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Runner

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The Alberta Teachers' Association

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Focusing on the Future

Teaching Spectrum-Style—Part 3

Passion, Vulnerability and Community

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Editor's Message

Astrid Kendrick

As I have come to know members of the HPEC community, I've seen that educators across the system—from gyms to school board offices—have been increasingly committed to improving the well-being of students and staff.

What does it mean to have a vision for wellness? In the past, I have made the mistake of equating wellness with displays of physical and mental strength. I thought that if I could complete a sprint triathlon, deadlift 100 kilograms, or be positive and enthusiastic (regardless of personal and professional stresses), I was healthy. However, as I've witnessed endometrial cancer slowly tear away my mother's dignity and independence over the past nine months, I've come to realize that wellness is about so much more than individual health.

Putting wellness at the forefront of educational policy means developing responsive schooling institutions that honour the *heartwork* of the people working and living within them. Schools are centred on teaching and learning, and healthy students are better learners, but just as important, *healthy adults are better teachers*. Putting supports in place that enable the adults in schools to grieve, to be sick, to care for loved ones and to exercise, to laugh, to socialize is a necessary foundation for truly well organizations.

This year's annual HPEC conference and *Runner* theme is 20/20 Vision Towards Wellness, a culmination of the long work of health and physical educators across the province over the last decade. Moving from an emphasis on physical activity and nutrition to the comprehensive view of health described in the 2009 wellness framework has been slowly gaining momentum. Despite the latest hiccup in implementing the new wellness curricula, improving the well-being of children, youth and adults in schools will continue to move to the forefront of school culture.

In this volume of *Runner*, many different ideas of wellness are presented. This year's journal provides an international view of health and physical education, with authors from Greece, Scotland, the United States and, of course, from across Alberta.

What's your vision for wellness?

President's Message

Nadeen Halls

I began writing this message with a terrific start to the school year for your HPEC team—we have started the great work that goes into a hosting a number of regional drive-in workshops and teachers' convention sessions and another great annual conference (in Lethbridge, Alberta). This year we are working to align our events and publications to support our 2020 vision toward wellness.

By the time you get this publication, we will be closer to the end of the year and the end of my two-year term as your president. I have absolutely loved having the opportunity to work with passionate HPEC mentors and advocates who have made an impact—not only on my professional career, but also on my heart. Alberta HPEC has quickly become a support network and family to this BC-born girl. The HPEC vision, passion and dedication to improving the quality of health and physical education are like no other. More important, the opportunities being provided to students and schools as a result are exceptional.

As you head to the end of the school year and into your summer, I encourage you to take some time to rest, recharge and reflect upon your own personal vision for

wellness. Take time for yourself, because it is essential for the health of your future self.

For more information about opportunities available around the province, check out the website at www.hpec.ab.ca. I encourage you to reach out and connect with us as part of our HPEC family. We are here to serve and support our members around this beautiful province.

Active Bodies, Thriving Brains: How Movement Fuels Mental Health

Jill Lambden

Physical activity in childhood is essential—not only for healthy physical development, but also for healthy brain development. The 2018 ParticipACTION Physical Activity Report Card included an expert statement on physical activity and brain health in children and youth. Based on the best available scientific evidence, an expert panel concluded that "for better brain health, all children and youth should be physically active on a regular basis. In addition to physical health benefits, physical activity also improves cognition, brain function and mental health" (ParticipACTION 2018).

The evidence shows that physical activity is good for three areas of brain health:

- **Brain structure and function**
  Exercise increases blood flow in the body, which in turn increases blood flow to the brain. This means that when we move, the brain is fuelled with more oxygen and nutrients. At the same time, exercise stimulates the release of hormones, including norepinephrine, which improves attention, perception and motivation; serotonin, which enhances mood; and dopamine, which also improves motivation and focus. Finally, physical activity increases a protein called brain derived neurotropic factor (BDNF), which keeps brain cells growing and functioning optimally. BDNF is like a fertilizer for the brain, making the growth and creation of brain cells easier. The cells most sensitive to BDNF are in the hippocampus, the part of the brain concerned with learning and memory. This area of the brain can actually grow larger with regular exercise over time.

- **Cognition**
  Physical activity has a positive impact on thinking and learning, leading to better performance in school subjects such as math, language arts, science and social studies. Active children are better able to pay attention, focus and concentrate on tasks for longer periods of time. Evidence shows improvement in attention and focus even after a single bout of physical activity. Activity is associated with better memory, and it helps with convergent and divergent thinking, leading to more creative problem solving. Physical activity is also beneficial for emotional regulation and executive functioning.

- **Mental health**
  Physical activity supports mental health by helping to manage and prevent negative symptoms as well as promoting positive emotions and self-esteem. Activity reduces symptoms of depression through several mechanisms, including the release of serotonin and dopamine, the "feel-good" hormones, increasing the perception of control while participating in physical activity and increasing opportunities for social interaction among peers. The current research highlights the effect of physical activity in reducing depressive symptoms; however, research into the prevention of depression is still inconclusive. Preliminary evidence suggests that physical activity also plays a role in preventing and managing feelings of anxiety. One possible explanation is that physical activity provides a short-term distraction from anxious symptoms. Physical activity can direct physical sensations away from feelings of anxiety and direct them instead to the activity at hand. The release of serotonin and dopamine also has a calming effect on the mood. Physical activity is linked to stress reduction in children and youth. Kids who are active have lower levels of the stress hormone cortisol in their bodies, and

they have a reduced physical reaction to stress. Research is still exploring how these mechanisms take place in the body; however, we can conclude that physical activity is an effective tool in managing academic and social stress in children and youth. Physical activity also improves coping strategies when it comes to stress. Teens in particular demonstrate better resilience when dealing with and recovering from stressful situations. Finally, physical activity is associated with better self-perception, self-concept and self-worth in children and youth. The mechanisms for this vary. Physical activity may be a protective factor against online scrutiny that often comes with social media use, because activity can distract from and decrease time on social media. Physical activity and personal perceptions are interwoven. High levels of activity are associated with improved self-esteem, which leads to better mood and positive self-perception. Therefore, kids who are active are actually shown to feel better about themselves.

With all of the benefits to student learning and mental health, it is important to promote physical activity and include movement throughout the school day. This can be done in all areas of the curriculum, not just during physical education classes. Incorporate multiple opportunities to move, considering all types of learners and all types of movers. Plan for a variety of activities depending on the needs of your class at different points during the day. You may need to increase the energy level of the room with a moderate to vigorous movement break, calm students who are overly excited using a mindful movement activity, or promote some cognitive flexibility before a demanding academic task.

- **Moderate to vigorous activities** are the classic heart-pumping activities that require a high amount of effort and typically increase heart rate, blood flow, breathing and body temperature. Canada's 24-hour movement guidelines recommend that kids get 60 minutes of moderate to vigorous physical activity per day. School is one place that students can get a portion of this active time. In addition to physical education class, try active dance videos, short energizer breaks (think jumping jacks and other high-intensity activities that leave you short of breath) or a morning run club.
- **Mindful movement activities** are low intensity and can be used as a calming strategy and to help manage the stress response. Activities such as stretching or yoga relax muscles and can relieve mental stress as well. Not every student or classroom climate calls for energetic movement activities; in fact, they may be more of a distraction in certain situations. If you want to incorporate movement into lessons and help students focus and stay on task, mindful movement breaks are a great place to start.
- **Executive functioning activities** help develop skills to increase focus, hold control, filter distractions, switch gears and focus on multiple streams of information at the same time. There are three dimensions of executive functioning skills:
  1. *Inhibitory (impulse) control* is the ability to resist temptations, distractions and habits, and to pause and think before acting. Try activities such as musical chairs or freeze dance to develop inhibitory control in students.
  2. *Working memory* is the ability to hold information in the mind and use it when needed. Try activities such as tag games, copy games, call-and-response games and jump-rope games to improve working memory skills.
  3. *Cognitive flexibility* is the capacity to switch gears and adjust to changing demands, priorities and perspectives. Try fast-moving ball games, Simon says and organized sports to practise cognitive flexibility. As students get older, allow opportunities for goal setting and planning game strategies to further their executive functioning. Encourage them to monitor and adjust plans as circumstances arise to hone their skills.

In addition to incorporating energizers and movement breaks into classroom routines, consider ways to create a movement-based school culture. Think about the social and physical environment of your school, as well as the partnerships in your community that can support activity permissive environments. Some ideas to get the whole school more active include

- modelling energizers and movement breaks at staff meetings on a regular basis;
- getting students involved in designing movement breaks; for example, students can create monthly activity calendars to challenge the school community to be active every day;
- instead of fire drills, having "fitness drills" in your schools to promote random movement throughout the day;

- adding hallway decals or tarmac stencils to promote movement in indoor and outdoor walking spaces; and
- encouraging school council to plan events and fundraisers that promote health and movement.

The Bottom Line

- Physical activity is good for brain structure and function, cognition, and mental health.
- Use a combination of moderate to vigorous activity, mindful movement and executive functioning activities to support students' brain health.
- It is important to move in all classes, not just physical education.
- Create a movement-based school culture where everyone is moving regularly.

For more information and resources to support physical activity and movement at school, check out the following organizations:

- Alberta Health Services School Health and Wellness Promotion
- Be Fit for Life
- BOKS Kids
- Canadian Society for Exercise Physiology (CSEP)
- Ever Active Schools
- ParticipACTION

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Jill Lambden, MSc, RD, has worked in school health promotion for over 10 years. During her time as a health promotion facilitator with Alberta Health Services, she has worked on local and provincial projects to support school health. She firmly believes in the power of schools to help kids be mentally and physically healthy. She enjoys yoga, downhill skiing and trying to keep up with her two high-energy kids.

Teaching Mindfulness

David Chorney and Kendra Eliuk

As evidenced by local comprehensive school health group discussions, mindfulness practice is becoming mainstream in many classrooms in the Edmonton Public school district, often helping students in younger grades reduce anxiety levels before a big test, lessen incidences of bullying or helping to calm a hyperactive class (Leland 2015). In looking at methods of mindful breathing or meditation, there are numerous websites and apps that can be easily used in a classroom or at home. One example: www.stopbreathethink.org offers guided breathing audio clips, ranging from 3 to 20 minutes, that encourage the practice of mindful thought in the present. Teachers may use this program as part of their morning routine, preparing students to learn for the day, or at a point in their class where students need to calm their anxieties or hyperactivity. Allowing 3 to 5 minutes of mindful practice before an exam may help calm the anxieties of some students, allowing them to clear their mind before beginning the test. With the StopBreatheThink app, students are asked to sit, close their eyes and focus on their breathing. They feel the chair under them and the ground under their feet, all the while guided through relaxed breathing. Students emerge from the meditative process with a calmer mind and a connection to the present, more ready and able to learn. Shapiro et al (2015) have compiled a comprehensive list of mindfulness programs, such as iRest for Kids, MindUp, Learning to Breathe, Wellness Works in Schools and Little Flower Yoga, along with brief descriptions of the programs, their implementation and the goals of the programs, that may be further explored. Younger children also benefit highly from the use of story to help practise mindfulness so that they may calm their anxiety. Anxiety, which is often caused by a lack of connection, a feeling of inadequacy or a loss of control (Haubrich 2016), is the first mental health disorder to appear in young children (Neil and Christensen 2009, 209; Haubrich 2016). As young

children do not yet have the mental capacity for reasoning, they are often unable to understand and cope with their anxiety when it strikes. The use of story helps children to practice mindfulness because they are engaged in the story in the present. Rather than focusing on their emotions, they are able to clearly and logically work through the problems of the character, thus offering insight into their own anxiety at a later date. The practice of self-regulation through this approach allows children the opportunity to work through new challenges or problems in a calm and safe manner (Shapiro et al 2015).

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David Chorney, PhD, is an associate professor in the Faculty of Education, Department of Secondary Education, at the University of Alberta. He has been working in postsecondary education for the past 16 years. Prior to becoming a professor, he was a high school teacher for 7 years, teaching exclusively physical and health education.

David's active research program focuses on physical education teacher education (PETE), curriculum theorizing in physical education, physical literacy as it relates to teacher education, and technology integration within the teaching of physical and health education. David's teaching is dynamic and engaging, and he devotes much time to ensuring that his classes are relevant, meaningful, inspiring and challenging. He is well respected as an outstanding, informed teacher educator at the provincial and national levels. He has been awarded the Faculty of Education Undergraduate Teaching Award and the Faculty of Education Technology in Teaching Award, and in 2014 was awarded the Rutherford Award of Excellence in undergraduate teaching, the University of Alberta's most prestigious teaching award.

Kendra Eliuk is a recent graduate of the University of Alberta and a faculty member in the Department of Secondary Education.

Changing School Culture, One Step at a Time

Chris Fenlon-MacDonald

Let me paint you a little picture. It was midway through the 2013 school year, if I remember correctly, when I attended a professional learning opportunity exploring physical literacy. Dean Kriellaars, the keynote, spoke on the importance of movement throughout our day. At one point, he mentioned that we need to get creative and think outside the box if we want to promote the development of physical literacy and nudge physical activity behaviours in schools.

Building the Box

Upon returning to my school, I attempted just that. Armed with a roll of painter's tape, I taped two patterns (similar to hopscotch) on either side of the hallway. I didn't tell the students at the time what I was doing. To be honest, I don't think I knew exactly what I was doing, either. What I did know was that I wanted to increase student physical activity. What I didn't know was that I was doing so much more.

After some creative fundraising and the official go-ahead from our school leadership, we replaced floor tiles with intentionally designed colour patterns. It took the better part of a school year to replace them, but it happened. During this time, I began calling the initiative Don't Walk in the Hallway and used the hashtag #DontWalkintheHallway on social media to promote the work. In fact, the driving force in naming the initiative was a job interview with Ever Active Schools, during which I was asked to present a health-promotion idea to an interviewing panel; Don't Walk in the Hallway was that idea.

As we prepared to replace the floor tiles in our hallways, we also planned to research the impacts of Don't Walk in the Hallway in our school. When all was said and done, the initiative increased physical activity at the school by a total of 872 steps on average each day. But it seemed as though that wasn't enough.

Creating a Bigger Box

I vividly remember speaking with Dean Kriellaars after we discovered the results of the study. In that conversation, I told him that I felt we were not making a big enough impact and that the results were not as great as we had hoped. What he said at the time didn't resonate with me until my first year with Ever Active Schools, after a formal Don't Walk in the Hallway resource was created. He said, "It *is* making a difference—a big difference. It's changing the physical activity *culture* in schools."

Normalizing the Box

That statement is what resonates with me today and what drives the work of Ever Active Schools professional learning in the area of activity-permissive learning environments. Normalizing physical activity is the grand outcome of the Don't Walk in the Hallway initiative. We've seen more schools, architects and many others using concepts like Don't Walk in the Hallway to make intentional designs in the built environment. Regardless of what they are called, be it sensory pathways or otherwise, they are normalizing physical activity in an environment that otherwise may have looked different for staff and students alike.

Physical activity has broad impacts on health and learning outcomes and, simply put, is fun for everyone! By thinking creatively, we can all build school communities that normalize physical activity. After all, physical activity is not a break from learning; it *is* learning.

Chris Fenlon-MacDonald, a juggling, elementary-school-teaching supernova, works to enhance school health and well-being through his role as provincial education coordinator with Ever Active Schools. His star shines brightest when his feet are firmly planted on the ground—rather than attached to a bungee cord, where the feeling of falling, bounce, bounce, bounce, SNAP (just kidding) isn't nearly as ~~terrifying~~ exhilarating as promoting school health and wellness.

