

Optimizing the learning environment for students in physical education: Integrating theories of motivation



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Engaging students in meaningful physical education could inspire them to transfer learning to their home environments. This paper identifies how physical education teachers can create environments which improves student motivation. By engaging with literature on self-determination theory and research on ego/task-orientated climates, the authors provide ten top tips for promoting a positive culture in class and developing dispositions to be physically active in the long term. Some of these include: valuing the activity chosen, inclusion in physical education, infusing negotiation into teachers' pedagogy and including multiple socio-cultural perspectives.

Introduction

In the ideal physical education (PE) setting, students would transfer what they learn in PE to their home environments (Ennis, 2017). It has been reported that, upon leaving secondary school, students become inactive and sedentary, therefore, this transfer of learning from PE has been considered a challenge for teachers. Accordingly, teachers must establish and implement new ways to enhance transfer of learning in physical education to students' overall education and beyond the school environment (Ennis, 2017); thus, connecting learning experiences to student's lives (Kinchin and O'Sullivan, 1999). Richards and Levesque-Bristol (2014) noted that this *contextual relay* can be fostered through creating a learning environment that promotes student engagement. Students become engaged when they have a willingness to do something, demonstrating motivation. This motivation can be created by the teacher, who can be considered "the driving force in every gymnasium" (Ennis, 2017, p.241) and who can facilitate and change individual dispositions to be physically active through a culture of motivation.

Establishing a Motivational Climate in Physical Education

Self-determination theory specifically addresses the concept of motivation toward behavior (Ryan & Deci, 2000). Specifically, Ryan and Deci (2000) asserted that individuals may be motivated to carry out a certain behavior depending on environmental circumstances and their basic need satisfaction. One fundamental assumption of the model is that there are three main forms of motivation: amotivation (no desire to carry out a behavior), extrinsic motivation (desire to participate in order to earn a reward or please others), and intrinsic motivation (autonomous desire to engage in behavior). Ideally, individuals should be intrinsically motivated to carry out a behavior as this form of motivation is more stable and enduring (Ryan & Deci, 2000). In contrast, when individuals are extrinsically motivated by external factors such as winning or pleasing others, motivation may disintegrate in absence of such factors. In order for an individual to be intrinsically motivated, their basic psychological needs of competence (high perceptions of their ability), autonomy (ability to self-regulate and control their actions),

and relatedness (strong sense of connection to others) must be fulfilled (Ryan & Deci, 2000).

Discussion

Self-determination theory within the physical education literature has, to this point, been applied primarily to understand and conceptualise student motivation in physical education. For example, a group of researchers administered surveys to middle school students measuring their levels of motivation towards PE, their perceptions of need fulfillment from teachers, and self-reported physical activity (Zhang, Solmon, Kosma, Carson, & Gu, 2011). Results showed that the level of intrinsic motivation mediated the relationship between need support fulfillment and students' physical activity, suggesting that individuals who possess higher levels of intrinsic motivation toward physical education, and feel that their basic needs (autonomy, competence, and relatedness) were met, are typically more physically active (Zhang et al., 2011). In addition to predicting physical activity, investigators have applied self-determination theory to predict student engagement in physical education (Xiang, Ağbuğa, Liu, & McBride, 2017). Similar

to conclusions from Zhang and colleagues (2017), a positive predictive effect of autonomy, competence, and relatedness on student cognitive and emotional engagement in physical education manifested in the data (Xiang et al., 2017). Furthermore, Xiang and colleagues (2017) found that two forms of relatedness: relatedness towards peers and relatedness towards teachers, positively predicted student engagement in physical education. These findings suggested that the more connected students felt toward their peers and teachers, the greater their perceived levels of engagement. Consequently, the role of the physical educator should be further examined as they may heavily influence students' need fulfillment.

Recently, investigators have explored the impact of physical educators' instructional practices on student motivation and documented that teachers who employed authoritarian approaches to class management and instruction elicited external motivation in their students (De Meyer et al., 2014). These data suggest that instruction and management strategies can greatly affect the ways in which students are motivated to participate in physical education. Furthermore, some scholars have sought to examine how teachers' own motivations toward instruction may be affected by individual and external factors (Taylor, Ntoumanis, & Standage, 2008) providing instrumental help and support, and gaining an understanding of the students. A survey was implemented with 204 teachers across the United Kingdom to assess their own self-determination to teach, causality orientation (how much they feel they could control the teaching environment), perceptions of their work environment, perceptions of student motivation, psychological needs satisfaction, and their use of need-supportive teaching strategies (providing rationale to students, gaining an understanding of students, and provision of instrumental support). Analysis of data revealed that self-determined motivation to teach was influenced by their perceptions of

student self-determination and their autonomous causality orientation (Taylor et al., 2008) providing instrumental help and support, and gaining an understanding of the students. Negative perceptions of their work environment, specifically job pressure, negatively predicted teachers' self-determined motivation and their reported use of need-supportive teaching strategies. From these results it can be deduced that teachers' need satisfaction impacts their self-determined motivation, thus affecting their desires to teach and implementation of need-supportive strategies (Taylor et al., 2008) providing instrumental help and support, and gaining an understanding of the students. These factors must therefore be taken into consideration when understanding the perceptions and motivations of students.

