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The Physicality to Mental Health and Mentality of Physical Education: A Complex Spiral



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Synonyms

[Awareness](#); [Metacognition](#); [Movement](#);
[Pedagogy](#)

Introduction

Movement skills contribute to the physical education of children as well as through their everyday general lives. Daily movement, of varying intensity, is advocated by the World Health Organisation (WHO 2018). Benefits of a musculoskeletal, cardiovascular, neuromuscular, body mass, and those pertinent to this essay, of a psychosocial nature, are cited. When pedagogically embraced, psychosocial benefits can purposefully accompany the development of psychomotor skills. This paper explores ways physical education can increase awareness if not improve emotional wellness in children as they acquire movement-based skills and competencies through an autonomy developing pedagogical approach. This psycho-motor/social pedagogy is conceptualised and exemplified.

Physicality to Mental Health

While physical activity provides benefits for personal well-being, the lack, thereof, is acknowledged as a primary contributor to premature death (WHO 2018). Healthy children are more likely to grow into healthy adults. Global and national policies aim to increase physical activity. Their expectations appear more elusive than anticipated (Hobbs et al. 2018). Furthermore, a prevalence of mental health disorders threatens individual well-being, propagating across broader society (Bailey et al. 2018). Reduced physical activity depicts an inverse relationship with mental health problems in youth (Hallall et al. 2015) and, as such, can deploy strategically to complement existing comprehensive child-centered mental health guidelines and recommendations. When imbedded through appropriate learning experiences that match with a child's developmental phase, physical activity can build autonomy in regards to how they might approach their general health and well-being. Such functional aspirations promote a child-centered agenda. Mental health is not extracurricular (Mental Health Foundation 2019) but central to a child's physical and emotional development as they experience learning.

General health-related and skill-specific fitness-producing activities can help to offset negative influences of sedentary behavior in adolescence. Increased physical activity levels can attenuate depression, anxiety, psychological distress, and emotional disturbance. Worryingly,

children with diminished motor skill proficiency could potentially become more socially isolated (Poulsen et al. 2008). Skill proficiency is therefore both a factor contributing to child health as well as a component of physical education. When deployed strategically through available conduits such as curricula, extracurricular, and community-based opportunities, it can assist children in their skill, competency, and knowledge acquisition. When delivered through an informed and developmentally appropriate manner, it offers space and opportunity to explicate and encourage positive messages serving to build child identity and bolster self-worth. Mental health issues are less visible than observable challenges for children, such as limited motion due to physical challenges inclusive of obesity, yet could be just as capricious. One way forward is to address both, as directed by the developmental readiness and awareness of the child. It is not unforeseeable to posit that if presented with a conducive environment, children could in turn increase the affective aspects of learning as they physically move. From a physical education perspective, perseverance involves action. It relies upon the strategic deployment of personal and learning dispositions for students to acquire accessible subject knowledge, skills, and competencies. Personal attributes, gradually internalized, enable a person to adapt to life's difficult circumstances (Alvord and Grados 2005).

Mental health issues are complex as they are often preceded by and presented through numerous factors. To confound this intricate nature further, these factors are plausibly, both isolated and interrelated, predictable or unpredictable in nature and thereby require a more comprehensive and fluid response. A conceptual shift to operationalize factors construed as potentially debilitating to a more facilitative role can positively impact children as they learn to recognize these and reframe them in order to gain proficiency in the development and maintenance of emotional wellness. When addressed explicitly within teaching and learning, the factors of concern can also function in developing an awareness of, if not resilience to, these. Intrinsic elements, such as sociability, temperament, and

perseverance, assist in the building of holistic health and wellness. Arguably, quality physical activity could reduce moderate mental health stressors and open opportunities to fortify child resilience. Clinically diagnosable mental health disorders have risen and have increased in complexity among young people in recent times (DfE 2018). Contributory variables can extend beyond the control of the educator or educational environment. Children present a variety of affectively based needs. Children in need, looked-after children, and previously looked-after children experience more challenge socially, emotionally, and mentally, than their peers (DfE 2018). While educators cannot mediate all such factors, they can reapportion and reposition their pedagogy to address child awareness and autonomy of contributory elements toward a healthier mentality. A multifaceted approach can encapsulate some of the complexity as children progress through their respective education systems and life experiences. Tragically, for some pupils, mental health issues are part of their reality, whereas for others they might appear at different stages of life. Further school-based considerations provide ideal opportunities for children to develop emotional resilience as they learn. Movement-based experiences can offer extremely valuable opportunities for children to develop a more robust self profile.