Supporting Students' Mental Health in Physical Education Classes

Lauren Sulz, Hayley Morrison and Chris Fenlon-MacDonald

> Good morning, Lauren.
>
> Do you have any good strategies or tactics to work on incorporating mental health awareness, understanding or promotion in physical education classes?
>
> Cheers, Aaron

The e-mail above came from a preservice teacher who was in the midst of completing his practicum. After chatting with a few colleagues and conducting a quick literature search, I soon realized that although research on supporting students' mental health in general was abundant, specific strategies and practices for the physical education (PE) context were less obvious. We know that health and education are intricately connected. Healthy students learn better, and educated students are healthier. However, health is multidimensional and affects much more than just learning or academic success. Understanding these complex connections, we can make mental health a key focus tailored to the unique aspects of a PE class. My coauthors and I thought this would be an important topic to tackle in *Runner*. Therefore, this article is designed to help physical educators understand more about the promotion of positive mental health for students. As such, it provides strategies and practices to support students' mental health in PE contexts. Using literature on the promotion of positive mental health in schools, we offer research-informed strategies to help physical educators, like Aaron, support and promote mental well-being in PE programs. We'd love to hear from you about how you support your students in these ways as well—contact lsulz@ualberta.ca.

Defining Positive Mental Health

The definition of *health* presented by the World Health Organization (WHO) represents more than simply the absence of disease: "health is a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity" (WHO 1946). This conceptualization allows for a more holistic and positive approach to health. The definition of *mental health* is synonymous with this holistic and positive definition of well-being. However, terminology describing mental health is often monopolized by definitions related to mental illness—the absence of mental health—rather than viewing mental health as a multifaceted and complex construct (Roset, Green and Thurston 2019). These conceptualizations emphasize the problems or challenges associated with mental health concerns instead of embracing a more positive view of one's mental well-being (Morrison and Peterson 2013). By viewing mental well-being through a positive lens, teachers and schools can focus their efforts on the promotion of positive mental health as opposed to solely the treatment of mental health concerns (Morrison and Peterson 2013).

Westerhof and Keyes (2010) propose three core components of positive mental health: emotional well-being, the feelings of happiness and satisfaction with life; psychological well-being, a positive individual functioning in terms of self-realization; and social well-being, a positive societal functioning in terms of being of social value. Keyes (2002) has argued that it takes a combination of emotional, psychological and social well-being to be considered mentally healthy. Similarly, the Public Health Agency of Canada (2006) describes positive mental health as "the capacity of each and all of us to feel, think, and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity" (p 2). Of course, since physical health (including play, sport, physical activity, exercise and recreation, to name a few), is one of the dimensions of health, we know that quality PE can absolutely support positive mental health. In this article, we draw upon these definitions and research, which conceptualize positive mental health as distinct from mental illness. By doing so, we shift the focus

of educators "from a preoccupation with repairing weakness to enhancement of positive qualities" (Clonan et al 2004, 101).

Positive Mental Health in Schools

Schools have been identified as a critical setting for the promotion of health and well-being among students, including mental health (Hills, Dengel and Luban 2015; Morrison and Peterson 2013; Stewart et al 2004). Students spend a significant amount of time at school (more than six hours a day for more than 180 days a year!); therefore, what happens at school can have a significant impact on students' well-being (Ontario Ministry of Education 2013). Daily interactions with peers and teachers enhance students' feelings of belonging, connectedness and emotional safety, which can all contribute to students' mental health. The promotion of positive mental health has been associated with numerous developmental outcomes, including improved academic achievement, identification and effective management of emotions, reduction of high-risk behaviours (for example, drug use), enhancement of healthy lifestyle behaviours, increased understanding and de-stigmatization of mental health conditions, and development of meaningful relationships (Morrison and Peterson 2013), to name just a few. Through the intentional creation of safe, healthy, accepting school environments (both physical and social) and through planned and deliberate teaching practices, students' positive mental health can be supported (Ontario Ministry of Education 2013).

Positive Mental Health in Physical Education Classes

Halliday et al (2019) describe physical activity as a valuable approach to supporting adolescent mental health. Participation in physical activity during adolescence can help minimize risk of chronic diseases, prevent overweight and obesity, and increase the likelihood of physical activity engagement in adulthood (Azevedo et al 2007; Hallal et al 2006; Harvey et al 2018; Hu et al 2004). In addition, physical activity engagement during adolescence can decrease the probability of depression, anxiety, antisocial behaviour and emotional problems (McMahon et al 2017). PE programs provide a structured opportunity during the school day for students to engage in physical activity and develop the skills, knowledge and behaviours that will help them stay active and healthy throughout life. A PE environment that embraces and promotes whole-child education focuses on the physical, social, affective and cognitive development of all. PE differs from other subjects, as the curriculum encourages opportunities to develop social and emotional skills such as communication, leadership, cooperation, self-awareness and self-management. Research has shown that PE classes can allow opportunities for social interaction, providing social support shown to decrease loneliness and activating the development of personal skills necessary for the development of quality relationships (Felfe, Lechner and Steinmeyr 2016). PE may have a significant role to play in the promotion of positive mental health among young people.

Teachers' Role in the Promotion of Positive Mental Health

Although educators are well placed to support students' mental health and recognize the important role they can play, many educators feel ill equipped to do so. Teachers express concerns of feeling overwhelmed, ill prepared, and incompetent, often because they feel they lack the knowledge and skills necessary to demonstrate competence in the area of student mental health (Froese-Germain and Riel 2012; Whitley, Smith and Vaillancourt 2013). Teacher education programs (Corcoran and Tormey 2012; Rothi, Leavey and Best 2008) and limited inservice teacher professional development opportunities do not adequately prepare teachers for promoting mental health within their classrooms. For example, Reinke et al (2011) reported a disconnect between the 89 per cent of teachers who reported their willingness to support their students' mental health versus the 34 per cent who believed they actually had the skills to do so. This highlights the need to develop teachers' competence and confidence in creating learning environments in which mental health is supported (Lendrum, Humphrey and Wigelsworth 2013; O'Reilly et al 2018). While educators cannot and should not attempt to diagnose mental health problems, they have an important role in the promotion of positive mental health at school and in their classrooms (Ontario Ministry of Education 2013). With enhanced knowledge, understanding, practical strategies and increased confidence, teachers can facilitate physical education classes that support the mental health of students. In order to support students' mental health, we need to support teachers and their efficacy in mental health promotion.

Positive Mental Health Concepts

The positive mental health literature includes a vast array of key concepts and promising practices for the promotion of positive mental health in young people. The Joint Consortium for School Health (2017) emphasizes 13 various concepts; we have chosen to focus on the following 4: strength-based approaches, autonomy support, social–emotional learning and mental fitness. These concepts are identified because they have a common purpose: to create a supportive classroom environment and to destigmatize mental health. The following section describes the four positive mental health concepts, highlights their relevance to PE and the literature on student mental health, and outlines practical strategies and practices for PE.

Strength-Based Approaches

As teachers, we enter the learning environment thinking about what we want students to learn—to know, to value and to be able to do—based on the curriculum. However, we often forget that students bring with them unique backgrounds, situations and experiences; the uniqueness of each individual should challenge us to think about who they are and what they *can* do before we think about what we want them to be able to do. Taking a strength-based approach means you first highlight the positive attributes, abilities and talents that students bring with them to the learning environment (State of Victoria 2012). Beginning with positive characteristics initiates the capacities for learning rather than dwelling on the deficits that students experience (Hickson and Morrison 2018), and emphasizes students' potential (Joint Consortium for School Health 2017). Roset, Green and Thurston (2019) found that the classroom climate—and instilling a positive climate—affects students' perceptions and engagement in PE. They suggest that "[the] 'atmosphere' or 'mood' during PE lessons (from the changing room through to the lesson itself), including the attitudes of teachers and fellow students to all aspects of the PE lesson (from grouping of pupils through to norms regarding competitiveness) ..." influences whether or not students feel a supportive and nonthreatening environment (Roset, Green and Thurston 2019, 9). Students can experience a sense of enjoyment, a desire to participate and less pressure to perform when the classroom climate is focused on positive interactions and cooperation. This means that taking a strength-based approach when teaching PE—centred on empowerment, possibility, strengths—can affect the classroom climate, influencing students' positive mental health development. Hamilton and Hamilton (2004) suggest the following principles for incorporating strength-based perspectives in schools: believe in people, engage people, incorporate sources of motivation, use strength-focused language, begin with existing strengths, build authentic relationships and allow time for change. Table 1 highlights key strategies and practices to apply a strength-based approach in PE.

TABLE 1. STRENGTH-BASED STRATEGIES AND PRACTICES IN PHYSICAL EDUCATION

Incorporate sources of motivation: engage student interests, motivation, passion. For example,

- ask your students what their strengths are, what activities they enjoy, who they like to work with and if they have any personal goals in PE. This is an excellent way to engage students and establish a classroom community focused on motivating each other and sharing diverse passions;
- include incentives in your class such as having students take leadership to do a brain-break, teach a skill or choose to be the equipment manager and assist you with setup to earn time for "class choice" activities the following week.

Use strength-focused language: communicate with students for potential hope and optimism. For example,

- if students participate in activities outside of the school environment, such as playing on a recreational soccer team, encourage students to practise their dribbling skills in PE class to enhance their skills in their community league games. Avoid saying "Well, practice makes perfect, so just do it" and focus on the potential the activity has for the students' interests;
- if students are not thrilled about dance, discuss with students how spatial awareness (moving at low, medium and high levels) can improve their skills in a preferred activity such as football (for example, needing to bend low to make a tackle). Making connections for students demonstrates and communicates the rationale behind your activity choices and allows them to optimistically see the transfer to their daily lives or preferred activities.

Autonomy Support

One's ability to think, feel and make decisions by oneself is a developmentally appropriate process and particularly important during adolescence within school contexts (McElhaney et al 2009). Youth seek environments where they have control over their actions and where opportunities for autonomy and independent thinking are maximized. Placing students in leadership roles and empowering them to make positive decisions for their own health and well-being will help them succeed now and in the future. Literature has identified the conditions necessary for students to perceive that their autonomy is supported in classroom settings. These conditions include providing meaningful rationale (for example, why an activity would have personal relevance), using noncontrolling language (for example, minimize pressure—"should," "must"—thus conveying a sense of choice and flexibility), offering meaningful choices (for example, provide options and encourage decision-making) and incorporation of personal interests in learning activities (Deci et al 1994; Morrison and Peterson 2013). Students who participate in autonomy-supportive physical education environments have been shown to increase their physical activity levels during class time (Lonsdale et al 2009; Lonsdale et al 2013), enhance their motivation to be active outside of PE class and increase their class enjoyment (Gibbons and Gaul 2004; McBride, Xiang and Bruene 2007). In relation to the promotion of positive mental health, the encouragement of autonomy allows students to develop effective coping and problem-solving skills, confidence and a sense of voice in classroom settings. As well, they are able to connect their sense of self to the activity (Ciani et al 2010). Further, when autonomy needs are met and freedom of choice is expressed, self-determination and resilience are enhanced (Morrison and Peterson 2013). Enhancing students' self-determination and resilience may encourage self-perceptions such as "I am able to make decisions about things that are important to me and others" and "I feel hopeful because others support my participation in decision-making" (Deci and Ryan 2008; Ferguson, Kasser and Jahng 2010). Table 2 highlights key strategies and practices to apply autonomy support in PE.

TABLE 2. AUTONOMY STRATEGIES AND PRACTICES IN PHYSICAL EDUCATION

Offer meaningful choices: allow student voice and choice in planning and selection of tasks. For example,

- at the beginning of the year, you might already have a year-plan in mind; however, your students and their developmental level will help dictate what you do and how you do it. To offer meaningful choices, allow students to voice activity choices within curriculum dimensions that they enjoy, would like to try or would like to improve their skills for. Provide a list of activities for students to choose from within each curriculum dimension to still allow for teacher voice, curricular outcomes to be met and structure. Try to ensure that each student has at least one of their activity choices within the year plan;
- embed choices within each lesson to create opportunities for student engagement, leadership and self-determination. Try offering two choices of invasion games that focus on the same lesson objective. For example, if working on invasion game strategy, set up a modified soccer game on one side of the gym and a modified basketball game on the other side. Allow students to choose the activity they want to engage in, then have meaningful conversations about similarities and differences in game strategies between both sports. You can further embed choices within lessons by offering competitive/noncompetitive options, allowing for choice of partner and/or team, and offering choice in equipment/space/rules for an optimal level of challenge.

Create opportunities for problem-solving and skill transfer: provide relevant rational for tasks. For example,

- provide opportunities to discuss transfer of skills from one skill to another (for example, hit in volleyball vs badminton smash). Connect tasks to students' personal lives and future behaviours. For example, discuss how learning the dominant movement patterns in gymnastics will help with the activities they are currently engaged in (landing in basketball, balance in all sports). Teach through a physical literacy lens whereby units are based on skills, not sports—for example, create a sending and receiving unit in which students are learning to throw and catch in various contexts as opposed to learning a sport they may perceive as something they will never play in the future.

Social-Emotional Learning

Social-emotional learning (SEL), in which students learn to manage, identify and communicate their feelings and emotions (Ashdown and Bernard 2012), is central to teaching the whole child. When we walk into a school we are immediately confronted with students' SEL processes and, as educators, are tasked with attending to this area of development. The Collaborative for Academic, Social and Emotional Learning (CASEL) defines SEL as "the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (CASEL 2019). Additionally, there are five core SEL competencies: self-awareness, self-management, responsible decision-making, relationship management and social awareness (Durlak et al 2011). Research has shown that well-designed, well-implemented social and emotional learning programs are associated with positive social, emotional, behavioural and academic outcomes for children and adolescents (Durlak et al 2011). Ciotto and Gagnon (2018) state that "in the physical education setting the five core competencies are taught in the affective domain, as seen by a student persevering while learning scarf juggling, controlling one's emotions during competitive game play, and demonstrating an awareness of and support for other classmates' differences" (p 28). Therefore, these SEL outcomes and competencies *are embedded* and *can be achieved* within a quality PE classroom environment. To highlight the importance of SEL competencies, consider *self-management* (also known as *self-regulation*), which is a critical skill our students develop and learn throughout the course of their lives. *Self-management* refers to our ability to adjust to levels of emotional, motivational and cognitive stimulation in order to achieve goals and interact positively with the environment around us (Rosanbalm and Murray 2017). Self-management primarily revolves around our ability to regulate emotions and balance them with other cognitive demands—for example, managing our emotions when we win or lose a game in PE or during recess. Achieving these skills depends on three critical cognitive functions—working memory, cognitive flexibility and inhibitory control (Diamond 2013). PE requires students to actively engage these cognitive functions, which can lay the cognitive foundation for self-regulation. Through the intentional design of certain games and activities, we can set the stage for our students to optimally develop specific SEL competencies. See Table 3 for specific examples of developing SEL competencies in strategies and practices.

TABLE 3. SOCIAL-EMOTIONAL LEARNING STRATEGIES AND PRACTICES IN PHYSICAL EDUCATION

Develop self-management tasks: give students cognitive function tasks (working memory and cognitive flexibility). For example,

- provide activities that teach game sense and tactical elements (for example, offensive tactics of where to place the ball) that lead to better understanding of invasion games such as basketball or ultimate frisbee. For example, consider active renditions of tic-tac-toe. Place hula hoops, or poly spots, in a 3x3 grid and line up two small teams a distance away. Teams can take turns by sending one student to the grid and placing a coloured bean bag inside a hula hoop following traditional tic-tac-toe rules. Additionally, teams can send members at the same time, though this will produce a different experience for students. Each method of play will develop a deeper understanding of the strategies other team members or opponents may use, which enhances our chances of success.
  This concept can be taken further by adding more hula hoops to the grid and, rather than playing to align three beanbags, students play to align four beanbags (similar to the game Connect 4).

