testing happened in each child's home, and data were collected from the child and his/her mother by two experimenters working independently.

Evans and Fuller-Rowell (2013) explained that stronger evidence was needed, but they also noted that children with better self-regulation appear to be protected in some capacity from the harmful effects of poverty on their working memory. This positive finding highlights the need for schools to provide opportunities for students to develop their self-regulation skills. Those opportunities may be mentored in schools that create a culture of supportive relationships.

The Importance of Relationships

The impact of positive relationships in the profession of teaching is extremely significant. As teachers, we have the capacity to build those relationships with our students, with the families of our school community, and with our colleagues. Through first-hand experiences, I have found that encouraging relationships can motivate our students to work harder, to take more learning risks within the classroom, and to feel safe and accepted. This is especially true for students who live in poverty and experience stress. In their research, D'Angiulli and Schibli (2011) offered some suggestions for what we, as educators, can do to promote positive relationships and by doing so help our students who are dealing with stress. They stated that we must keep our expectations high. It is important to respect differences and plan with attention to learning styles. Finally, we must try to make our classrooms as stress free as possible and strive to build positive relationships between the school and home. As teachers, it is particularly imperative that we build our capacity to create meaningful relationships with our students.

Teacher-Student Relationships

Schmitt, Pentimonti, and Justice (2012) examined to what degree the quality of the teacher-child relationship and behaviour regulation are related to the grammar gain of preschoolers from low SES backgrounds. As well, Schmitt et al. asked, "To what extent are the relations between the quality of the teacher-child relationship and grammar gain moderated by children's behaviour regulation?" (p. 686). They defined at-risk students as those from low-SES homes.

Teacher-child relationships were explained positively as being those of closeness, which included warmth and approachability, and were explained negatively as being those of conflict, which included strained interactions with a lack of rapport.

Schmitt et al. (2012) conducted their study of teacher-child relationships within a larger study that examined instructional practices in preschool classrooms that were identified as working with at-risk populations. The research participants were 173 children of various ethnic backgrounds, with a mean age of 52 months and from 30 United States childcare centers. Most of the centers had only one participating classroom and were identified as Head Start programs and state-funded/Title 1 programs.

Schmitt et al. (2012) found that the quality of a teacher-child relationship had an association with a student's grammar gain over the course of a year. They also noted that there was no significant relationship between children's behaviour regulation and their grammar gains during the year; however, children with strong behaviour regulation and conflicted teacher-child relationships showed greater grammar gains than their peers with low behaviour regulation skills and conflicted teacher-child relationships. The results validated that nurturing classroom environments with positive relationships can enhance academic learning and language development, as well as social development. The culture of inclusive relationships must also extend to include each student's caregivers.

Relationships with Parents

It is important to get to know and understand the parents of our students. When the school creates a welcoming atmosphere among parents and community members, that positive approach engenders collaboration that can then provide support for all involved. Based on focus group findings, White (2012) emphasized the importance of building connections with parents because the parents' own experiences in the educational system could have been negative. In her research, Hands (2013) focused on strategies for connecting with and supporting parents who deal with challenges that affect their engagement with their child's education, such as poverty and cultural diversity. As referenced within the article, parents who are engaged in their children's learning promote student achievement and well-being. Hands defined parent engagement as shared control over education, with an understanding that parents hold knowledge that contributes to teaching and learning.

Hands (2013) addressed the challenges of family engagement and elaborated the strategies and initiatives used in the study that might facilitate more parental involvement for all families. One strategy discussed was to build resources for parental engagement, such as translation services, childcare services, transportation services, and free programming. Another successful strategy that promoted inclusion was giving parents the opportunity to be involved in student learning through programs such as the Get Involved: Volunteer in Education (GIVE) program and Families and Schools Together (FAST) program. Through providing access to these initiatives and strategies, Hands' study supported student achievement through collaboration.

Hands' (2013) research findings confirmed many of my personal experiences when working with families that live in poverty. I have been fortunate to be a part of the FAST program at my school. As a classroom teacher, I see the major rewards of the program as connections and relationships are formed that promote home-school partnerships. My colleagues and I have discussed how to attract and include more teachers in this program, because it is a positive experience for everyone involved.