Education Has a Comprehensive Role to Play

Pedagogically speaking, physical education is taught through a myriad of approaches, styles, and models. With explicit acknowledgment of the prevalence of mental health issues, the adoption of pedagogies and practices that explicitly support child mental health is more welcome than ever. The complexity of facilitating healthy child development in physical education is in itself complicated. Within the presence of all expected factors, children's minds develop with less linearity than expected physical milestones (Gogtay et al. 2004). As they grow, children experience and can be subjected to environmental stimuli potentially detrimental in

nature to emotional, cognitive, and/or physical development (Gabbard 2016; Gallahue et al. 2012). Factors can interrelate and accumulate from a series of acute incidents into more insidious chronic phenomena of ill-health and increased complexity. Limitations to government support systems and school-based resources further compound child mental health. The situation remains inherently challenging. At the very least, facilitated opportunities for children to be active offer explicit occasions for children to develop a more positive self-regard. When explicitly illuminated, pedagogical affordances can attempt to enhance emotional resilience.

Globally, governments have explored the potential role of schools in identifying and supporting the mental health of children. In England, for example, this issue is ever changing (DfE 2018), and there is a growing expectation for schools to become more proactive in addressing any such health inequality. School-based physical activity provides more time for children to participate in movement on a daily basis. As with physical education, extracurricular opportunities should be accessible for all children of all abilities and means. Movement promotes an awareness of the importance of action-based learning in order to promote feelings of well-being.

Inherently, the subject of physical education is set through movement. As such, it offers a fundamental platform from which to augment child holistic health as it seeks and surpasses curricular-driven outcomes. Since the 1978 rendition of the International Charter of Physical Education, Physical Activity and Sport (amended in 1991 and revised in 2015), physical education has been attributed a wide-ranging variation of importance (UNESCO 2015). Consideration of the existing role(s) and potentiality for physical education as regards life-based experiences through physical inactivity and/or holistic wellness makes for dynamic discourse. This could be highly problematic in itself. Ironically, despite their potential to accentuate mental health-related issues, schools offer an accompanying forum to build healthy mental attitudes and coping strategies. Can, indeed, ought physical education assume a more

prominent role regarding student holistic wellness as it pertains to healthy mentality?

The Mentality of Learning and Development in Physical Education

Physical education remains an essential component of existing educational curricula. Whether explicit or implicit, physical education accesses all learning domains (Murray et al. 2018). By virtue of this, benefits to mental wellness exist. The corresponding school ethos will likely determine the presiding philosophical stance to support the general curriculum emphasis of delivery. Collaborating with the European Commission, the International Bureau of Education, the International Council of Sport Science and Physical Education, the International Olympic Committee, Nike, the United Nations Development Programme, UNICEF and the World Health Organization, UNESCO provided a government support package to assist in the provision of skill building and inclusive child-centered physical education policy (2015). Endeavors to support fully accessible physical education by all children varying in need, capacity, and disposition are important to maintain a mindful operational sense of what is going on from policy to practice. In a rudimentary sense, the proposed pedagogical approach offers a practical way for children and teachers to position the movement-based learning through a progressive accountability spiral of motor and affective skill and competency acquisition. It aims to complement existing curricular policies. It fits ecologically within a physical education context to progress motor-based learning through a developing sense of self.

Learning Domain and Experiential Considerations

Educators teach to, and through learning objectives of a psychomotor (motor- and thinking-based), cognitive, and social (value-based) domain nature. Revisited and revised, learning domains have played an intuitive role in learning

and teaching in recent decades (Krathwohl, 2002). Practically, they offer a working platform from which to transfer and build teacher and pupil competencies (inclusive of explicit and tacit knowledge; acumen) in physical education. Physical education pedagogies acknowledge and utilize theoretically underpinned models and approaches in order to support learning outcomes. An opportunity to illuminate and deploy personal dispositions to support that process offers an explicit conduit for skills and competencies of a more affective orientation. Indeed the merit of such learning is renowned, and can embed through a continuum of physical education teaching styles (Mosston and Ashworth 2008) as well as instructional models (Metzler 2015), renowned across the subject. Furthermore, experiential learning is distinguished for its benefits in developing the affective aspects of the self, such as self-efficacy, self-confidence, citizenship, and other value-based skills and dispositions. Learning can occur in formal and informal settings, within and alongside the curriculum (Richmond et al. 2018). The additional breadth of opportunity beyond curricular constraints can further extend the merit of a quality curriculum.