Encourage activities of social awareness and relationship management: focus on listening skills and respectful relationship building. For example,

- develop a culture of respect within your classroom so that students have a chance to listen carefully and accurately to others' points of view and perspectives. Additionally, stop midgame to teach both verbal and physical social cues so that students can begin to understand and predict how others feel and may react to certain situations. Finally, end lessons with a debrief that allows students to manage and express their emotions while respecting relationships and diverse points of view.

Mental Fitness

Generally speaking, if we understand physical fitness to be our ability to cope and meet the physical demands of life and other physical pursuits, mental fitness as a concept is fairly easy to understand. Mental fitness is our ability to meet the psychological demands of life and having a positive sense of how we feel, think and act, which improves our ability to enjoy life (Morrison and Peterson 2013). By definition, mental fitness is the state of psychological well-being resulting from the fulfillment of three basic psychological needs: relatedness (need for relationships), competence (need for recognition of personal strengths and personal achievement) and need for autonomy (having choices and making decisions) (Deci 2009; Deci and Ryan 2008). When mental fitness needs are met, individuals tend to opt for attitudes and behaviours that contribute positively to their own personal well-being (Morrison and Peterson 2013). Higher levels of mental fitness have been associated with increased prosocial attitudes and behaviours, increased sense of school connectedness, enhanced well-being and resilience, and increased self-determination related to goal setting and engagement in activities for healthy lifestyle change (Morrison and Peterson 2013). Strategies for adopting a mental fitness approach in classroom contexts include acknowledging students for their strengths, allowing students to identify and use their strengths, empowering students to collaborate with their peers, providing constructive feedback, and focusing on the development of positive relationships (Morrison and Peterson 2013). See Table 4 for specific examples of mental fitness strategies and practices.

Conclusion

The promotion of positive mental health in schools is foundational to our roles as educators. Using the strategies and practices from the four positive mental health concepts described in this article—strength-based approaches, autonomy support, social and emotional learning, and mental fitness—can help create a positive classroom culture, one in which students are supported to thrive in their learning and develop their mental health skills and which ensures the implementation of a holistic and quality PE program. However, we must acknowledge that in order to support students' mental health, teachers must also be provided with the knowledge, skills and strategies necessary to create an environment that supports student mental health. Be sure to reach out to others for help with student mental health promotion—and to take care of your own mental health development! We'd love to hear how you support yourself, other teachers and your students as you take care of mental health in phys ed.

TABLE 4. MENTAL FITNESS STRATEGIES AND PRACTICES IN PHYSICAL EDUCATION

Model appropriate behaviour: practice what you expect from students to support positive mental health. For example,

- when you feel the need to take a moment to reset or step away from a stressful situation, make a point of explaining to your students *what* you are doing and *why* you are taking the actions you are. Students can't be what they can't see, and if we don't show them appropriate ways to deal with stress, they are left to navigate these emotions without the proper guidance.

Reduce stigma around mental health: talk openly about mental health in class. For example,

- collect and share positive emotional moments by talking about them with your students. Make it a point to recall and share times when you have experienced pleasure, comfort, confidence or other positive emotions in and outside of the school environment. Have students (and yourself!) keep a journal to express feelings and help gain perspective on stressful days. Set personal goals, reflecting on personal strengths. Discuss goals—and the challenges associated with reaching those goals—as a class.

Make time for mental fitness. For example,

- make sure the first five minutes of class allows for conversations, shared stories and checking in with students to build relatedness.

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Chris Fenlon-Macdonald's biography is available following his article "Changing School Culture, One Step at a Time," on page 8.

Focusing on the Future—Adolescent Health Literacy

Stacey Hannay

Being able to read a food label is one thing, understanding why a Macdonald's hamburger is so cheap is but another, thus substantiating an ever-present yet confusing ideal of what it means to have health literacy in our day and age.

Although there has been considerable interest in the idea of adolescent health literacy as a concept worldwide, it does not come without criticism: that of being poorly defined (Nutbeam 2000; Sorensen et al 2012). As health and physical education teachers begin to expand and explore possible definitions of health literacy to include an understanding of the social determinants of health as important components of critical health literacy, a conversation begins to open up that challenges the status quo (World Health Organization [WHO] 2000).

If schools are considered agents of pedagogical change and essential mechanisms for health literacy development in an educational setting, then the discourse surrounding adolescents and the role that schools play in equipping young people needs to reflect today's values and expectations. Creating the required knowledge, skill, capacities, values and attitudes must become the dominant conversations to enable our youth to become active participants in shaping their own health and the health of their communities (Institute of Medicine 2004; Nutbeam 1996, 2000, 2008).

So where does one start when theorizing a new approach to adolescent health literacy? As teachers continue to seek out, produce and develop an understanding of positive health-related behaviours in students, our educational system, unfortunately, continues to deliver status quo results (Brug et al 2012). This renders the question *why*? To date, most school-based health literacy programs have focused on adolescent health risk behaviours and have not been able to provide learning opportunities for young people to reach a critical level of understanding and therefore act upon new knowledge (Benham-Deal and Hodges 2009; McCuaig et al 2012; McCuaig, Carroll and Macdonald 2014; Sykes et al 2013). Part of this issue has been that the research into this concept is being driven primarily by those working in the health sector, rather than schools, teachers and educational researchers (Mohammadi, Rowling and Nutbeam 2010). The ripple effect of this research has resulted in poor implementation and maintenance of health promotion programs due to a lack of educational relevance and alignment with curriculum and their educational outcomes (Southgate and Aggleton 2017).

What is a possible solution to this issue? A system-based solution acknowledges that education and the art of teaching are a complex human activity, influenced by individual, sociocultural, contextual, embodied, affective, cognitive and epistemic factors (Langford et al 2014). Our current curriculums and programs offer but a glimmer of targeted individual-level factors and, as a result, are void of sociocritical pedagogies (Macdonald 2013).

What can teachers do? We are the health champions in our schools; the ways in which health literacy is manifested at school or at the community level are important, as our students can only act on knowledge in context that supports critical levels of understanding. A shift from our traditional understanding of individualized responsibility and toward an understanding that we need to recognize that health literacy learning should take place within the broader school context—rather than only in the health education classroom—is our first step toward understanding adolescents' health literacy (Langford et al 2015; Paakkari 2015; Peralta et al 2017).

So where does one go next? Aiming to design a conceptual framework for adolescent health literacy should be based on current school-based adolescent health literacy programmes that have been implemented globally and that take into account education theories and models that propose the use of sociocritical pedagogies (Alfrey and Brown 2013).

One might ask what this rhetoric means. We are seeking to create convergent thinkers in our classrooms through a process known as *critical pedagogy* (sometimes

referred to as social justice). Through this process, teachers can create dialogues with their students in the learning process as a continuous cycle of learning, unlearning, reflecting and evaluating (Kinchelow 1993; Freire 2000; Brookfield 1986).

Taking into consideration UNESCO's (2006) approach to understanding literacy as a means by which individuals decode and deconstruct both their own cultural traditions and those of society, literacy becomes fundamental in establishing one's voice as part of a wider project of possibility and empowerment. If all teachers can begin by accepting that literacy is more than just reading and writing, health literacy can become a process that provides students and teachers with an opportunity to give meaning and expression to their own needs and voices as part of the larger context (Giroux 1988). These are the galvanizing actions of a critical thinker, a problem solver, which all teachers and schools strive to produce within their student populations.

Since health literacy has been an unkempt domain of the learning continuum, due predominantly to the traditional structures and functioning of schools, we must advocate for a more holistic and critical view of health literacy (Ryan et al 2012; Sykes et al 2013). The scope of health literacy should be expanded to include the ability to access, understand, evaluate and communicate information on the social determinants of health (WHO 2008). Students should be encouraged to act on multiple health messages, not only in health-related settings, but also in the social communities and environments in which they live. This approach shifts the locus of control from an individual alone to more complex conditions of influence from groups, governments, institutions and global media and the resources they provide and/or withhold (Peralta et al 2017).

Attempting to define health literacy or even critical health literacy as a learning outcome for adolescents based on Paakkari and Paakkari's (2012) assets-based approach might produce some shortfalls, on the assumption that individual competencies encompass social contexts (Southgate and Aggleton 2017). However, if we can broaden our definition to include UNESCO's (2006) educational literacy framework, we begin to peel back a few layers of the onion and expose its core. Step one is attending to the idea that learning is a dynamic process, rather than the production of more limited short-term educational interventions focused on adolescent health and development. Step two becomes a shift in how we view literacy, moving toward an ongoing process of life and the ways in which students construct knowledge and make sense of their learning experiences in the classroom, inherently bringing the ideal of social construction back into the equation. This allows our students to construct an understanding of the world around them through experiencing discrepancies between what they know and what they discover in the environments surrounding them. Step three involves examining this new understanding in terms of power and subject matter, so that our students gain the confidence and competencies required to examine health literacy as text. It is at this step that they can begin to think critically within different contexts, among multiple messages and in multiple forms about how to apply new knowledge to the broader sociohistorical influences that are influencing the production of health.

The idea of adolescent health literacy is a complicated one, and the concept commands further examination. This short paper is only a snapshot intended to open the conversation on what could be and how it might be operationalized in classrooms around the province. The beliefs presented are centred on pedagogy, which, if embedded in the culture of schools and implemented effectively by teachers across learning and subject domains daily, could foster the necessary conditions to support deep critical thinking in our students—conditions that are essential for a health-literate adolescent (Ormshaw, Paakkari and Kannas 2013).

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Teachers, Complexity and the Integration of Physical Education (Part 1)

Mike Jess

Over the last 20 to 30 years, the emergence of holistic and educationally focused initiatives has been an astonishing feature of the physical education landscape. Meaningful physical education, physical literacy, fundamental movement skills, teaching personal and social responsibility (TPSR) and health-optimizing physical education (HOPE) are just some of the broadly focused educational approaches that have appeared. Specific developments focused on games and sports have also been abundant and include teaching games for understanding (TGfU), sport education, student-designed games, games sense, the constraints-led approach, nonlinear pedagogy, cooperative learning and games making. While these innovations have helped shift physical education in a more educational direction, as each one appears the subject splinters into different "camps" (O'Connor and Jess 2019). Tensions and barriers have started to appear as each camp develops its own language and set of rules even though the key concepts are often similar. While a return to the one-size-fits-all days of the multiactivity curriculum is undesirable, there is a need to recognize the importance of making efforts to integrate the subject area.

In this short series of two articles, ideas from complexity thinking (see Table 1) are presented in an effort to help teachers engage with this integrative process. In the first paper, three concepts focus on the first phase of this integration process: ecological starting points, learners as self-organizers and negotiating boundaries. Other complexity concepts, namely making connections, similarity and diversity, and recursive elaboration, are equally important for subject integration and will be discussed in the second paper. Crucially, while these complexity concepts are discussed separately, they are collectively indivisible from each other and work together to support this shift toward a more holistic, educationally focused and integrated subject area.

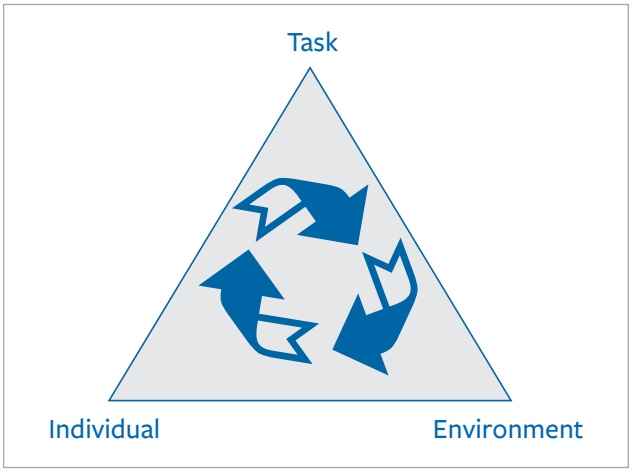
TABLE 1: COMPLEXITY CONCEPTS TO INTEGRATE PHYSICAL EDUCATION

Ecological starting points	Signposting connections
Learners as self-organizers	Similarity and diversity
Negotiating boundaries	Recursive elaboration

Concept 1: Ecological Starting Points

An ecological approach takes the view that human behaviour and learning emerge from the interaction among three key components: the individual, the task being attempted by the individual and the environment in which this task is being attempted (see Figure 1).

Figure 1: Ecological Components



Central to this ecological view is the recognition that when teachers meet a group of children in a physical education setting, each child not only has a different genetic makeup but also has lived a life comprising different physical, cognitive, social and emotional experiences. Because of these different histories, teachers should take time to carry out an initial or baseline assessment of the children they are teaching. This assessment should concentrate on each child's history and their current physical, cognitive, social and emotional development in relation to the focus of the teacher's learning intentions. Developing this detailed understanding of the children they are teaching creates a positive starting point for much of what follows.

Concept 2: Learners as Self-Organizers

While this baseline assessment is an excellent starting point, it has limitations: it only presents a snapshot of each child at the current time and does not specifically help a teacher move the learning process forward. Because children's starting points are different, and because they have the capacity to self-organize, it is not possible to predict with any certainty how each child will respond and what they will learn over time. Self-organization is the key to a complexity view of learning and is best understood by explaining the difference between complicated and complex systems. While each part of a complicated system is preprogrammed to produce outcomes with a high degree of certainty (for example, a watch or a car), many parts of the complex system have the capacity to self-organize and produce outcomes that may be predictable but also may be unpredictable. This self-organizing capacity is particularly noticeable when a class of 25 or more children use their individual cognitive abilities to make decisions about how they will behave, although this is equally evident in their physical, social and emotional behaviours. Order and predictability may be witnessed, but so too may unpredictability and even chaos. From a movement perspective, acknowledging self-organization helps us understand that children have the capacity not only to be efficient and predictable in their movement behaviour but also to be unpredictable and creative. The coexistence of these apparent opposites has significant implications for the way we teach physical education. With different starting points and the capacity to self-organize, as a complex learning process progresses some children may behave in ways that are predictable, others may be unpredictable and some may be predictable at one time but unpredictable at other times. What will emerge over time is uncertain, with the result that teachers need to be flexible with their learning intentions and in their approach to teaching. However, unlike the complicated system, at the heart of this self-organizing process lies the ability of learners (and teachers) to make adaptations in response to the different task, individual and environmental boundaries they meet on a minute-to-minute basis each day.

Concept 3: Negotiating Boundaries

As complex learners, children are constantly negotiating boundaries as they progress through the learning process. Boundaries are everywhere and have the potential to hinder or help the learning process. They can be found within the individual, the task they are attempting and the environment in which the task is being attempted. While any example could be used to explain boundary negotiation, this simple example focuses on children playing a central-net game, like tennis, in which they catch and throw the ball over a net. The boundaries the children may need to negotiate include the following:

- **Individual boundaries**
  Physically, the game involves three key movements: throwing, catching and travelling to catch the ball. Children who are poor at throwing and catching will find the physical boundaries problematic, and their game involvement is likely to be unsuccessful. Conversely, a child who catches and throws effectively is likely to negotiate these physical boundaries easily but may find other boundaries more problematic. Understanding and remembering the rules of the game and how to keep the score (cognitive), being able to play against a partner (social) and responding appropriately to the outcome of each rally (emotional) are examples of other individual boundaries. For some, these boundaries may inhibit engagement and for others they may enable easy access to the game.
- **Task boundaries**
  Task boundaries change quickly during the game as the child takes on different roles. In each rally, each child will be an attacker whose task is to throw the ball over the net, but will immediately become a defender when the other child catches the ball. As a defender, the task

is to track the ball, move to intercept the ball and then catch the ball. The boundaries of these are different and need to be negotiated by the child.