I have also been involved in parent-teacher evenings designed to inform parents of school programming, in which fewer than 10 parents attended. Hands (2013) encouraged educators to be aware of the format of the presentation, to know where to hold the function, to know what the parents want, and to know how to encourage attendance. For me, this means rethinking how to plan for upcoming events in my school. As elaborated by Hands, our initial step may include

going into the community and listening to what our families identify as beneficial. This is an approach that I will be discussing with the administration at my school when planning for school-wide events and when planning for the next school year with my colleagues.

Relationships and Collaboration Among Colleagues

Teamwork has always been an important component of my professional role, and one that I feel has benefited me, my students and their families, and my colleagues. Ciuffetelli-Parker, Grenville, and Flessa (2011) discussed a Canadian qualitative case study funded by the Elementary Teachers' Federation of Ontario. Over a one-year period, narratives were collected from adult groups of teachers, parents, and administrators who discussed what made schools successful when working with students who live in poverty. The 11 schools selected for the study consisted of 6 small schools in an urban area, 3 large schools from the same urban area, 1 suburban school, and 1 rural school. The demographics of the schools ranged from all-English speaking students to schools with 50% of their population identified as English language learners. The student population of one school consisted of a majority of Aboriginal learners. The schools in the study were nominated based on their reputation for success.

One of the key findings of the study was that successful schools had a committed teaching staff. As stated by Ciuffetelli-Parker et al. (2011), "Teacher participants attributed school success and a positive school climate to teaching excellence and high-quality collaboration" (p. 144). As teachers, it is important that we make collaboration a priority for the benefit of our students. When schools can provide time for colleagues to work together, it helps students, teachers, and families. Teachers reported that it could be hard to find the balance between addressing social-emotional learning and academic learning. They relied on collaboration among colleagues for support; the schools and teachers in the study reported that they felt a collective responsibility for all of the students in the school. The successful schools implemented new initiatives, including peer modelling and coaching, and Professional Learning Communities. As reported by Ciuffetelli-Parker et al., the staff cared about students and each other, with the goal being to improve students' social-emotional well-being and academic achievement.

The narratives in this study were relevant, and I could easily relate to what the teachers in the study were feeling. In my experience, working as a team with students, colleagues, families, and community members has been immensely rewarding because it has provided me with personal knowledge of how effective collaboration and the sharing of ideas can be facilitated across classrooms, and into homes and the community. I believe that all students within a school are our responsibility, not just the students in our homeroom. When we collaborate as a school community, we promote student academic and social growth through joint approaches to student programming.

Programming To Support Student Success

While a common theme among the reviewed articles was the power of relationships in making a difference for our students, another theme that emerged was the necessity for early intervention. It is important for schools and teaching staff to recognize students' strengths and areas of need in order to program for success. School staffs need to identify through collaboration the current level of performance of individual students early in their school years. This will enable teachers to put supports in place to help each student grow to his/her maximum capability. Burney and Beilke (2008) described the impact of poverty on achievement in school. Students living in poverty have limited access to resources to build their foundational skills and they have fewer opportunities for activities after school. With a positive and assertive statement, however, Burney and Beilke also stressed, "Low-income students of academic promise offer the nation's best hope for reversing the trend of an increasing number of families living in poverty"

(p. 188). They suggested initiatives for schools working with students who live in poverty, while emphasizing the importance of early intervention and better school programming.

Many programming suggestions were offered by various authors throughout my reviewed research. In particular, to assist students living in poverty to reach their maximum potential, Burney and Beilke (2008) stated that schools must identify high-ability students living in poverty early in their school years, develop resilience in students, encourage family support for students, provide students with access to accelerated instruction, deliver professional development for educators, and offer mentorship to students.

Programming suggestions stated by teachers in the study reported by White (2012) highlighted the importance of a structured approach with clear expectations. White also noted the importance of small group learning, of responding to emotional issues at the start of the day, of confidence-building techniques, and of positive reinforcement for attendance. In middle/secondary school, strategies that were reported as effective were making learning meaningful, understanding the causes of poverty, creating an inclusive community, teaching to strengths and interests, and empowering students. All of the programming aspects speak to the importance of addressing the needs of the whole child.