Physical Education: Not the Solution Yet an Emergent Contender

Quality physical education provides planned opportunities to explore, practice, acquire, and experience learning within and beyond the school setting. There is neither a correct way to teach physical education nor any single curricular approach to best address physical education aims. It sets a foundation to develop skills, competencies, and emotional fortitude for pupils to be physically active for their life course. It is forward facing and as such aligns beautifully with holistic child wellness. With the disregard to daily globally set physical activity mandates (Hobbs et al. 2018), one tenable solution to increasing physical activity is plausible through daily physical education. Global advocacy for the adoption of daily physical education can reduce a sedentary lifestyle and inactivity among children, regardless

of the situation or schooling. If strategic emphasis can be made of the designated time, a component of this could be strategically dedicated to learning through an affective lens. Children can become more aware of their feelings, emotions, and attitudes toward their health and well-being even if their opportunity to practise learning through these is limited. By positioning value-based processes to learning of an expected movement-based a primary outcome, the added dimension around affective learning can also be explored, acquired, refined and transferred by learners across the learning progression spiral. This conceptual shift, commonplace through the more dynamic experientially based adventure-based models, offers more explicit opportunities for children to explore a holistic understanding in how to develop a stronger self-identity via explicit practise and feedback afforded to the affective elements which support their personal development. This approach offers school-based implementation without deployment of additional staff or resources. It is but one pedagogical strategy to support the provision of a more affectively robust physical education.

Physical education is complex and dynamic (Ovens et al. 2013) and can be transformational. Explicit emphasis upon the affective or social domain offers an effective pedagogical strategy in developing and practising emotional empathy and developing attributes. These can build resilience. In subtle ways, a holistic approach to physical education can attain and exceed curricular expectation as it supports children in becoming aware of their mental health education.

While multifaceted in purpose and perhaps direction, it does not over claim its potential. Often, however, it is undervalued and under- or misrepresented through policy and policy enactment. A well-balanced curriculum implemented by well-informed educators affords a chance for children to bolster their mental health and well-being. A planned learning and teaching progression can afford and hence facilitate learning across domains. In this pedagogical approach, the educator explicates the learning from the affective domain alongside and indeed, through that of the psychomotor learning. The coupling and sharing

of both affective and motor aims (in planning and lesson) models and reinforces the importance of the less transparent elements for children.

Physical education is not intentionally situated to ameliorate mental health disorders. However, the reported benefits of physical activity and that of quality structured movement-learning time offer potential for productive and positive contributions in this regard. Familial, peer, and societal expectations and influences provide further tensions to emerging issues. Children of secure familial ties can struggle as they grow up. Those with less security of attachment will endure a further array of interrelating and compounding factors (DfE 2018).