- **Environmental boundaries**
  These include the size and limits of the court in which the game is being played, the height of the net, and the size, weight and shape of the ball. These environmental boundaries all need to be negotiated as the game progresses: successfully for some, unsuccessfully for others.

These are just some of the many personal, environmental and task-related boundaries that each child negotiates as they self-organize over the time that the game progresses. For teachers, recognizing that children are continually self-organizing to negotiate the boundaries they encounter is a key feature of their learning. From a teaching perspective, because learners are constantly self-organizing-within-boundaries, understanding and working with boundaries are the key to effective teaching. Over time, learners negotiate boundaries by self-organizing inside, around and outside the different boundaries that present themselves in different contexts. This self-organizing process helps consolidate behaviours, challenge learners or lead to creative responses, although it can also result in boredom, stress or even chaos. This section briefly explains these three ideas about boundaries and how they affect teachers.

1. **Playing Safe Inside the Boundaries**
   Playing safe inside boundaries is part of the learning process because it helps consolidate behaviours. Children are not taking risks and are not being challenged to any significant degree. However, while playing safe helps consolidate learning, it can also consolidate poor habits and can lead to boredom if the activity goes on for too long. For teachers, it is important to recognize when learners are playing safe to consolidate positive behaviours, are not consolidating poor behaviours and are bored because the task is too easy or going on for too long.
2. **Pushing Around the Boundaries**
   Self-organizing around boundaries is an important part of the learning process because it challenges the children's current behaviours and helps move the learning process forward. In different contexts, working at the edge of individual, task and environment-related boundaries will push individuals to the "edge of chaos" and will often lead to new learning. However, if the children are challenged on the edge of the boundaries too often, they are likely to become stressed and their behaviour will often begin to break down under the pressure. For teachers, deciding when and how to challenge learners by pushing the boundaries is a key feature of the way they can support the learning process.
3. **Exploring Beyond the Boundaries**
   Self-organizing outside boundaries is also important because it offers learners the opportunity to be more creative in their behaviours. Moving beyond the boundaries to explore possibilities allows children the chance to try out ideas that are different. They can negotiate a wide range of possibilities and may end up behaving in ways that are creative and original. These creative experiences can become highly motivating and exciting. Conversely, when students move beyond the boundaries or the "'edge of chaos," the behaviours may break down completely. For teachers, offering learners the opportunity to explore a wide range of possibilities outside the boundaries may be less predictable than the other options, but is an important part of the learning process in a world that is becoming increasingly complex.

Conclusion

At a time when physical education is beginning to splinter, there is a need to find ways to help teachers integrate the subject area. This paper has introduced three key complexity concepts that can help move us towards a more connected and educationally focused physical education. Using ecological starting points, acknowledging learners as self-organizers and recognizing the importance of boundary negotiation are introduced as key concepts in this shift toward a more integrated subject area. The next article explores how making connections, similarity and diversity and recursive elaboration can help create a complexity framework for the future of physical education as an integrated and coherent subject area.

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What's Your Leadership Mission?

Amanda McGarry

Mission Statement: Establishing a culture of well-being in which partnerships prosper through positive relationships.

The data that I have read and my personal experiences have inspired me to develop my mission statement around well-being and positive relationships. I was concerned to learn that "51% of us [teachers] report that our workplace is a major source of stress" (Gleddie 2019). As a school leader, I believe that establishing a culture of well-being is a crucial piece of reducing the stress that teachers experience in a school. I strongly believe that when a leader engages in placing a high importance on well-being, a healthier school will emerge. According to Cherkowski and Walker (2019), it is essential to build up the well-being of all staff members within a school. This building block is also fundamental in developing positive relationships. Therefore, my mission statement is drawn from the competency of "Fostering Effective Relationships" from the *Leadership Quality Standard* (LQS) (Alberta Education 2018, 4).

I focus my mission statement on the holistic approach described by the comprehensive school health (CSH) framework. This framework discusses four intertwined pillars: social and physical environment, teaching and learning, policy, and partnerships and services. Incorporating a purposeful holistic approach tends to the needs of all individuals within the school and naturally develops a culture of well-being (Storey et al 2016).

As a leader, my mission is to build a positive culture within a school by focusing on the social environment. This addresses the following indicators from the LQS:

> b) demonstrating empathy and a genuine concern for others; c) creating a welcoming, caring, respectful and safe learning environment; … h) engaging in collegial relationships while modeling and promoting open, collaborative dialogue (Alberta Education 2018, 4).

Hollingworth et al (2018) reported that to create a positive culture, school leaders must build confidence in their staff, understand their staff on a personal and professional level, and commit themselves to engage in clear, intentional communication. To build confidence in staff, my mission is to generate a trusting bond between the staff and myself. Kutsyuruba and Walker (2017) support the bond of trust by finding that trust is the base for building and resolving of an organization's social structures in everyday human interactions. I have generated a bond of trust between the staff and myself. The bond of trust has been built on my having been a teacher in the building for the past four years. I have made connections with staff members through our professional practice and social interactions. The pre-existing bond of trust has made my leadership role more inviting.

Second, building relationships with staff members demonstrates a genuine interest and care toward their personal and professional lives, which creates a culture based on trust. Kutsyuruba and Walker (2017) acknowledged that trust is imperative to the success of a relationship; however, trust can be broken instantaneously due to the delicate nature of trust. Therefore, truly authentic interest and care are central to the success of a trusting relationship with staff in a school. I demonstrate true care by saying good morning to each of my staff members every day and sending regular thank-you notes and e-mails. I demonstrate genuine interest by asking my staff about their families and personal interests. The staff in my building are starting to notice the authenticity and are really excited about what the future of the school will be.

Finally, communicating with staff using appropriate questioning, listening and feedback skills can lead to meaningful conversations that are built upon trusting relationships (Johnson 2019). As a school leader, part of my mission is to engage in these three elements simultaneously to initiate a positive culture within the school. After a positive culture is built and maintained, I can work toward enhancing the well-being of the individuals I work with.

As a school leader, my mission is to form positive partnerships by involving the community and families in the school. These positive partnerships are "creating opportunities for parents/guardians, as partners in education, to take an active role in their children's education" (Alberta Education 2018, 4). When parents have positive connections with the teachers, the school and the community, the student perceives a sense of connectedness to the school (Berg, Bradford and Robinson 2018). When the well-being of staff members and parents is being met through positive partnerships, the students' well-being indirectly benefits. Positive partnerships with teachers and parents create a sense of student connectedness, which reduces students' feeling of school-based anxiety.

Furthermore, my mission is to create a positive partnership with the school's counsellors, psychologists and social workers to be "demonstrating a commitment to the health and well-being of all teachers, staff and students" (Alberta Education 2018, 4). The positive partnerships constructed with these professionals contribute to increased health and well-being within the school. When the students' well-being is taken care of, there is a direct contribution to the well-being of the whole school environment (Berg, Bradford and Robinson 2018).

Often individuals view CSH as an aim directed only at improving the health and well-being of students. To change this perspective, my mission is to incorporate a healthy school policy to meet the needs of the staff within a school. I can do this by carrying out a health promotion program that supports the health and well-being of all staff members. The health promotion program encourages and supports staff to become more active and adopt healthier eating practices (Berg, Bradford and Robinson 2018). My mission is to provide opportunities for staff to voice their opinions through meaningful conversations when implementing a health promotion program. This commitment contributes to the development of positive relationships. Through executing a health promotion program among the staff, I am building a culture of well-being in the school. The health promotion program benefits all partnerships in the school, either directly or indirectly. My mission is to indirectly affect the students' well-being using positive staff role modelling within the school.

When an educator's well-being is taken care of, they can view themselves as teachers of health and well-being (Berg, Bradford and Robinson 2018). Within the CSH framework, under the pillar of teaching and learning, teacher well-being is of utmost importance. My mission is to make sure that educators will view themselves as knowledge holders of health and well-being. Once this acknowledgement occurs, they can begin to integrate those understandings into the curriculum they teach. These teachings will also be communicated during other activities in the school and community. Therefore, all leaders and staff members are "acting consistently in the best interests of the students" (Alberta Education 2018, 4). This communal action initiates a cyclical culture of well-being throughout the whole school. As a school leader, my objective is that the students and staff learn, understand and incorporate health and well-being into their daily lives.

In conclusion, my mission is to establish a culture of well-being in which partnerships prosper through positive relationships. When this alignment occurs, an environment is created in which educators are encouraged to grow professionally, have a positive influence on learners, enjoy a quality life both inside and outside school, and thrive and perform to their utmost ability in their job (Kutsyuruba et al 2019). As a leader, my mission is to inspire staff and students to take ownership of their well-being. Finally, my mission is to inspire staff and students to build positive, prosperous relationships with the individuals whom they interact with daily.

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Teaching Spectrum-Style—Part 3: Learning Through Critical Thinking

Mark T Byra

The Spectrum is structured around two clusters of teaching styles, one reflective of a learner's capacity to *reproduce* movements and the other reflective of a learner's capacity to *produce* movements (Mosston and Ashworth 2008). Within the reproduction cluster (styles A–E), a model of a movement is presented to the learners, which they then attempt to replicate during practice. There is a time and place in which to employ these instructional styles, which some refer to as *direct* or *teacher-centered* teaching (Metzler 2017; Rink 2020), in the learning environment. Within the production cluster (styles F–K), a question or problem is presented to the students, which they then attempt to solve. Terms such as *critical thinking, problem solving, inquiry-based learning* and *discovering* are used to describe the type of learner decision making and thinking that takes place in these styles. As with the reproduction teaching styles, there is a time and place to employ these instructional styles, which some refer to as *indirect* or *student-centred teaching* (Metzler 2017; Rink 2020), in the learning environment. Mosston and Ashworth (2008) view the Spectrum as a universal model that is designed to help teachers understand the processes of teaching and learning across a continuum of teaching styles that include teacher-centred (A–E) and student-centred (F–K) approaches.

The first two "Teaching Spectrum-Style" articles published in *Runner* (Byra 2018, 2019) focused on the reproduction cluster of teaching styles, in which learners work from memory, a state of "cognitive consonance" (Mosston and Ashworth 2008). The focus of this third article is on the Spectrum's *production* cluster of teaching styles, styles that require the learners to discover knowledge through inductive and deductive reasoning, inquiry and problem solving, styles that evoke "cognitive dissonance" (Mosston and Ashworth 2008). Within this cluster of teaching styles, there appear to be two groupings: styles F–H (student-discovery learning) and styles I–K (student-initiated learning). Styles F (guided discovery), G (convergent discovery) and H (divergent discovery) are based upon the premise of learners discovering knowledge. These three styles emphasize students' cognitive development, triggering specific thinking processes like comparing, contrasting, hypothesizing, discovering and creating (Chatoupis 2013; Cleland 1994; McBride 1992). Styles I (learner-designed individual program), J (learner-initiated) and K (self-teaching) also emphasize learners' activation to seek knowledge, but through self-initiated learning. It has been found that styles I–K impact students' perceptions of autonomy more than the act of discovering knowledge (Papaioannou, Theodorakis and Goudas 2011). In the remainder of this article, I will describe styles F–K within the structure of these two subgroupings (F–H and I–K), provide example scenarios for the styles and discuss them in light of Alberta's K–12 physical education learning outcomes (Alberta Learning 2000).

Styles F, G and H—Learners Discovering Knowledge

The guided discovery (F), convergent discovery (G) and divergent discovery (H) styles revolve around learners discovering knowledge as evoked by a stimulus (a single or series of questions, or a problem) presented by the teacher (Mosston and Ashworth 2008). In style F, the teacher leads students to discover a predetermined response through a series of logically designed questions. In style G, the teacher presents students a single question or problem that leads them to discover the predetermined response (convergent discovery). In style H, the teacher

presents a question or problem that leads the students to discover multiple answers to the presented problem (divergent discovery).

Style F—Guided Discovery

In style F, students solve a problem through a series of carefully constructed questions designed by the teacher (Mosston and Ashworth 2008). The answer to each posed question within the series cumulatively leads the learner to discovering the "sought-after" response (p 215). Mosston and Ashworth (2008) envisioned style F as the gateway to introducing learners to the process of discovering knowledge. This way of learning and teaching is not the norm in physical education, nor is it in other school subject matter areas. Learning by replicating modelled movements with teacher-presented task feedback, as is the case in styles A and B, represents the norm in physical education (Cothran et al 2005; Cothran, Kulinna and Ward 2000; Syrmpas, Digelidis and Watt 2016; Syrmpas et al 2017). Hence, Mosston and Ashworth (2008) viewed it important to introduce teachers and students to this new paradigm of learning (that is, constructing knowledge, reasoning, inquiring, problem-solving, discovering), refer to it as what you may, through a series of questions that gradually lead the learner to solving the final question.

Following is an example scenario of a style F series of questions to guide a group of learners' discovery of a game tactic for net games. After observing multiple students in the Grade 4 class participating in long rallies against their opponents in half-court one-on-one badminton games (students using short-handled racquets, not badminton racquets), the teacher stops a group of six students and gathers them together to ask them a series of questions for the purpose of leading them to discover a primary game tactic used in net games—hitting the implement to open space:

1. What was the goal of the game you were playing? Anticipated student response (ASR): To score against my opponent. Teacher feedback (TFB): Yes.
2. Generally speaking, during these long rallies, where on court is your opponent positioned most of the time? ASR: Close to the net or near the back of the court. TFB: Yes.
3. Why did your opponent remain in one place on court during the rally? ASR: Because that is the place where I was returning the shuttle. TFB: Good response.
4. Where might you try placing the shuttle on your next hit if your opponent remains near the back of the court? ASR: Just over the net. TFB: Nice.
5. Where might you try placing the shuttle on your next hit if your opponent remains near the net? ASR: To the back of the court. TFB: Nice.
6. Why would you place it near the back of the court when your opponent remains near the net most of the time, or just over the net when your opponent remains near the back of the court most of the time? ASR: Because they will have difficulty playing it back to me or they will not be able to play it back to me. TFB: Nice conclusion; now let's try this tactic on court.

Style F episodes are designed to be conducted with individual students or small groups of students. It is not a style to be used with the entire class unless you clearly know that the series of questions will lead all of the learners to the discovery. In other words, one cannot discover the answer to the target question if one already knows the answer. Most style F episodes take little time to deliver—in the example scenario, perhaps a minute or two. Logically, style F seems to work well when introducing students to a new topic. It also is a style that can be implemented in a spontaneous manner, on the go, when the teacher sees that a student or small group of students is having difficulty negotiating the learning task. To be able to do this, however, the teacher needs to be highly knowledgeable in the content (badminton in this example), and knowledgeable and comfortable with the structure of the teaching style. The questioning technique used when teaching within the tactical games approach (Mitchell, Oslin and Griffin 2013) mirrors style F. This questioning technique has been shown to enable students' critical thinking and performance during game play (Butler 1996; Curtner-Smith 1996).

Style G—Convergent Discovery

In style G, students are presented with a problem to which they discover the one correct answer. I will illustrate this teaching style through a scenario using the same content as presented in the style F example scenario (badminton, with the goal of striking the shuttle to open space—moving your opponent).

> "Come on in, Grade 4s. In the next task, you are going to play a game against an opponent [one-on-one half-court game]. Your goal during this task is to score points against your opponent. Please choose a partner and sit next to her/him.

5-4-3-2-1 … very good! Here are your instructions for the game. Begin with a serve as introduced last class and reviewed during our first task today. If you win the point (the rally), you continue to serve. If you lose the point on your serve, your opponent gets to serve. Do you have any questions about what the goal is of this task? Emily, what is the goal of this task?" "To score points against your opponent." "Very good, Emily! You have three minutes to play your game against your opponent. At the end of three minutes, I will tell you to stop and I will ask you a question about the game you played. You and your opponent will then get together and solve the question. Questions? No? Very good. Now find your space and begin your game. Go."

