**Proposed Integrated Educational/Occupational Therapy Pilot Project**

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**Project Rational**

According to neuroscience, the ability to think, learn, and attend stems from our ability to move, to integrate our senses, and to feelings of belonging. Without adequate motor skills and sensory integration, students cannot be expected to reach their full academic potential2, 11, 12, 16,20.

**Aim**

To deepen the understanding of the foundations of learning and attention for educators to then strengthen the ability of educators to implement strategies that aid in learning and attention.

**Background & Context**

As a profession, Occupational Therapists are uniquely positioned to design and tailor strategies that help students manage their sensory and cognitive load, thus improving overall decision making9, 10, 22. Occupational Therapists also help train and integrate motor and sensory systems. Currently, when Occupational Therapists are available and caseloads are manageable, they work one on one with a student to treat any impairments and the educator provides the recommended classroom accommodations such as special writing devices, balance activities, or weighted vests.

SD 91 is having trouble locating a full time Occupational Therapists. Presently, an Occupational Therapist from Terrace comes in, assesses, and makes recommendations. However, teachers are not well-versed on how to *integrate* recommendations into their regular classroom routines, nor do they have the scientific background knowledge to understand the recommendations.

In the past, SD 91 had Speech Language Pathologists host professional development to increase the ability of classroom teachers to deal with basic speech needs as the SLP caseload was unmanageable. This proved helpful for classroom teachers and provided the idea for this proposal. Lastly, this ties into the *brief* work that the district did with Stuart Shanker and will bring it back into the front of the minds of educators again20.

**Project Overview**

It is proposed that School District 91 host a pilot project where outdoor educators and occupational therapists work together to develop routines that are easy to integrate into the existing curriculum for k-7 teachers. Having classroom teachers work with Occupational Therapists to develop a model for integration will help ensure a functional, seamless delivery model (rather than as a mechanistic add-on). When interventions and instruction are co-ordinated, they will occur more often and have a greater effect. The goals of the project are to:

1. Increase the accessibility of curriculum for all students, but especially those with minor sensory, gross/fine motor, mobility, self-regulation, or processing impairments. Both teachers and Occupational Therapists are regulated professionals with clear but different goals that are designed to increase student ability and their competence as they navigate their world.
2. Increase teacher knowledge around self-regulation and practices that can help.
3. To increase self-regulation and motor planning in students.
4. To increase opportunities to practice sensory regulation to strengthen the neural pathways and make regulation automatic4, 11.
5. To increase the psychological health of both students and staff by encouraging more teachers to go outside, even briefly, as there is overwhelming evidence that being outside has a positive impact on student learning6, 13, 14 and that place attachment is most beneficial when it involves experiences in the natural15, 19.

**Proposal**

An OT/Teacher pilot project is proposed to address two complementary and critical components of education: psychological health and accessibility/functionality of curriculum and learning outcomes for students. *There is an expectation that this work would result in increased achievement in literacy, numeracy, and social emotional learning by addressing the foundations of learning and attention as is outlined below.*

**Connections to SD 91's Strategic Plan**

**SD 91 Strategic Goal: Honour Diversity by recognizing including Indigenous perspectives**

One of the rationales for seeking to combine the work of outdoor educators specifically with occupational therapists is because, in a review of indigenous perspectives on health in Canada, health is about balance, and developing a relationship with the land is part of that balance for many indigenous communities7. Indigenous communities across Canada consider that accessing the land safely on a regular basis is important for overall psychological health and well-being7 .

**SD 91 Strategic Goal: Strengthen Partnerships and Encourage Collaboration to create learning opportunities for our students.**

This project is a move to integrate services in a more functional way. OTs, SLPs, and educators working in isolation, while beneficial, does not allow for the integration and flow of knowledge and skills that we seek for ourselves or our students. Collaboration makes knowledge accessible.

**SD 91 Strategic goal: Inclusive Curriculum**

Learners with diverse abilities often experience stress in the classroom20. Studies of heart rate, blood pressure, and self-reporting measures provide convincing evidence that spending time in outdoor environments may reduce the experience of stress, ultimately improving overall well-being for all students, not just those with sensory needs13. With help from an Occupational Therapist to assess and manage programs, it is hoped that this project will help create inclusive education settings for learners with disabilities and diverse abilities.

**SD 91 Strategic Goal: Increasing Student Belonging**

Place Attachment is the cognitive-emotional bond to a significant or often visited setting18, 19. There is an increasing body of evidence that positive place-attachment supports belonging, identity formation, comfort, a sense of freedom and stress reduction15, 18. In short, place attachment fosters psychological well-being18, 19. There is even evidence that, in the case of children in care, it may substitute for the lack of secure human attachment15. It is also worth noting that the basis of attention is emotional security, which can be aided through positive place attachment16, p.125.

**Fostering Place Attachment**:

Outdoor education experiences typically foster a sense of belonging by developing place attachment. When students can grow in their ability to navigate, care for, and access spaces they attach to them with pride, fostering a sense of confidence and belonging8, 23. Allowing students to simply explore and move is also a simple but powerful way to create belonging23.