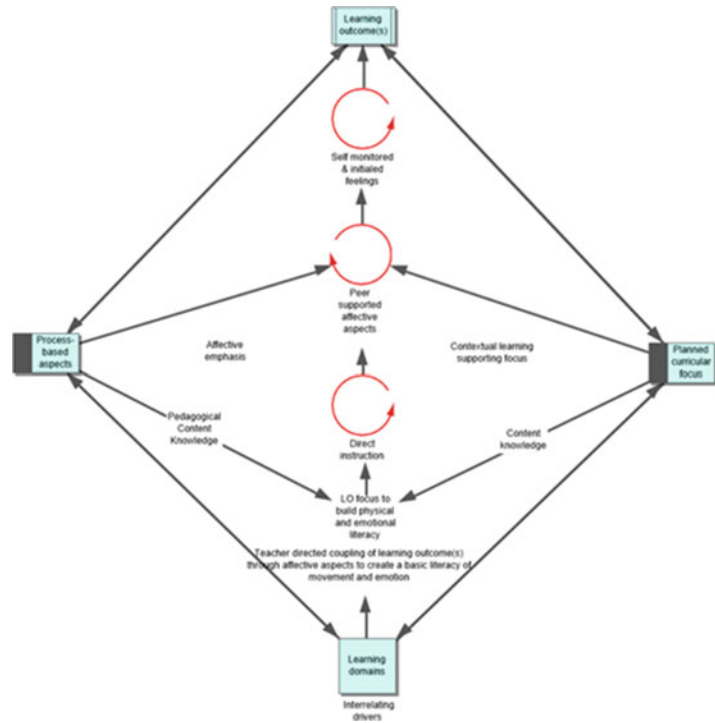
Within a learning scenario, expectations are set and assist all stakeholders in the learning and teaching journey. To be more effective, the learning extends beyond single dimensions of competency or being. A practical approach to holistic learning of an experiential theme provides valuable opportunities to physically educate children across the breadth of domains. Children learn better, when they feel better about themselves. The opportunity to feel “grounded” (emotionally) as they move (physically) is an incredibly empowering experience when explicitly facilitated. Educators plan for this through a pupil-centered, process-emphasizing approach. When the child is within the physical education learning space, they can safely explore, practice, refine, and transfer skills, competencies, and tactics through emphases relating to how they approach the tasks and challenges, how they feel, and how they treat themselves and others. This ensures that children leave the physical education class with greater competencies across a variety of domains despite the emphasis remaining through a value/process focus. Learn as they move, move as they learn transcends to a more mindful adage as they learn move through self and collective awareness, to deploy these across their movement-based learning.

Evolving Autonomy

In combining approaches to develop skills and pupil agency, children have a safe and sequenced opportunity to acquire a mental and physical fortitude. Self-regulation can be developed through well-planned physical education. It embraces a mindfulness that children bring to their way of being. They become aware of how they think and of how they act (Ommundsen 2003). It is most companionable to metacognition and as such offers an explicit opportunity for development alongside motor skill acquisition. Learners increase their working awareness of how they learn in the physical education setting when they are engaged in a metacognitive way. This awareness can lead to autonomy as it pertains to the knowledge or competency being acquired (Murray 2014). Once functioning through a higher level of awareness, students can choose to consider the more affective elements of the content and process. A teaching and learning pedagogical tool; a spiral toward mental wellness agency; and the positive mentality spiral illustrate the fusion of pedagogy through affective learning (Fig. 1). The development of pupil autonomy in regulating feelings complements existing learning outcomes more subject-based in nature. The active pedagogical process couples the motor skill(s) of interest with mindful affective set of vocabulary and behaviors which model validation of explicit process-based efforts when working toward developmentally appropriate outcomes. It systematically supports all children (learners) from the outset. The framework then encourages peer-to-peer support along the teaching and learning experience. Students within the learning and teaching experience, are progressively encouraged to deploy the skills and competencies taught and modelled by the teacher, practised with peers, for their own benefit, at their own discretion. In essence, it works toward the acquisition of a motor skill as it gives authentic recognition to the dispositions the students bring to their learning scenario. Students are encouraged to appreciate the merit of what they bring to the teaching and learning experience. Learning expectations encompass and embrace knowledge, skills, competencies and so

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Fig. 1 The positive mentality progression spiral. (Adaptation of the Meta PE-3, Murray 2014)



forth, across a motor-based genre. To this, an inherent quality, such as a disposition of patience, empathy or persistence for example, is illuminated as an accompanying experiential learning expectation. To this end, the learning and teaching cycle facilitates their combined dual experience across a metacognitive pedagogy. Educator input diminishes as pupil autonomy increases. Figure 1 depicts the pedagogical progression. Table 1 exemplifies this through a throwing theme progression (psychomotor domain: throwing, affective domain: perseverance).

How It Works: Reasonability, Responsibility, and Accountability

Motor skills and associated knowledge and competencies develop of course through any learning domain. In this mindful approach, they are scaffolded and practised through an affective lens. The positive mentality progression spiral (Fig. 1) begins through a teacher-centered approach. This is gradually reduced to place (or return) more reasonability, responsibility, and

accountability of learning (and feeling) upon the learner. It delivers across a three-tiered spiral, which gathers momentum through student elevating competency and efficacy in managing personal feelings amidst a practical learning pursuit:

1. Commitment. Initially, learners are provided opportunities to explore, to practice, and to attain learning objectives through direct instruction. This is coupled with affective elements to encourage a working awareness of self and others. Both psychomotor and psychosocial learning expectations are introduced, modelled and agreed. This is scaffolded through a teacher-directed set. Teacher provided feedback, both motorically and affectively based, aims to raise awareness around the learning. Strategies (such as referring to and or recording notes, using available resources, self-talk, and such) are modelled by the educator.
2. Awareness This “being present while learning” responsibility starts to shift following explicit practice in peer-to-peer support with reduced teacher direction as pupils progress learning

The Physicality to Mental Health and Mentality of Physical Education: A Complex Spiral, Table 1 A spiral of affective and motor progression-working exemplar: throwing theme coupled with the affective dispositions of patience and perseverance (referred to here as “stickability”)

| Learning objectives for skill theme of throwing Planning | Psychomotor focus Movement cues | Agency development Monitoring during practical | Coupled affective emphasis mental strengths theme – patience & perseverance | Teacher, learning partner, own notes (one for mental strength and one throwing skill related) | <i>Reflections</i> <i>Post learning and teaching experience</i> |
|--|--|--|---|---|--|
| <p>I can explore different ways to throw in ways which support my and class progression</p> <p>I can use a mental strength; perseverance to help me with my commitment</p> <p>Noun (https://www.lexico.com/en/definition/patience)</p> | <p>Underhand Overhand Backhand throws</p> <p>Perseverance (noun, from Latin perseverantia) to persist despite difficulty in working toward agreed outcome</p> | <p>Teacher-centred cues provided for class to use through the discrete (and processable) feature</p> | <p>Mastery based through throwing theme to reinforce positive affective dispositions, e.g., for perseverance</p> <p>Practising movements with perseverance and patience in the elicitation and warm up</p> | <p>Teacher-directed positive structuring (and potentially re-constructing) of a positive mental set</p> <p>Aim to practise throwing using (and modelling for your class mates) enough control to experience and enjoy trying to develop your technique.</p> | <p><i>Constraints for this learning sequence; class, environment, time, etc. refined expectations (through national and school curricular parameters)</i></p> <p><i>Teacher-provided feedback of throwing and how and when patience and perseverance was helping, and where and when it could be used to further the stickability.</i></p> <p><i>Where you might use this more effectively</i></p> |
| <p>I can throw across a range of distances at and through differing heights and persist as I change and challenge through distance</p> | <p>Eyes on target Side to target Arm back High elbow Step (with opposite foot) follow through</p> | <p>Reciprocal with partner; more conceptual space through change-choice opportunity</p> | <p>You have practised our three throws. Challenge yourself your preferred throw – aim to throw with this technique across three heights and three distances Tell a nearby thrower how you feel. Share what mental strength you needed to be successful.</p> | <p>Peer-supported positively framed input through practise</p> | <p><i>What is working well?</i></p> <p><i>Where might my partner use more “stickability?”</i></p> |

(continued)

The Physicality to Mental Health and Mentality of Physical Education: A Complex Spiral, Table 1 (continued)

| Learning objectives for skill theme of throwing Planning | Psychomotor focus Movement cues | Agency development Monitoring during practical | Coupled affective emphasis mental strengths theme – patience & perseverance | Teacher, learning partner, own notes (one for mental strength and one throwing skill related) | <i>Reflections</i> <i>Post learning and teaching experience</i> |
|--|---|---|---|---|--|
| I can practise throwing to a stationary and moving target, when stationary and on the move with calm persistence | Variety of tasks, challenges, and objective-related games, e.g., suspended targets, hoops, chalked “X”s on a wall, etc. | Pupil centred, initiated with preferred source of validation at discretion of pupil | Work through a series of challenges across the three techniques, explicitly reinforcing, modelling, and presenting examples where the mastery required and shows patience and perseverance. Main subject knowledge accuracy as mental strength positioned to perceived and evidenced importance | Facilitate class-based recognition of efforts; acknowledge efforts to partners Plenary- Facilitate class-based recognition of efforts; acknowledge efforts of self | <i>Where do I need to use more “stickability”?</i> <i>When can I practise these at lunch, in class, when playing after school, at home?</i> <i>Guided mini Directed, reciprocally and/ or self mini reflections (developmentally and contextually appropriate)</i> <i>For next practise (out of PE class) and class-based teaching and learning opportunity (teacher-pupil forward looking intention; contribution)</i> |

through reciprocal peer-supported mindfulness. Pupils are cued upon how to support peers in what they are learning (across the psychomotor domain) and how they are doing so (across the psychosocial domain). Feedback, provided by peers, seeks to raise shared accountability.