At the end of three minutes, the students are told to stop and sit down on court next to their opponent.

"Each of you scored multiple points during your game. With your opponent, solve the following question: What did you do to your opponent when you scored a point? Once you think you have solved the problem, put your hand up and I will come over to listen to your answer. Begin!"

The major difference between styles F and G has to do with the way the question or problem is presented to the students. In style F, the teacher guides the learners to solve the problem through a series of sequenced questions. In contrast, in style G the learners are given the problem and then engage in the appropriate cognitive operations to solve the problem (comparing and contrasting, analyzing, synthesizing and so on). They themselves determine what are the smaller questions that lead to answering the problem.

Style G episodes are generally short, but may be conducted with the entire class. This example style G episode could likely be delivered in about two or three minutes (that is, time taken by the students to solve the problem after having completed three minutes of game play). Style G episodes do need to be formally planned in advance as a part of a lesson. As in style F, style G requires the teacher to be highly knowledgeable in the content (badminton in this example) and knowledgeable and comfortable with the structure of the teaching style. Working in pairs, or possibly groups of three, to solve the problem in style G tends to help the students critically think about the solution at a deeper level. Research indicates that neither style F or G is regularly implemented by physical educators in their daily instructional practices (Cothran et al 2005; Cothran, Kulinna and Ward 2000; Syrmpas, Digelidis and Watt 2016; Syrmpas et al 2017).

Style H—Divergent Discovery

In style H, students are given a problem or question to solve that leads to the discovery of multiple answers. This is significantly different from what is asked of students in styles F and G, which is to discover the single answer to the question (convergent). In style H, students are asked to discover multiple answers to the question (divergent). Asking students to produce movement options is unique to style H, and thus requires the teacher to explicitly set the scene at the beginning of the episode and to verbally support their students' actions while engaged and at the end of the episode (Mosston and Ashworth 2008). Following is an example scenario of a style H episode.

"Children, please sit on your spots with your hands in your lap, legs criss-cross, balloon in front you on the floor, and eyes on me. Excellent, Johnathan! Grade 1s, we have been working on striking with different body parts for the last few classes. In our next task, you are going to discover how to strike the balloon with different amounts of force (strong and light) at different levels (low, middle, high) while using different body parts. I am expecting to see you striking the balloon in many different ways. Grade 1s, please stand. Strike your balloon with strong force. Begin." The learners are given 15 seconds to engage in the task while the teacher circulates and provides individual, specific, neutral feedback (for example, "Yes, Mary—you are using your foot to strike the balloon at a high level; yes, Joseph, you are using your elbow to strike the balloon at a high level). "Stop! Melissa, I like how you are standing still in your self-space with your eyes on me. I saw some of you striking the balloon at a high level (using strong force) with your hands; I saw others using their feet to move the balloon to a high level. Now show me another way of striking the balloon with strong force. Begin. Stop. Next, strike the balloon with light force while you are positioned at a low level. Begin." The learners are given 20 seconds to engage in the task while the teacher circulates and provides specific, neutral feedback (for example, "Yes, Martin—you are using your head to keep the balloon

up while in a kneeling position; Liam, you are striking the balloon with light force with your finger, but what about your body position?" Liam crouches down. "Yes, now you are in a low position"). "Stop! Good work at discovering new ways to strike the balloon with strong and light force! Now, from ... Begin." And so on.

This episode would continue in this fashion for perhaps five-plus minutes. At the conclusion of the episode, the teacher would praise the students for the different movement responses produced. In doing so, the teacher is supporting the students' individual discoveries.

In style H, students must produce their movements within the movement parameters that the teacher sets in the problem. If a student is not engaged within these parameters, the teacher must address the issue through corrective feedback, as illustrated in the scenario above with Liam.

In style H, it is very important that the students understand that the movements used in answering the problem are/may be different from one student to the next. They need to know this because more often than not learners are asked to complete a task according to a specific model (demonstration). In this example, the teacher reinforces and encourages learners to produce different ways of striking the balloon within the parameters set by the teacher.

In styles F, G and H, the teacher is asking the students to engage in critical thinking. This takes time, and most physical educators believe they have little of it to begin with (for example, teach students for 25 to 45 minutes, once or twice a week). Teachers who engage their students in these teaching styles are demonstrating that they value students using class time for the process of discovery. They believe that students can improve their performances—motor, cognitive and social/affect—through discovery learning.

Because styles F, G and H are teaching styles that are not a common part of a physical educator's instructional tool box, it is important to realize that successful implementation of these styles is going to take time, require professional support and, perhaps most important, require an open mind (that is, invite opportunity for change). Assuming an open mind, teachers will need time to observe multiple examples of these styles in action, more time to experience the styles while in the role of a learner themselves, and yet more time to implement multiple episodes of each of these styles with their students under the supervision of a knowledgeable and experienced Spectrum teacher. Success is dependent upon the level of professional development offered.

Styles I, J, and K—Self-Initiated Learning

The learner-designed individual program (I), learner-initiated (J) and self-teaching (K) styles revolve around individualized learning (Mosston and Ashworth 2008). Two of these styles, I and J, may be observed in school physical education classes, most likely at the high school level; the other, style K, takes place outside of the school setting. Style K exists beyond the purview of K–12 physical education.

Style I—Individual Program

Students in style I seek to "discover a structure that resolves an issue or problem" (Mosston and Ashworth 2008, 274) that is presented by the teacher. The teacher's role in style I involves introducing the subject matter topic to the students through a carefully designed set of questions or criteria. This set of criteria subsequently serves as the guide for the students to design an individualized program of study. Following is a scenario depicting style I.

> "Grade 11s, during the past 15 lessons, you have been introduced to the fitness and exercise centre in our school. You have learned to employ proper technique when lifting free weights and using weight machines, and you have learned how to design resistance exercises using your own body, all for purpose of developing muscular endurance and strength; you have learned to employ the treadmill, stationary bicycle, stair mill, rowing machine and elliptical to develop cardiorespiratory endurance; you have learned a variety of flexibility-based activities and methods of stretching to improve flexibility; and you have been introduced to body composition, specifically to understand what it is and to interpret body composition measures. You have also been introduced to multiple concepts related to health-related fitness like the FITT formula, principles of physical activity (overload, progression and specificity), the stages of lifestyle change, the physical activity pyramid, goal setting and assessing your individual level of health-related fitness. Now you are ready to design

your own personal physical activity program that has as foci cardiorespiratory, muscular endurance and flexibility development. The program you design for yourself will be implemented over the next four weeks during our class (16 lessons). In developing your personalized physical activity program, you must (a) establish your reasons for designing the program, (b) establish short-term goals for the three foci, (c) rate your stage of change, (d) employ the FITT formula when designing and selecting the physical activities to include, (e) maintain a written record of your program and (f) at the end of the four-week program assess the goals that you set for yourself.

"My role during these four weeks will be to observe your progress in designing and implementing your personal physical activity program, and to listen to your questions. I will communicate with you through the questions you ask and the questions I pose to you based on my observations of the development and implementation of your personalized physical activity program."

In style I, the teacher presents the details of problem to be solved. The learners subsequently design an individual program to solve the problem. Compared to Styles F–H, students' level of independence increases significantly. Students who have experience in the content area and experience with the processes related to problem solving (discovering) learned through their involvement with styles F–H, as well as with the student decision making associated with styles A–E, will be able to participate in a productive manner in style I.

Style J—Learner Initiated

Students in style J design and implement their own learning experience based on movement ideas that they initiate themselves. In style I, the idea of the learning experience is initiated by the teacher through the presentation of a problem; in style J, it is the student who initiates the idea (problem) for a learning experience. Following is a scenario depicting style J.

"Miss Linske, now that we have experienced designing and implementing a personal physical activity program in physical education class, I want to design a more comprehensive physical activity program for myself that I would like to implement next year while in Grade 12. Would I be able to do this next year as a part of Grade 12 physical education class?"

"Madelyn, what a great idea! And yes, you can! I offer a physical education class for Grade 12 in the fall that is scheduled from 12 to 1 pm, Monday through Thursday, that I call "Learner-Initiated Physical Activity Experience." Our facilities here at the high school as well as those available at the community recreation centre can be used during this class. Students who come to me with a written plan for a physical activity learning experience may choose to use this experience to meet the school district's Grade 12 physical education semester-long course requirements. Now, I have a fairly extensive document that outlines in detail what you need to do if you choose to enroll in this special Grade 12 physical education class. I will share it with you."

Student independence is more pronounced in styles I and J than in the three discovery styles (F, G and H), because it is the students' responsibility to make all of the design decisions regarding the topic of study and, in style J, to initiate the idea of the learning experience. As indicated earlier, students' perceptions of autonomy have been found to be stronger in styles I and J than the act of discovering knowledge because of the high level of student independence associated with these two styles (Papaioannou, Theodorakis and Goudas 2011). However, success for the students in styles I and J is dependent upon their experiences with mastering the decisions and processes related to styles A–H, because styles I and J require that the students integrate this previously learned knowledge and skills into the design and implementation of their individualized program.

A primary goal of most high school physical education teachers (as well as middle school and elementary physical educators) is to develop a level of knowledge, skill and self-efficacy in their students so that they want to continue to choose to engage in physical activity for a lifetime. Styles I and J will move students a step closer to meeting this overarching goal of physical education.

Style K—Self-Teaching

In the self-teaching style, the student is responsible for making all of the decisions associated with serving in the role of teacher and learner. In essence, the learner becomes both teacher and student. This style cannot be

found in the school physical education setting. Mosston and Ashworth (2008) conclude with this style because it reflects one teaching oneself. It is the self-contained teaching style that naturally evolves from the 10 other Spectrum teaching styles.

Once we graduate from high school, many individuals become interested in performing a new physical activity or perhaps several new physical activities. I taught myself to windsurf as a young adult (style K). I was able to successfully navigate this new endeavour (that is, teach myself) because of the understanding I had of learner and teacher decision making related to the five reproduction and five production Spectrum styles, the investigation of the new activity through readings and YouTube videos, and the opportunity to observe others doing it.

Styles F–K and the Alberta Physical Education K–12 Learning Outcomes

Development of the cognitive learning domain is of primary emphasis in styles F–K. Improving motor performance and affect are secondary to the production teaching styles. Time within the instructional process is specifically devoted to student thinking. Students specifically engage in inquiry-based learning, or discovery learning, through the student-centred instructional practices employed by the teacher. In styles F–K, students produce the answers to movement questions or problems through the process of discovery or inquiry.

The aim of K–12 physical education is to "enable individuals to develop the knowledge, skills, and attitudes necessary to lead an active healthy lifestyle" (Alberta Learning 2000, 5). In terms of the outcomes found in Alberta's K–12 physical education program, styles F–K can be used to help students acquire skills through a variety of developmentally appropriate movement activities in typical and alternative learning environments (general outcome A), and to help students foster responsibility to lead an active lifestyle specifically through effort and goal setting/personal challenge (general outcome D).

In addition to the above connections to Alberta's K–12 physical education program, styles F–K are also intimately connected to general outcome C, "students will interact positively with others" (Alberta Learning 2000, 5). Communication, leadership and teamwork can all be developed within the student-centred instructional approach used in styles F–K. In essence, learners are highly engaged in the cognitive and affective educational learning domains while actively performing physical activity in styles F–K. The learner-designed individual program style (I) and learner-initiated style (J) are especially well connected to effort and personal challenge, two elements of general outcome D.

Summary

The Spectrum is a framework that unifies, embraces and connects the range of instructional approaches that exist in teaching and learning. The notion that one approach to teaching is better than another is not supported by the Spectrum. Mosston and Ashworth (2008) theorize that different teaching styles are needed to meet the many different student learning styles and the diverse range of learner objectives spanning the psychomotor, cognitive and affective learning domains. I hope that these three articles on the Spectrum provide readers with the knowledge and intrigue needed to integrate one or more of the teaching styles into their daily instructional routine. Let me close with a statement from Mosston and Ashworth (2008) that seems to summarize the essence of teaching from the Spectrum: "Anyone who desires to reach for a non-versus pedagogical approach, rich in alternatives, can benefit from learning the Spectrum from Command to Discovery" (p xxi).

Are you interested in learning more about the Spectrum of Teaching Styles? Go to https://spectrumofteachingstyles.org/ to download a free copy of Mosston and Ashworth's textbook, *Teaching Physical Education* (2008, 6th edition, first online edition).

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Implementing the Spectrum of Teaching Styles in the Classroom: Pitfalls and Barriers

Constantine Chatoupis

Abstract

The Spectrum of Teaching Styles is a conceptual framework that for over 50 years has remained a guiding tool in teaching and research in physical education. According to Mosston and Ashworth (2008), the Spectrum consists of a continuum of 11 landmark styles, each of which emerges as decisions shift between teacher and learner. The 11 styles can be clustered into either reproduction (styles A–E) or production (styles F–K) teaching styles. This paper documents certain pitfalls and barriers that teachers may face when they use the Spectrum teaching styles in the classroom. This documentation resulted from observations made while working with physical educators in Grades K–12. In addition, ways of overcoming these barriers are proposed in an attempt to help teachers apply the Spectrum effectively in their daily teaching duties.

Purpose of the Article

Over the years, the author has observed K–12 classrooms in which the Spectrum of Teaching Styles is used by teachers to teach physical education (PE). Several lessons were videotaped to carefully keep anecdotal records of the teaching–learning events. Those observations were part of my duties as a mentor responsible for supervising inservice PE teachers during classroom teaching. Based on the anecdotal records as well as on Spectrum theory, the author traced certain pitfalls or barriers when the Spectrum teaching styles are used to deliver PE teaching.

The purpose of this paper is to describe those pitfalls to alert PE teachers when they use the reproduction teaching styles in their daily teaching in K–12. By addressing those pitfalls, the interested practitioner can make decisions that are in line with Spectrum theory, thus ensuring that each of the teaching styles is applied effectively. A brief description of each teaching style is given and then a description of the pitfalls follows. In some cases, remedies are suggested. For a full description of each teaching style, the reader is referred to the standard text that is now available on the web (free digital Spectrum text download available at https://spectrumofteachingstyles.org/index.php?id=16).

The Spectrum of Teaching Styles

The Spectrum of Teaching Styles is a conceptual framework that describes and organizes the process involved in teaching (Goldberger, Ashworth and Byra, 2012). Figure 1 delineates the structure of that framework. According to Mosston and Ashworth (2008), the Spectrum consists of a continuum of 11 landmark styles, each of which emerges as decisions shift between teacher and learner. The transition from one landmark style to another represents certain decisions organized into three mutually exclusive sets: (a) the preimpact set (planning and preparation decisions), (b) the impact set (decisions made during the teaching–learning transaction that define the action) and (c) the postimpact set (feedback and assessment decisions).

The 11 styles are clustered as either *reproduction* (command style, practice style, reciprocal style, self-check style and inclusion style) or *production* styles (guided discovery style, convergent discovery style, divergent discovery style, learner- designed individual program, learner-initiated style and self-teaching style) (Mosston and Ashworth 2008).