Programming To Integrate Academic and Social-Emotional Skills

Meeting the complex needs of children and adolescents requires reflection about one's own context and students. For me, relevant research and integration of practices that facilitate both social-emotional learning and academic success are imperative. Daunic et al. (2013) acknowledged the link between social-emotional learning (SEL) and academic learning, while recognizing the pressures within schools to find time to promote social-emotional learning. As a way to provide time and context for social-emotional learning, Daunic et al.'s study combined SEL with acquisition of literacy skills, such as vocabulary development and comprehension, in order to create a Social-Emotional Learning Foundations (SELF) curriculum. The purpose for the pilot research study was to determine the usefulness of integrating the selective, small-group SEL intervention with literacy instruction, to pilot implementation protocols, and to collect data to initiate an examination of potential for improving social-behavioural outcomes.

Daunic et al. (2013) conducted their research in 8 kindergarten classrooms in 2 schools that expressed an interest in the program. Kindergarten teachers chose 3-4 students who were identified for behavioural risk, not including students with other disabilities. The study implemented five social-emotional learning components: self-awareness, self-management, social awareness, relationship management, and responsible decision-making. The lessons were taught for 20 minutes, two to three times per week in small groups (3-4 students), in order to increase opportunities to promote language, especially language related to SEL. The pilot study findings revealed a positive indication that both literacy and self-regulatory skills that are associated with SEL were improved by using the integrated program.

By further exploring the strengths of effective programming, Welsh, Nix, Blair, Bierman, and Nelson (2010) investigated the association between developing working memory and attention control skills, and acquiring emergent literacy and emergent numeracy skills in pre-kindergarten. The researchers conducted a quantitative research study of a large sample of children in the Head Start pre-kindergarten program. Welsh et al. hypothesized that growth in working memory and attention control would be related to growth in emergent literacy and numeracy skills over the course of the pre-kindergarten year, and that growth in these skills would each influence reading and math achievement in kindergarten. Attention control was described as the ability to focus and shift attention, and to ignore irrelevant stimuli.

After analysing the data compiled in the research study, Welsh et al. (2010) concluded, "The data provided convincing evidence that development in working memory and attention control during the preschool period might be an important contributor to later academic achievement in reading and math" (p. 51). They acknowledged the need for more research in

this area in order to strengthen the findings. As well, Welsh et al. examined the growing evidence within their findings of a close association between working memory and attention control, and ability in mathematics. They speculated that pre-kindergarten math activities make demands on working memory and attention control. In addition, Welsh et al. suggested that working memory and attention control experience rapid development during the preschool years. For me, this statement highlighted the need for programs to encourage growth in these domains during preschool and kindergarten years, especially for students living in poverty. This is certainly something that I will be sharing with my colleagues and the parents of my students when I return to my numeracy support teaching role next school year. In that role, while addressing the needs of my students and their families, I will also work with an understanding that I must program from my students' areas of strength.

Learner Factors for Effective Programming

In my professional experience, when planning for student achievement, it is important to identify and plan from the strengths of the students in the classroom, from their prominent learner factors. Olivares-Cuhat (2011) conducted a pilot research study to explore learner factors that are common in high-poverty urban schools. She used a comparative research design with descriptive statistics to measure the relationships among learner factors such as learning style preferences, language learning strategies, and emotional intelligence of students from an American high-poverty middle school. She also examined differences in learner factors between students of distinctive ethnic backgrounds. Learning style preferences were explained in the article as matching teaching and learning styles. Olivares-Cuhat described language learning strategies as activities such as mnemonic devices and relaxation methods chosen by learners in order to regulate their own learning. The final learner factor of emotional intelligence was defined as intelligence that is broken into various cognitive abilities.

Olivares-Cuhat (2011) discovered that the students had a strong preference for kinesthetic and sensing-perceiving learning styles. She also found that these students were significantly below average in emotional intelligence. As well, different learning style preferences and abilities were found across different ethnic backgrounds. When students can find their culture and learning style integrated in the teaching and learning process, more learners will benefit.

These findings indicate that educators must deliberately plan for and integrate programs for students who live in poverty and experience the symptoms of stress that students living in poverty often present. Integrating social-emotional programs with academic programs is a practice that requires attention in our classrooms. As well, the need to be aware of learner factors within classrooms is paramount (D'Angiulli & Schibli, 2011; Olivares-Cuhat, 2011).