Designing functional and positive experiences in place would be a key goal of this pilot project. Examples would be finding and documenting collaborative projects to work on (such as the wetlands restoration already in place) and finding ways to document and showcase work (celebrations).

**SD 91 Strategic Goal: Expand & Support Culture of Inquiry**

Ongoing assessment of the integrated activities would be grounded in the work of the 4 key questions from spirals of inquiry from NOII.

**Goals specific to this project**

**Improved Psychological Health**

**Definition**

Psychological health is defined as an individual’s ability to realize their potential, cope with stressors, and offer a productive contribution9. It is a broad concept that encompasses an individual’s overarching well-being, including emotions, thoughts and feelings, ability to problem solve, overcome obstacles, social connectedness, and understanding of the environment around them9. Psychological health is often used interchangeably with mental health, and the Government of Canada recognizes that psychological health can be negatively impacted by stressors, with the potential to contribute to mental illness17. Mental illness is where a person’s cognition and mood are affected in such a way that it negatively impacts how they interact with their environment including how they think, feel, behave, and interact with others5.

The goal of this project would be to positively affect psychological health by creating curriculum that fosters place attachment, sensory regulation, and motor planning through the natural affordances of the existing environment. Just going outside has the ability to reduce stressors, and therefore provides the perfect place to develop social, educational, and environmental connectedness13.

**Management of Psychological Health Stressors in an educational setting**

**Assessing classroom culture**: The pilot project should involve a collaborative assessment of the strengths of the classroom culture and opportunities for class-wide improvement to support the psychological well-being of all. An example of an opportunity for improvement might be the use of varied movement activities on walks to stimulate the proprioceptor system, followed by a fine motor activity and a reflection of the effect of the movement on the difficulty level of the writing activity. The creation of debrief activities would also be an example of an opportunity for improvement within this pilot project.

**Motor Planning**

**Importance of**

When considering inclusive curriculum, it is important to consider the foundations of learning, of which motor planning is one11, 20.

Motor planning activities increases a student's ability to pay attention, and occupational therapists often help with motor planning interventions. Attention plays a primary role in learning and the acquisition of information11, 12, 16.  Greenspan, a clinical professor, and a practicing child psychiatrist found that "the better the child could execute three steps in a motor sequence (such as hop, jump, clap), the better they became at executing three steps in solving a problem"20. Trips outside involve motor planning, and between the Occupational Therapist and the teacher, ways could be found to maximize or increase the opportunities for motor planning exercises.

Sensory Regulation

**Definition**

Sensory regulation is the ability to take in relevant information from our environment and use it to obtain desired outcomes16, 20 . Desired outcomes range from improving one's reading and math ability to participating in beneficial social interactions (collaboration) or sports activities in a calm manner. Without adequate sensory regulation students will experience academic difficulties, for example if your proprioceptor and your visual centers are not working in an integrated fashion both writing and reading will be difficult as you will not know where to focus your eyes or how hard to press the pencil20, p.59. As an Occupational Therapist understands the basis of sensory systems, working with an Occupational Therapist to develop integrated sensory activities will make them more meaningful for educators.

**Assessing the project**

Combining the professional of Occupational Therapists and Educators should lead to more inclusive pedagogies with a broader knowledge base which should in turn improve academic outcomes. A key feature of this project needs to be assessment and documentation if it is to be meaningful and contribute to permanent changes in pedagogy.

As there will not be a large enough sample size for statistical relevance, the creation and collection of debriefing tools will be important in figuring out which activities are most beneficial to the goals from the perspective of both students and educators.

The Spiral of Inquiry from NOII has an excellent template that can be used to set goals both as a starting point, and as the program moves forward.

It is expected that this project would also use standardized assessments such as RAD, PM scores, and EYE data to check for efficacy.

**Recommendations**: It is recommended that 2 teachers at various grade levels be involved, and it is recommended that they already be interested in or have a background in self-regulation and are already taking students outside. This ensures that the Occupational Therapist can see how teachers are already using the outdoors to improve motor skills, reduce stressors, implement curriculum, and improve a sense of belonging allowing the work to move forward faster. It is also recommended that the school have a high number of Occupational Therapy referrals in order for the therapist to see the highest number of students with needs. However, it is recognized that these strategies will often help all students.

**Proposed Next Steps**:

* Locate an Occupational Therapist who has the relevant expertise and is interested to develop a budget and timeline for the project.
* Review the proposed budget with the School District, and if approved further develop a plan that includes (approx..) 4 classroom visits and 4-5 hours for co-developing curriculum
* Other considerations: a strong, committed team of educators is recommended, as is 4-5 ½ days of release time or extra pay as teachers will be expected to not only develop integrated programming but also gather and interpret data with the end goal of being able to mentor other teachers (possibly through current mentorship funds) and/or provide at least one pro-d workshop for educators in the district.

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