Common Pitfalls in Classroom Teaching

The reader should bear in mind that not all 11 teaching styles are included here because the PE teachers the author observed did not use the production teaching styles in their teaching. In a personal communication with the teachers, the author discovered that during their

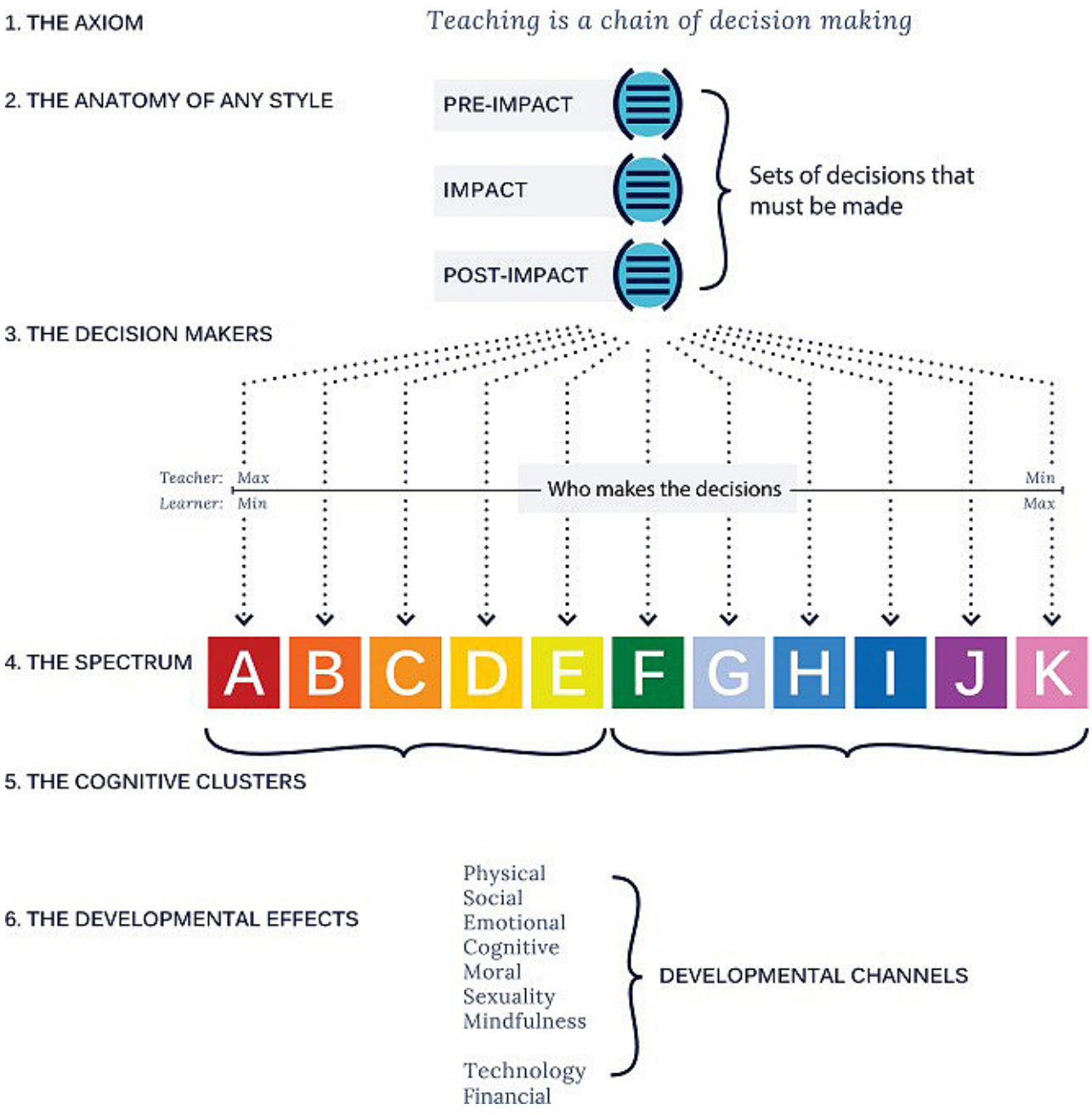

Figure 1. The framework

(Reproduced from https://spectrumofteachingstyles.org/index.php?id=20, with permission.)

initial teacher education, they did not experience or practise the six production teaching styles, which prevented them from building confidence and comfort in using them.

The Command Style

The learning focus of the command style is precision performance—reproducing a predicted response, practice or performance on cue following a set pace and rhythm. The role of the teacher is to make all decisions and the role of the learner is to follow these decisions on cue. More information about the teaching styles is available at https://spectrumofteachingstyles.org/index.php?id=21.

When an episode in the command style is not reaching its objectives, it may be due to one or more of the following:

1. There is an excessive amount of teacher-talk and too little time for the learners' active participation.
2. The class is not synchronized in the performance of the movements. The teacher needs to examine the pace and rhythm speed (too fast or too slow).
3. The teacher is giving annoying or overlapping command signals. Loud or continuous repetition of a signal or a signal inappropriate to the task can be counterproductive and even cause discomfort. Overlapping or unclear signals confuse time decisions—starting, pace and rhythm, and stopping. The teacher should consider alternative signals.
4. Excessive repetition of the same task may cause boredom, fatigue or both. Learners need to feel both challenged and satisfied that they have learned something from this behaviour.
5. Stopping the action of the entire class because one or two learners are having difficulty stops the flow of the activity and diverts the class attention to the inadequacies of the individuals.
6. The teacher stays only in one spot. In this behaviour, the teacher does not have to stay in one fixed position when conducting the episode. Moving about (using rhythm-support techniques other than counting) provides the teacher an opportunity for individual and private feedback without stopping the action.
7. Unclear introduction of the expectations causes tangents. Displaying a classroom chart reminds the learners that multiple behaviours will be in use in the gymnasium.

The Practice Style

The learning focus of the practice style is to initiate individual and private practice of a memory/reproduction task while receiving private feedback from the teacher. When an episode in the practice style is not reaching its objectives, it may be due to one or more of the following:

1. The demonstrated task is not fixed; therefore, learners seek variations or alternatives.
2. In the case of a considerable number of learners making the same error, the teacher gives individual feedback instead of group feedback.
3. During practice, some learners talk to their peers, thus interfering with other people's decisions. The practice style should allow for private practice.
4. Task selection is such that learners cannot sustain engagement in the task, or they constantly need assistance, or their work is primarily incorrect. If learners cannot be relatively successful in the task, time off task increases and discipline problems develop.
5. The teacher observes learners for a sustained period of time and then walks away without saying anything. This interaction is ambiguous and does not enhance the task performance or the emotions.
6. The learners finish before the allotted time and engage in decisions that may not be appropriate for the episode. A choice of two or three activities would be appropriate for those who finish their tasks early.

The Reciprocal Style

The learning focus of the reciprocal style is to develop a social interaction that reinforces the giving and receiving of immediate feedback that is guided by specific teacher-prepared criteria. When an episode in the reciprocal style is not reaching its objectives, it may be due to one or more of the following:

1. The teacher tells the learners who their partner will be and, as a result, the learners shift their attention to their partner selection and do not listen to the new roles.
2. With learners who are familiar with the nine decisions of the practice style, the teacher repeats them, which makes the episode too long and distracts the focus from the decisions of the reciprocal style.
3. The teacher offers feedback that includes comments about the performance of the task.

4. The task is too simple or the doer is already proficient in the task and, as a result, the doer can practice independently.
5. The teacher does not respond when he/she hears abusive, impatient or crude comments, when feedback is picky and obsessive, or when the observer ignores the doer.
6. The teacher just asks the learners to work together. This is ambiguous and does not direct the students as to what they are supposed to be doing.
7. The only pairing technique offered by the teacher in all reciprocal style episodes is learner selection.
8. A deviant behavior by a given pair is observed and the teacher asks "What's the problem?" instead of refocusing the learners on their roles.
9. The teacher communicates only with those observers that have some difficulties.
10. The feedback offered by the observer is judgmental and not informative about what was correct and what was incorrect.

The Self-Check Style

The learning focus of the self-check style is to develop independent practice of a memory/reproduction task and engage in self-assessment that is guided by established criteria. When an episode in the self-check style is not reaching its objectives, it may be due to one or more of the following:

1. The teacher uses this style with novices or with learners who do not demonstrate some degree of success in the task.
2. The teacher selects tasks that are not conducive to self-examination; that is, tasks in which the focus and the end results are the body itself.
3. Learners get stuck and assess their performance incorrectly while the teacher keeps asking questions that cannot be answered or withdraws feedback.

The Inclusion Style

The learning focus of the inclusion style is to provide opportunities for continued participation of all learners in the selected task, regardless of their varied skill levels. Tasks in the inclusion style are designed with varying levels of skill difficulty so that learners can survey the options and select an entry level of difficulty. Learners may make adjustment decisions in their task level. Additionally, learners check their performance against the prepared criteria. When an episode in the inclusion style is not reaching its objectives, it may be due to one or more of the following:

1. The teacher responds to the details of the task performance and not to the decision-making role.
2. The teacher uses value feedback, not neutral feedback, referring to the selected level.
3. The competition during the episodes is against the others and others' standards, abilities and aspirations, and not against oneself.
4. Learners are inexperienced in making self-related decisions or unskilled at distinguished degree of difficulty between task levels as they relate to their performances (for example, they make consistently inappropriate level decisions).
5. The teacher uses a verbal behaviour that emphasizes a "do your best" attitude.

To read more about Spectrum styles of teaching, see https://spectrumofteachingstyles.org/index.php?id=21.

Concluding Thoughts

The Spectrum of Teaching Styles is a powerful tool that has become an integral part of many teachers' daily teaching routine—a tool that helps them harmonize their intent and action (Goldberger, Ashworth and Byra 2012). However, pedagogical understanding of the theoretical premises of each teaching style can add value to teacher quality so that students' learning can be enhanced. It is necessary that teachers have a thorough understanding of the theoretical basis of the Spectrum to avoid certain pitfalls and overcome barriers like those described above.

Carefully reading the standard text by Mosston and Ashworth (2008) is a prerequisite. In addition, the Spectrum Institute for Teaching and Learning (SITL) sponsors a variety of workshops and seminars to promote utilization of the Spectrum theory. PE teachers are advised to attend these seminars. Apart from the standard text, the literature offers some additional basic readings about Spectrum theory that the readers will find useful in framing their thinking about this pedagogical tool (Byra, 2000, 2018, 2019; Chatoupis 2009, 2010a, 2010b, 2018; Franks 1992; Goldberger 1991; SueSee, Pill and Hewitt, in press).

Note

1. These nine specific decisions are location, order of the task, starting time per task, pace and rhythm, stopping time per task, interval, initiating questions for clarification, attire and appearance, and posture (Mosston and Ashworth, 2008).

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Large Class, Small Space: Student Engagement in Physical Education

Rachel Richards and Daniel Balderson

In today's world of overcrowded schools, many physical educators are finding themselves dealing with larger class sizes in smaller spaces. Whether it's a half gym, a fitness centre or a classroom—as class sizes grow, we need to be more creative with our strategies to ensure that the best environment is created so student learning takes place. Rachel Richards, former physical education student at the University of Lethbridge and now an in-service teacher, sent a 10-question survey to physical education (PE) teachers across North America asking for their tactics and strategies; 28 teachers responded.

The first question was how many students are in their classes. The most common class size reported by teachers (46.3 per cent) was between 30 and 35 students. As a follow-up question, Richards asked teachers what their ideal PE class size would be. A large number (78.57 per cent) reported that a class size of 15 to 25 is preferred. Despite the difference in what we hope for and the current reality, teachers strive to make the most of each situation and engage our students in a variety of ways.

Student Engagement in a Large Class

Teachers were asked what strategies they employ to promote student learning with a large class. Five strategies were commonly mentioned:

1. **Small Groups/Group Work**
   Good group experiences can empower your students as they work towards team goals. Strategies suggested from survey respondents included
   - student-levelled groups,
   - large-group activities with lower structure,
   - rearranged grouping based on self-assessed understanding of outcomes,
   - peer teaching,
   - class leaders and
   - one teacher commented, "I teach the skill that we are working on to the entire group and then either send them out as a large group to work on it in an activity or in smaller groups, down to pairs, embedding the skill or knowledge that we have looked at in a game-type scenario."
2. **Stations**
   When working in a small space with a large number of students, stations can be a great way to maximize engagement. Survey respondents said they design activities to fit the space, and stations allow for independent, open-ended tasks. A teacher commented, "We try our best to break our space into zones or quadrants to keep kids active and engaged."
3. **Adjusting to Student Skill Level and Individualization**
   One strategy cited for enhancing student engagement in large class sizes was differentiation. One strategy used by practitioners was a "Joes-and-Pros" strategy for games. This allows students choice, because they self-select where they want to play based on skill level and interest (high or low level of competition). This can help students engage in the sport at a level they are comfortable with. Other strategies included student-centred inquiry-based projects and celebrating the skills that students have by allowing them to lead in the instruction of drills and games they have experience with.
4. **Organization and Instruction**
   Lesson organization can make a big difference in effective teaching. Many respondents gave strategies for structuring your lesson and classroom in a way to maximize engagement, including
   - quick transitions,
   - clear communication of learning outcomes,
   - whole-part-whole strategies (talk or demonstrate to the whole group—partner skill work—application in game setting—real game),
   - lots of repetition,
   - lots of think/pair/share and compare/contrast,
   - effective transitions and
   - focused instruction.

5. **Motivations and Movement**
   Teachers agreed that one of the best ways to motivate students is to create hands-on games and activities that challenge and motivate. Another strategy is to give them learning goals for the day. Related to motivation, a few other suggestions included being enthusiastic and making relationships/connections a top priority early on.

Set Expectations Ahead of Time

According to teachers, setting expectations at the beginning of the year is a key factor in effective classroom management and to enhancing student learning. Have consistent expectations and give constant feedback on how students are meeting or failing to meet those expectations.

Set your routine early (for example, 1 whistle = stop/look, 2 whistles = come in) as well as establishing consequences (for example, wasted time = less time in activity). One respondent suggested practising coming in, listening quickly, then going and doing. This teacher spends a whole class just getting that process down.

Get Their Attention!

In large, shared spaces, the noise levels can make it difficult to capture the attention of all your students efficiently. Respondents were asked to share how they get their class's attention; 60 per cent of the teachers mentioned using a whistle. Other strategies (or combination of strategies) teachers highlighted are listed below.

- **Whistle/Music/Visual Prompts**
  One suggestion was to have different tunes (music) that have different meanings. These songs might relate to different needs such as stop, start, come in and so forth. Holding your hands up while the whistle is blown can be effective to give students a visual cue as well as an audible cue.
- **Good Gym Voice**
  Another often-cited strategy was to yell or have a good gym voice. Many respondents said they use key words like *freeze* to command attention. Just like with the whistle, raising your hand as you speak helps provide another cue for your students.
- **Count Down**
  The countdown is a great way to create a sense of urgency and to get students to hustle—but counting down without a consequence won't have the desired effect. One strategy is to begin counting up after you reach your countdown and having every number you count up be a task such as seconds of waiting silently, burpees or other consequences.
- **Wait Silently**
  "Be silent and raise my hand. Works 99.8 per cent of the time," responded one teacher. Waiting silently is also a strategy cited by teachers. Some will wait silently while looking at their watch; others will have preset consequences.

Teachers suggested that, once you have the students' attention, talk about why they need to pay attention quickly. You can talk about losing play time in class or about the goal of the class being to increase their heart rate; let them know that *they* decide how their class is going to be, based on how well they listen and engage in each activity.

To read the complete document, visit Rachel's online portfolio at https://rachelelizabethrichards.weebly.com/large-classes-small-spaces.html.