While considering all of the factors needed in order to engage and encourage our students to be lifelong learners, we must first get to know them as individuals and then program for their interests in a learning style that enables them to excel. When educators program for success, we can then also program for students in areas that require further growth. Knowing that demands of the teaching profession can be overwhelming and that teachers are constantly under time constraints, we must look at integrating social-emotional programming with academic programming, because the social-emotional aspect can greatly influence academic growth. Supporting our students fully and programming for achievement will help every student to feel a sense of accomplishment.

Summary and Discussion

Within our classrooms, it is vital that we are aware of the strengths and needs of each of our students. When we connect with students and make learning meaningful, we are more able to provide opportunities for each student to succeed. The research and literature reviewed within my paper provide a foundation of information regarding the effects of poverty on student

learning. In order to help my students reach their full potential, I must be aware of the current research regarding the effects of poverty on learning. This research will help me to improve my programming and to incorporate practices such as social-emotional learning initiatives throughout the teaching day for all of my students.

As referenced throughout my review, the need to build self-regulation strategies into the span of a teaching day is imperative, because being able to self-regulate may provide protection from the harmful effects of stress related to poverty. It is important to identify students who would benefit from this programming, and to identify each student's strengths, in order to provide opportunities for individualized learning. Early recognition of the needs of each student and classroom within the school, followed by appropriate intervention, is important when assisting students who live in poverty. Part of the early identification is forming positive relationships within a classroom so as to gain a clearer understanding of each student's abilities. Emphasized in the research is the need for positive relationships within schools as a foundation for learning. When schools can plan and deliver programs that are proven to be effective for students living in poverty, they will facilitate the student success needed to promote continuous growth. These programs could include relationship-building initiatives, and opportunities for social-emotional growth and hands-on learning.

Although I feel enlightened by my new knowledge, I know that this is only the beginning of my work in developing programming to meet individual student needs. Through this research, I am reminded not to treat students from a deficit approach, but to work from their strengths. I am further motivated to build empathy, understanding, and support for students who are dealing with poverty in my school and school division. Further to this, I would like to encourage constant dialogue and collaboration at my school about the impact of poverty and its associated stressors on our students. As a head teacher at my school, I have recently started conversations with my administration team and colleagues regarding the impact of teacher mentoring. We are beginning to plan for the following school year on how we can more effectively support each other, which will in turn support our students to achieve to their highest capabilities.

In my classroom and within my school, I feel it is absolutely essential that we check in with our students every day and provide an environment wherein we all are aware of everyone's well-being, because then new learning is more likely to take place. As well as providing an environment that is engaging and safe, I know that I must give my students opportunities to learn from their peers. The influence of the peer group, especially in the middle years of school, is another important factor related to motivation. Belonging to a peer group that is serious about school and achievement can enhance the academic performance of students (Burney & Beilke, 2008). That reminder has prompted me to think of the positive influence of my school's Student Leadership Team. I am encouraged by the number of students who aspire to be a part of the Student Leadership Team. For me, it is important that we create these positive environments and teams for students within our schools. This will be an area of focus for me next year as I move into a learner-support teaching role.

Within my research, there was an introduction of strategies and programs that could promote self-regulation and attention control. Two such programs are the Promoting Alternative Thinking Strategies (PATHS) program and the Tools of the Mind (ToM) program (Welsh et al., 2010). I have started to research these programs further. The ToM program is especially intriguing to me because it incorporates play. An area of future study for me will be the importance of play in the development of self-regulation, because I have witnessed students who are experiencing stress use quiet play as a coping mechanism in order to regulate their emotions. This is an area that I am anxious to learn more about through future research.

Conclusion

As teachers within school communities, we must work cooperatively to provide the support that all students need. The knowledge that I have gained from the research regarding the

influence of poverty on learning will help me to achieve my goals of effective programming for students within my classroom. The reviewed educational research has confirmed for me that teachers and schools can be positive change agents for our students living in poverty. With this new knowledge and through collaboration with my students, their families, and my colleagues, as well as through student engagement built through strong relationships and programming, I am confident that I can help more learners to experience success.

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About the Author

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