- Ownership. If ready and willing, pupils evolve to a state whereby regulation of learning and accompanying feelings is self-initiated. Skill-based outcomes are scaffolded, and children are invited to use self-support and peer support strategies at their discretion. For example, pupils can use self-talk or share their ideas with a talk buddy. Pupils can take options to take a movement break from the task of interest

to one which offers opportunity for personal space and a chance to become aware of their way of thinking and feeling and use a strategy to return their focus to the desired learning which is class paced (and not at their own discretion). Reflections of student led progress can be guided indirectly to consolidate the learning and teaching experience.

- Accountability is gradually developed so that the teaching and learning is beholden only to class learning outcomes and teacher-directed expectations. Pupils develop efficacy in both process and product and in having a working awareness of their feelings in learning situations. They are gently encouraged to be mindfully present through

their process and to commit toward a developmentally suitable skill-based outcome.

- In the emotional well-being spiral, the notion of self-regulation pairs skill acquisition with emotional resilience development. Thereafter, emergent feelings and the capacity to recognize and manage these offer learners an opportunity to build both resilience and efficacy through their activities.
- The linear scaffolded framework reflects the progressions nature of existing pedagogical frameworks and expected learning. Even when purposefully taught, affectively-based elements can emerge with less predictability than those of motoric property. A non-linear skill progression spiral affords multiple entry and exit experiential learning points in parallel with the agreed more linear motor learning outcomes. Pupils in the learning role, have explicit yet confined experientially-based accommodation to increase their awareness of their feelings. The explicit pedagogical shift to move responsibility of learning from teacher to learner with mediated support, is adopted for the skill-based competencies as well as those less observable in nature. This reciprocal non-linear partnering relationship of motor-based skills and affectively-based dispositions, offers conceptual and pragmatic space for the learner to feel safe enough to be present (as in mindfully cognizant; metacognitive) in experience the learning process within the foreseeable and thus expected parameters of the movement at hand. A controlled setting of the known; the movement-based objective of the teaching and learning, invites potential to develop autonomy of the sometimes unknown; how we feel as we move and learn.
- Each progression is incumbent upon the other, yet as a developmentally appropriate instrument, children can elect to remain within a juncture of choice. The processes may also emerge as determined by the needs

and motivations of participants. The system therein self-organizes as to spontaneously address unknown pupil feelings as they attend to known skill-based tasks and activities.

- The balance of the system will change as determined by student ability and motivation to work independently, to recognize feelings, to communicate feelings, and to use empathy when working alongside peers, and then progress toward self-regulation in their respective learning experience. An explicit affective capacity (such as perseverance or persistence) psychosocial in nature, is coupled with a movement skill of a psychomotor nature. The pupil then progresses across an explicit pathway of agency progression across the learning and teaching experience. This is set through a metacognitive approach.
- Caveat. We do not offer a list of skills to attend to a perspective way of feeling. We empower children through awareness to become metacognitive of how they learn via direct recognition of what and how skills are acquired and, through this process, value the affective side of what is being developed.
- Children and teachers avoid being held to or holding others to emotional ransom by virtue of the agreed focus and pedagogical management to learning focus upon the motor skill and via the staggered devolution of accountability.
- Student ways of being are valued in parallel with their ways of knowing.
- Feedback works through all learning outcomes while emphasizing those affective elements contributing to positive child self-identity and overall collective valued regard. This modelling is adopted through the reciprocal and then self-directed actions and considerations by students as they climb the metaphorical spiral of becoming more agentic in what and how they engage in learning.

Conclusion

Children can be who they are as they learn in physical education. They can take chances to explore and enhance strengthen their identities as they improve their fundamental motor competencies. Educators of physical education remain highly aware of the value and potential impact of the subject. While it does not exist primarily to serve the needs of other aspects of school or society, students engaging in a comprehensive quality physical education curriculum across formative years and stages will develop valuable competencies, knowledge, and skills to lead a healthy active lifestyle. The ways in which motor competency and knowing are experienced and acquired may yet prove to be of even greater affective benefit.

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