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Why HPE? Vision and Advocacy for Health and Physical Education

Jason McLester, Douglas Gleddie, Shannon Kell and Lauren Sulz

Welcome back! As the snow begins to hit, and winter is upon us, our ATEPHE group is back with another article. Our last two articles offered research-informed tips for teachers of physical education and/or health education to use in their teaching. This article is centred on the theme for 2020, which is Vision Towards Wellness, also aligned with HPEC 2020 in May. Our article seeks to empower the leaders in physical and health education by examining the *why* and supplying stakeholders surrounding our schools with research to support that position. Simon Sinek, in a TED talk watched by over five million people, describes how great leaders inspire action by starting with the *why*. In a sea of educational curriculum that deals with the how, when, who and what, our students, our administrators and even we ourselves often forget the purpose—the reason we are doing what we are doing. The *why*. This article attempts to reconnect us with our purpose and help reinforce why health and physical education are foundational to overall health and well-being for ourselves and our students. Our article begins where change always starts: with you, the teacher. Just like when the oxygen masks come down on an airplane during turbulence, we know that for you to be the teacher you want to be, you need to look after your own health and wellness first by examining the positive benefits of getting outside into nature during breaks. Our article then seeks to empower physical and health education teachers with research-supported evidence to take to stakeholders in your schools and communities, reminding them about the positive aspects of physical education for the whole child—mentally, physically, socially and emotionally. Our article finishes with a reminder to all physical education teachers, especially those teaching in the elementary years, of the impact you have made and can make in a student's lifelong views of physical activity and well-being.

Adults: Don't Waste Your Break!

Shannon Kell

It's windy. It's too cold. I don't have time. I need to finish this. I don't have sunscreen. The reasons are endless as to why we should not or cannot go outside during our breaks. We have limited time in our days and so much to do. When we do have a free minute, it is spent quickly completing an item off the to-do list while phoning a parent and simultaneously eating a banana without noticing. The thing is, we never really get a break because we fill our breaks with tasks. Additionally, we seem to be constantly connected to and communicating through technology.

What if—imagine this for a minute—we each took five minutes in the morning and in the afternoon during the school day to step outside and take a few deep breaths. Without your laptop or phone to check e-mails, without a quiz to grade, without any task at all; can you imagine this scenario? This is considered the best way to spend a break and not waste it.

Research has shown that we are overstimulated and our brains need breaks—actual breaks. This doesn't mean we turn to social media for the scarce five minutes we can spare during the morning. If you are feeling a headache coming on, some mental fatigue, perhaps anxiety and panic or feelings of being overwhelmed, you might be suffering from technostress, which includes these documented symptoms as well as direct or indirect negative effects on behaviour, thought, attitude and psychology (Naas Cook 2015). We know that technology has a negative impact on our ability to restore our cognitive functions (Jiang, Schmillen and Sullivan 2019).

We also know that outdoor and/or natural settings are ideal locations for restoring our cognitive functions, and that exposure to nature helps aid recovery from stress and fatigue better than urban, indoor and built spaces (Berto 2014; Hartig et al 2003; Kaplan 1995; Pearson and Craig 2014). Trees, grass, flowers and even just fresh (crisp winter) air offer us a sense of being away from our routine, everyday settings and allow our brains to rest. The catch is that our devices actually counteract the benefits we reap from natural settings (Atchley, Strayer and Atchley 2012; Jiang, Schmillen and Sullivan 2019).

The well-meaning plan of filling a break with productive tasks may seem like a great idea. But remember that our productivity declines when we are fatigued, we may not relate to others around us or notice social cues, and we may take greater risks that we might not have if we were cognitively rested (Berto 2014; Kaplan 1995). The challenge here is to take five minutes, no matter the season, to poke your head out the door and take some deep breaths, notice things around you and return feeling refreshed.

Advocating with Administrators (and parents, other teachers, journalists, etc ...)

Douglas Gleddie

I get it. Not everyone is as pumped about physical education (PE) as you are. Despite your best efforts to advocate for, implement and promote a quality PE program, it can sometimes seem that the deck is stacked against you. Budgets get tight—PE time gets cut. New curriculum continues to focus on literacy and numeracy (important, but ...) at the expense of PE. Super-negative media articles based on limited data, one-sided reporting and skewed interpretations don't help things either. So what can you do?

One of my favourite quotes (although I don't know the source) is "When will we use what we know to change what we do?" Perhaps the first step is making sure we present the evidence about the benefits of PE to our administrative leaders. What follows is a *snapshot* of what we know about the benefits of PE. Let's use the evidence to change what we do.

1. UNESCO Quality Physical Education Policy Project: there is a *tonne* of evidence for quality physical education (QPE) on this site, including infographics, videos and more. Consider linking to relevant resources on your school website and use the infographics and videos for presentations to administration, staff and parents.
2. I'll share a number of categorical articles below; however, after reviewing the research evidence for PE, Trost and van der Mars (2009) came to a very powerful set of conclusions:
    a) Policy makers must *stop trying to justify cuts* to physical education on the grounds that such cuts will strengthen school achievement or, ultimately, the economy.
    b) Policy makers, school administrators and teachers should *stop arguing* over whether physical education is essential.
    c) School administrators must *aggressively make room* for physical education (p 64).
3. Categorical Research Evidence for QPE
    a) Academics and learning
        i. Despite these students having less academic instruction, test scores and grades for students enrolled in physical education were similar to those of students who did not have physical education. (Coe et al 2006).
        ii. Adding an additional hour a day of PE for students in Grades 2 to 6 resulted in higher scores in science, math, French and English as compared to students with less PE time (Shephard 1996).
        iii. Increasing PE time does not result in reduced academic achievement (Sallis et al 1999; Trudeau and Shephard 2008).
        iv. Girls who participated in 70 or more minutes of PE per week achieved significantly higher reading and mathematics scores than those with 35 or fewer minutes per week (Carlson et al 2008).
    b) Social and emotional learning
        i. Physical activity is associated with a stronger self-image, quality of life, and quality of peer and family relationships for children and youth (Iannotti et al 2009).
        ii. Adolescents who are more active have a stronger sense of self-efficacy (Valois et al 2008).
        iii. Physical activity has the potential to enhance mood and improve self-esteem and self-perception (Fox et al 2000).

c. Motor ability
    i. Increased physical education and physical activity time improves the motor skills of students (Ericsson 2008).
    ii. Motor deficits are more likely to occur in students who do not have daily PE (Ericsson and Karlsson 2014).
d. Lifelong physical activity and joy of movement
    i. Female students participating in daily PE were more likely to report being more active and healthier 20 years later than those who had less PE (Shephard and Trudeau 2010).
    ii. Taking more PE in high school resulted in more physical activity after high school (Mears 2005).
    iii. PE programs with a goal of physical literacy result in students that have "... a love of being active, born out of the pleasure and satisfaction individuals experience in participation" (Almond and Whitehead 2012, 69).
    iv. Physical activity needs to be enjoyed so that students can access the psychological benefits of physical activity (Wankel 1993). "When movement is joyful and meaningful, it may even inspire us to do things we never thought possible" (Kretchmar 2008, 162).

I'll conclude with this quote from a recent research study that was featured (negatively) in the *New York Times*: "Memories of enjoyment of PE via the modified PACES were the most substantial correlates of present-day attitudes and intentions for PA" (Ladwig, Vazou and Ekkekakis 2018, 123).

Although we still have work to do to ensure that quality physical education is a fact of life for all K–12 students, we do have the evidence to back up our claims.

Health and Physical Education: A (Large!) Piece of Holistic Health

Lauren Sulz

Health. The driver of student success. We know that healthy students learn better, right? If we know this, our practices should be grounded in student health. Unfortunately, many school practices are not. It has become understood that schools will be more successful in their education mission when integrated promotion of students' academic, social, emotional, physical and mental well-being is achieved (Story, Nanney and Schwartz 2009; Zins et al 2004). Health and education are interdependent: healthy students are better learners, and well-educated individuals have better health and well-being (Bradley and Greene 2013). This suggests that schools need to focus on supporting students' holistic health to better achieve their objective of preparing students to make significant contributions to their communities. Health and physical education provide opportunities for students to learn how to lead an active, healthy lifestyle and advocate for their own health. Unfortunately, health and physical education are often neglected, last scheduled (or cut completely) and under budgeted (Gleddie, Hickson and Bradford 2018). Yet, the reasons for quality health and physical education in the promotion of student health are well established. This article aims to provide tips to further advocacy of quality health and physical education within your context, with the foundational focus on key aspects of holistic health (beyond the physical).

Whole-Child Education

Whole-child education is one of the most important concepts in education today, and for good reason. The whole-child approach to education was developed in recognition of the diverse needs of the 21st-century learner and in questioning whether student well-being is being sacrificed in the pursuit of academic excellence. A whole-child approach to education focuses on the social, emotional, mental and physical development of students (Slade and Griffith 2013). When school communities commit to educating the whole child, it is a commitment to creating learning environments that focus not only on core subject areas but also on psychosocial and physical aspects of the individual and learning (Slade and Griffith 2013). A whole-child approach to education ensures that each student is safe, engaged, supported, challenged and *healthy*. This approach, supported within the whole-school community, provides the opportunity to improve the educational success and healthy development of students (Lewallen et al 2015). Health and physical education programs can help ensure that every child enters school healthy and are critical to a complete education and development of the whole child.

Social and Emotional Competencies

Arguably, physical education class is one of the best contexts to develop social and emotional competencies (Ciotto and Gagnon 2018). Social and emotional learning (SEL) is defined as a process through which students learn to understand and manage emotions, set goals, show empathy for others, establish positive relationships, and make responsible decisions (Collaborative for Academic, Social, and Emotional Learning [CASEL] 2016). There are five core competencies of SEL that are essential for success of students (CASEL 2016):

- *Self-awareness:* the ability to accurately identify, describe and understand one's own thoughts and emotions and how they influence behaviour
- *Self-management:* the ability to effectively regulate one's thoughts, emotions and behaviours in diverse and/or difficult situations and to set and work toward personal goals
- *Responsible decision making:* the ability to make constructive choices about personal behaviour and social interactions based on the consideration of ethical standards, safety concerns, social norms and the well-being of others
- *Relationship skills:* the ability to establish and maintain healthy and rewarding relationships with diverse individuals and/or groups
- *Social awareness:* the ability to empathize with others by recognizing, understanding and appreciating the similarities and differences among individuals and groups

These competencies are critical in whole-child development and necessary for students' overall success. The nature of physical education allows students to problem solve through physical movement, remain calm and manage emotions when faced with failure, work collaboratively and cooperatively with classmates, set personal goals, listen and communicate with peers, embrace diversity in physical abilities, take risks, and resolve conflicts. We must recognize, and promote, the contribution of physical education to the development of students' social and emotional competencies.

Mental Health

We cannot advocate for mental health without advocating for health and physical education! Administrators, teachers, parents and the students themselves voice concern about the status of young people's mental health. In Canada, an estimated 13 to 18 per cent of children and youth suffer from mental health issues (Kutcher, Hampton and Wilson 2010). Health education is the only subject that includes outcomes targeted at positive mental health, teaching students about stigma and providing strategies to support positive mental health and resources and supports to cope with mental health issues. Physical education provides students with opportunities to be physically active, which is a critical component of holistic health and helps reduce depression (Mutrie and Parfitt 1998; Dunn, Trivedi and O'Neal 2001) and improves anxiety levels, behaviours and self-worth (Parfitt, Pavey and Rowlands 2009). We must align our worries for our students' mental health with concerns about the value and time allotment of health and physical education in our schools.

Often, as stated by Immordino-Yang and Damasio (2007), those in the field of education "fail to consider that the high-level cognitive skills taught in schools, including reasoning, decision making, and processes related to language, reading, and mathematics, do not function as rational, disembodied systems, somehow influenced by but detached from emotions and the body" (p 3). I challenge our education leaders to appreciate the importance of students' holistic health, recognize their health as a critical force to student learning, and contend that the mind and body are interwoven within the notion of learning itself (Immordino-Yang and Damasio 2007).

The Power of Physical Education

Jason McLester

I see students every day in my kinesiology or physical education curriculum classes—some because they have to be there, as it is a requirement in their program, and some because they want to be there—they love being active and learning more about physical activity. It is clear, as I listen to all of their stories, that physical education in school and the experiences they had in that environment have had a profound impact on their lives. For some, their physical activity experiences and those who taught them physical education have inspired and motivated them to follow suit and have that same impact on a future generation. For others in my class, those

experiences have shaped an attitude to physical activity that is resistant, reluctant and sometimes downright fearful. These students carry experiences with them that serve as obstacles to overcome in the hopes of lifelong health and wellness. In my experience, there is rarely a story that falls between these two attitudes. Students seem either to love PE or cringe at its very existence. Regardless of point of view, it is clear to me that we, as physical educators and as the designers of student's physical activity experiences, have a tremendous impact on a person's overall perception of physical activity, health and wellness into adulthood. As so eloquently spoken by Uncle Ben Parker, "With great power comes great responsibility."

We know that "involvement in physical activity in childhood and adolescence contributes to a physically active lifestyle in adulthood" (Malina 2001; Aaron et al 2002; Telama et al 2005; Dumith et al 2011), and that "the most marked declines in physical activity levels have been evidenced from childhood to early adolescence" (Duncan et al 2007; Telama and Yang 2000; Nader et al 2008; Yli-Piipari et al 2012) or childhood to late adolescence (Gordon-Larsen, Nelson and Popkin 2004; Zick et al 2007; Kwan et al 2012).

It stands to reason, then, that elementary physical educators are tasked with the heavy lifting. This burden of responsibility comes to the person who delivers content knowledge about the benefits of physical activity and nutrition, stresses the importance of physical activity as a tool for emotional well-being, and tirelessly endeavours to design a learning environment for students so they feel physically and emotionally safe in the effort to develop their fundamental movement skills. From a research perspective, we know that the ages of 5 to 12 are crucial, because we know that "children who are competent movers tend to be more physically active" (Okely and Booth 2000) and "are less likely to be overweight" (Okely, Booth and Choy 2004; Logan et al 2011). We also know that "children between the ages of 6 to 12 years, with advanced fundamental motor skills spend more time engaged in non-sedentary behaviours in comparison to children with low fundamental motor skills" (Houwen, Hartman and Visscher 2009). The elementary years are also important from a fundamental movement skill perspective because, as outlined by Canadian Sport for Life (2016), children should learn all basic sport skills "before the onset of the adolescent growth spurt" (p 19). In order for basic sport skills to be attained by approximately age 12, a student must be competent in the fundamental locomotor, nonlocomotor and manipulative skills prior to that age. With regard to fundamental locomotor movements, "improved motor competency leads to increased functional capacity, which promotes positive lifespan trajectories … to long term health outcomes" (Cattuzzo et al 2016). The foundation we create for our students at an early age can provide the strength and resiliency needed to serve them into adulthood on the journey toward lifelong health and wellness.

I believe that educators want to make a difference in the lives of their students. I see this every day in the third- and fourth-year students in our education program. It is clear from the research that physical educators, especially elementary PE teachers, have the ability to have a significant impact on the attitudes and behaviours of their students regarding physical activity, health and wellness past adolescence and well into adulthood. If we understand and accept this impact, and decide to teach with it in mind, we have the potential to bridge the divide. It is my hope that in the years to come I will walk into my class and hear the stories of the positive impact physical education has had—on not just some of my students, but all of them.

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Passion, Vulnerability and Community: The Success of Workshops Led by Preservice Teachers

Jessica Skall

On April 8, 2019, HPEC and Mount Royal University created a drive-in workshop for preservice teachers as a final exam piece for a program-mandated course in teaching physical education. One interesting twist on this drive-in workshop was the opportunity for preservice teachers to teach their own workshops on something that they are passionate about. I felt somewhat apprehensive about teaching my peers a physical education lesson, but I made a point of attending both of the student-led workshops that took place that day. What I noticed was intriguing, and I hope that peer teaching can continue to be encouraged throughout other preservice teacher programs.

The evaluation apprehension about teaching your peers can be nerve wracking. However, if there is anything that we know as teachers, it is that the best teaching opportunities take place when we are both passionate and vulnerable. When the first preservice teacher-led workshop began, it was clear that this pair had abundant confidence and were eager to teach their peers; as their peers, we were ready to listen. This reciprocal relationship fostered laughter and learning. There was no sidelining while the groups played the Indian game Kabaddi, and a strong sense of community developed as we learned a new game together. Everyone seemed impressed with our peers' teaching of the lesson, and in many ways they modelled effective teaching for the rest of us. In turn, I believe, we all gained more confidence to teach something new in an environment where one feels vulnerable.

The next (and final) preservice teacher-led workshop was about line dancing, and we had a very confident peer leading this workshop. Her workshop really highlighted how you can let your personality shine through in a physical education lesson that you are passionate about. Although many participants were familiar with line dancing, this was still an exciting and challenging workshop where we could see our peers make mistakes and try again (and again). We all felt somewhat vulnerable dancing; this contributed to the overall sense of community and growth that our small cohort developed over this workshop. I think that it is also important to note that health and physical education were not this preservice teacher's minor, but she led this workshop out of pure passion—there is no need for teachers (either preservice or inservice) to feel confined to their specialization to share their excitement with others.

I hope not only that more preservice teacher programs adopt student-led workshops, but perhaps that even professional development opportunities for inservice teachers allow for more opportunities for teacher cohorts to teach each other. Teaching your cohorts provides the opportunity for teachers to showcase what they are passionate about, and the vulnerability that everyone experiences in the process allows for a strengthened school community and greater teacher networking.

Jessica Skall is in her final year in Mount Royal University's bachelor of education program. In her studies, she has been fascinated with the connection between math and physical education with regard to how much influence these subjects have on a student's self-esteem. Outside of academics, Jessica enjoys challenging hikes in the Rocky Mountains.

Setting up a Comprehensive School Health Team: My Experience, the Method and a Hunger for More

Lisa Taylor

Comprehensive school health (CSH) is an internationally recognized approach to promoting healthy school communities, consistent with other frameworks, such as health promoting schools and coordinated school health (Bassett-Gunter et al 2016; Yessis, Manske and Gleddie 2015; Veugelers and Schwartz 2010), and is used to support student achievement through the development and improvement of school health (Joint Consortium for School Health [JCSH] 2012). The CSH framework comprises four pillars: when school policies, school community partners, teaching and learning practices, and the social and physical school environment are all supportive of wellness, students can maximize their potential as learners (JCSH 2012). As supported by Oser et al (2014), a wellness-focused school can increase student academic achievement by supporting staff and student well-being. In this article, I will talk about my approach as a "Health Champion" (Alberta Health Services 2017) to initiating CSH teams, and about my interests for the future.

Figure 1. The four pillars of comprehensive school health (JCSH 2012).

Two Schools, Two Teams

In 2015, as physical education (PE) learning leader in a high school of approximately 1,800 students, I initiated a CSH team, which we called a school wellness action team (SWAT). The vision was to improve the overall health and wellness of the school community. Thanks to exceptional mentorship from Nadeen Halls and a few ideas from health champions of other schools, this vision began to materialize. Within one year, the SWAT grew to include more than 30 individuals who could speak to a variety of different perspectives within the school community. Our SWAT included teachers, students, a facility operator, our school health nurse, administrators, a guidance counsellor, a member of parent council and nonprofit community partners. Members of our team launched new ideas and supported existing initiatives within the school, such as a mental health fair, a PE program satisfaction survey for students, mental health week, an all-gender washroom for students, physical activity opportunities for teachers, and a number of other activities and initiatives.

Recently, in January of 2019, I started a new role as a PE teacher in a K–9 school of approximately 750 students. Bringing with me the positive experience I had with the SWAT and CSH initiatives in my previous school, I wanted to look at how the CSH approach could be used to improve the overall wellness in my new school. Based on a similar method that I used in my previous school, I started a SWAT; within four months it gained 11 members, which included students, an administrator, teachers and the school nurse. Having launched the SWAT at my previous school, getting this team started felt much easier! It seems as though I might have happened upon a step-by-step process to set up a CSH team in a school. I am two for two, but I am wondering, will it work for you?

The Eight-Step Method

Step 1: Administrative Support. In both circumstances I approached my principal first. I referred to the health and wellness expectations set out by our board of education, acknowledged how CSH could support the existing culture and focuses within the building, and identified that I wanted to use CSH to improve wellness for the school community and by doing so, work to achieve school-specific academic goals as well. For example, a student who is well is more likely to achieve their potential with regard to math and literacy than if that student is not well, and a teacher who is well is more likely to deliver an effective lesson than a teacher who is not well—an idea supported by the findings in Oser et al (2014). Following approval, I asked for a small budget to support teacher well-being in CSH meetings, in the form of nutritious snacks or lunches.

Step 2: Five Minutes for Stickies in a Staff Meeting. Following approval for initiating a CSH team, I asked if I might be scheduled for five minutes during the next staff meeting to briefly introduce CSH and complete a wellness activity with staff. During the meeting, I handed out two sticky notes to each person. After briefly explaining CSH, as well as the various dimensions of wellness, I asked staff to record one thing they do to support student wellness on one sticky note (purple) and to record one thing they do for other staff on the other sticky note (pink). I collected the sticky notes and then celebrated our staff by thanking them for the effort they already apply to supporting wellness within the school. The sticky notes were placed on two different poster papers and were later hung in a staff common area for all to see (Figure 2). I finished by asking staff to watch out for an e-mail regarding the CSH team.

Step 3: Recruitment E-Mail. Following the staff meeting, I sent an e-mail to staff briefly explaining CSH and asked for a response from those who were interested in focusing on the overall health and wellness at the school. In this e-mail, I included the first meeting date and time and ensured that it was scheduled to take place on a noninstructional day during work hours, so as not to take personal time away from staff. Additionally, I made sure to have an administrator on each team, noting the importance of administrator involvement in implementing CSH (Roberts et al 2016).

Step 4: A Snapshot of Wellness. Prior to the first meeting, I began to record all the wonderful initiatives taking place in the school and school community and

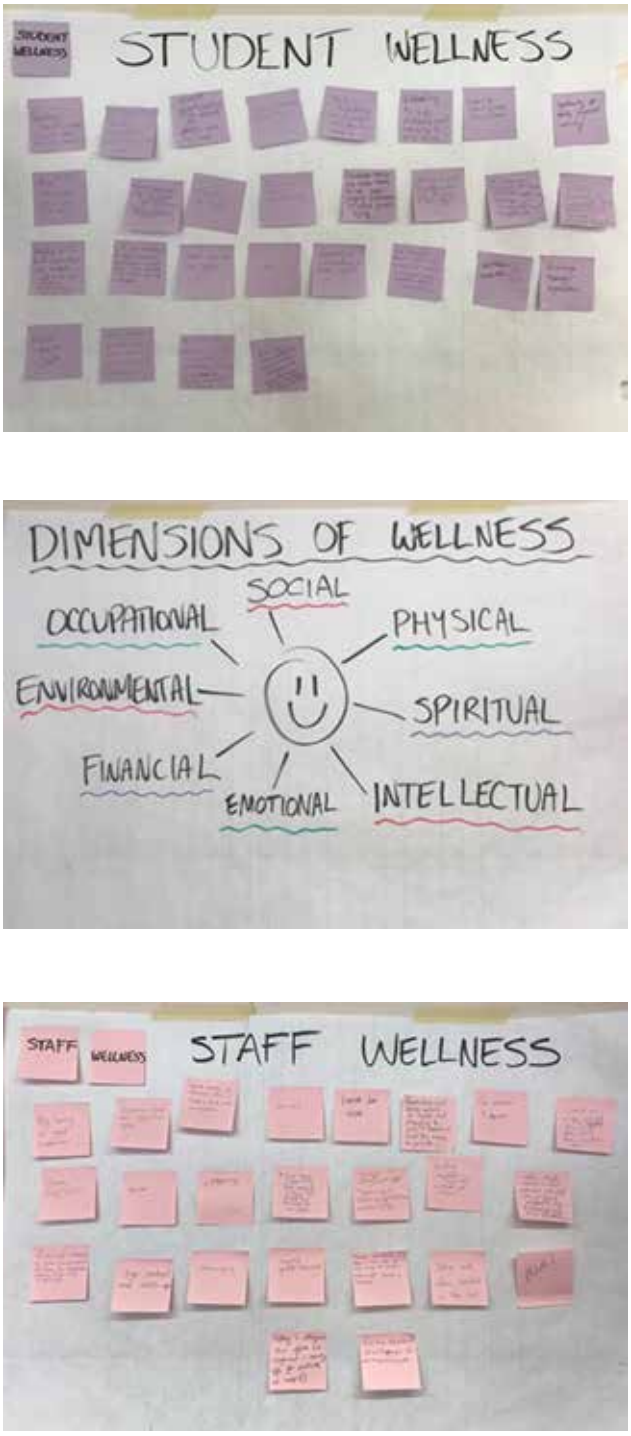

Figure 2. Sticky notes communicating existing wellness efforts within the school.

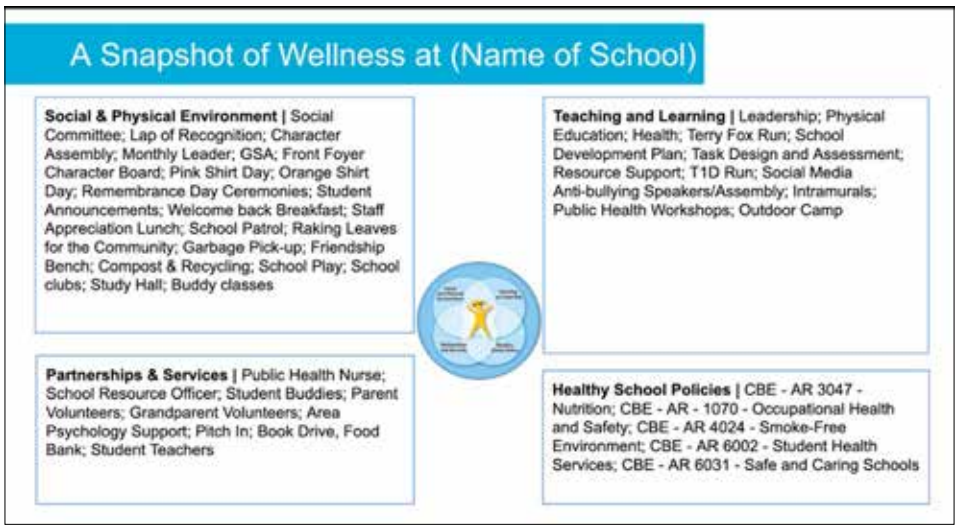

Figure 3. An example of A Snapshot of Wellness.

recorded them in A Snapshot of Wellness, a format developed by Nadeen Halls (Figure 3). This format clearly identifies and celebrates all the wonderful initiatives already taking place in the building with regard to the four pillars of CSH (JCSH 2012) and provides room for more to be added as new CSH initiatives are started.

Step 5: Recruit Students. I have used a few different approaches to recruiting students, including asking individual students personally, advertising the CSH SWAT to entire classes and making morning announcements over the PA system. Note: it can be difficult for students to access the school on a noninstructional day, so the timing of meetings may need to be revisited if your students are not able or permitted to get to campus.

Step 6: Register for the Healthy School Planner. With my first SWAT meeting on the horizon, I signed up for a free JCSH (2019) Healthy School Planner account for my school (http://healthyschoolplanner.com/).

Step 7: Meeting 1—Complete the Foundational Model. At the first meeting, our SWAT made sure to complete the JCSH foundational model survey in the healthy school planner tool (JCSH 2019). This is an excellent resource that helps identify areas of strength and need for improvement with regard to comprehensive health within the school community. The foundational model survey takes approximately one hour to complete; the more perspectives you have in the room (administration, teachers, students), the better!

Step 8: Meeting 2—Reviewing Results and Goal Setting. The JCSH foundational model survey yields a foundational model report (JCSH 2019). This document provides great feedback about how the school scores in specific areas of wellness. Each area is given a score out of four and includes suggestions for improvement. Prior to the meeting, I printed out the report and cut out each evaluated area. In one school, I posted these items on the walls of a conference room and encouraged group members to circulate through the room, read the evaluation, and write their name next to any areas they might be interested in tackling. In another school, I handed out the papers randomly to SWAT members who sat in pairs; if individuals were not interested in the area handed to them, they simply traded in the paper for another. Once SWAT members identified an area of interest, they were encouraged to jot down specific ideas or goals on the paper. These ideas were then compiled and recorded for meeting 3. Subgroups formed from here and action plans began to develop regarding different wellness initiatives. Note: Have a peek at other school-specific data regarding health and wellness—for example, accountability pillar survey results (Alberta Education, 2010)—to further inform your actions. Having a variety of data sources to consider can help focus priorities and immediate action.

A Hunger for More

I look forward to using the aforementioned process all over again! As I enter my first year of PhD studies at the University of Calgary, I look forward to focusing my research on how CSH initiatives may support the wellness of staff and students over the long term, by being directly involved with CSH teams. If your school is in the Calgary area and would appreciate additional CSH support, please contact me at lisamptaylor@gmail.com.

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Lisa Taylor, MPE, BKin, BEd, is a physical education instructor in kinesiology and a PhD student in education at the University of Calgary. She has enjoyed nine years teaching secondary physical education with the Calgary Board of Education, during which time she served as a physical education learning leader at the high school level and successfully started comprehensive school health teams at one high school and a K–9 school. For her PhD dissertation, Lisa plans to study the impact of comprehensive school health wellness initiatives on staff and students. As a wife and a mother, Lisa enjoys being physically active with her family as part of a healthy, active lifestyle.

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Runner, the journal of the Health and Physical Education Council of the Alberta Teachers' Association, is a professional journal for physical education teachers in Alberta. Authors are encouraged to submit articles of relevance in either a peer review or editorial review process. Topics may include, but are not limited to, personal explorations of significant classroom experiences; descriptions of innovative classroom and school practices; reviews or evaluations of instructional and curricular methods, programs or materials; discussions of trends, issues or policies; and scientific research.

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Send manuscripts for future issues to Astrid Kendrick at runner@hpec.ab.ca.

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HPEC Mission Statement

The Health and Physical Education Council (HPEC), as a professional organization of teachers, advocates for quality health and physical education programs and provides opportunities for professional growth and development of its members. HPEC is committed to providing leadership in creating healthy, active school communities.

HPEC Vision Statement

Alberta teachers will provide quality instruction and programs in health and physical education to promote the development of healthy, active lifestyles in students.

Objectives

The objectives of HPEC shall be to

- improve curriculum, instruction and assessment in health and physical education through increased knowledge, skills and understanding;
- develop, study and propose professional resources and responses to health and physical education issues;
- ensure that teachers have access to meaningful professional development opportunities that meet their needs throughout all stages of their career;
- enhance the expertise of members by promoting an understanding of current research to inform professional practice;
- liaise with other organizations that seek to promote healthy, active lifestyles within school communities;
- further the continuous development and evaluation of standards and guidelines within the profession for personnel, programs and facilities in health and physical education; and
- facilitate broad-based, skilful participation in the planning and implementation of effective, collaborative, ongoing professional development.

Beliefs

HPEC believes that

- a well-delivered health and physical education curriculum supported by quality instruction can change health behaviours of children and youth in K–12;
- health and physical education play a valued and vital role in providing a quality, balanced education for all children and youth in Alberta schools;
- all students in all grades in Alberta schools should have the right and opportunity to experience sustained, vigorous physical activity through participation in quality daily physical education programs;
- wellness is an outcome of quality health and physical education programs that develop the knowledge, skills and attitudes to assist students to make appropriate choices to live active, healthy lives; and
- comprehensive school health is the framework for the delivery of quality health and physical education programs to promote and develop wellness in Alberta's children and youth.

From the Executive Handbook of the Health and Physical Education Council (*2016*).

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