Upon review of literature related to self-determination theory in physical education, researchers recommended that teachers should implement strategies supporting students' sense of autonomy, competence, and relatedness into their pedagogy to promote students' intrinsic motivation (Sun, Li, & Shen, 2017). Furthermore, since students are the primary consumers of physical education curricula, their interests and competencies should be heavily considered when designing activities and unit plans. Sun et al. (2017) pointed out that, since students will not always show intrinsic motivation to each activity presented in PE lessons, teachers must explain the

value and importance of every activity and benefits gained from participation. These recommendations align with findings from cross-sectional research (Rutten, Boen, Vissers, & Seghers, 2015; Xiang et al., 2017; Zhang et al., 2011), underscoring the need for teachers to implement student-centered teaching strategies in their instruction.

Task versus Ego Orientation in Physical Education

Dweck and Leggett (1988) posited that students' desires to participate in physical education can stem from either task (motivated by one's desire to achieve mastery) or ego (motivated by winning and success) orientations toward physical education. Learners with a task-goal orientation are often concerned about completing tasks and developing competence in the content domain (Chen & Ennis, 2004). Students might say "I didn't quite get the tennis serve, can we practice again?" Alternatively, learners with an ego-goal orientation are usually more concerned about demonstrating competence relative to their peers (Chen & Ennis, 2004). An example of this is: "Let's race so I can beat Jermaine." Therefore, the class culture that the teacher creates can either enhance students' desires to learn or promote competition. Given the literature on intrinsic motivation, those who possess higher levels of intrinsic motivation demonstrate superior engagement with class content than those who are more extrinsically





motivated. Therefore helping students to adopt a task-oriented approach to participation in physical education may facilitate an optimal learning environment. It is possible for teachers to produce extremely powerful task or ego driven classroom climates by acting in particular ways and employing specific "situational cues" (Todorovich and Curtner-Smith, 2002 p. 122). Task oriented cues can include: the student selecting the time needed on a task rather than it being teacher directed or, teachers privately acknowledging recognition of accomplishments rather than publicly announcing merits. Another situational cue could relate to how students are organized in a lesson, for example a task-oriented environment would promote small, flexible, and heterogeneous, cooperative tasks rather than by grouping on ability.

Duda and Nicholls (1992) developed a line of inquiry comparing student ego and task goal orientations in sports and academia. They found that task orientation was the major predictor of satisfaction in schoolwork. Within PE research Todorovich and Curtner-Smith (2002, 2003) strengthened the notion that teachers can influence their students' goal orientation in PE. Findings from their experimental designed research suggest that if an educator teaches with a task orientated climate then students will improve their alignment to the task. Similarly, if a teacher encourages a more ego orientated climate students

will become more ego driven. Research has indicated that student intrinsic motivation is nurtured more from a mastery of task involvement rather than an environment that promotes high levels of competition (i.e. winning versus losing).

Students who embody an ego orientation are concerned with winning, which may pose challenges in sport and physical activity participation beyond their formal education. Often adult participation in recreation and physical activity consists of group-based exercise classes and independent fitness programmes, which are less competitive and focused on enjoyment and individual progression. It is for this reason we urge teachers to focus on creating a task oriented environment within schools where students want to be better for their own benefit and because they are intrinsically motivated to do so. Teachers can foster task -oriented learning environments by taking interest in the lives of their students. There are two main types of interests: individual and situational. Individual interest theory conceptualizes motivation as a result of positive emotions from activity preferences (Sansone, Thoman, & Smith, 2000). Situational interest occurs when an individual reaps positive emotions from an activity and its characteristics (Mitchell, 1993). It is for this reason we outline ten key strategies that teachers can adopt to improve students' situational and personal interests

within PE with the ultimate goal of increasing student motivation.

Mindfulness should be encouraged amongst students. Allow students reflection time on activities where they can continuously acknowledge their feelings, actions, and thinking. This can be realised through the use of portfolios, sketch books, timelines, photo diaries, discussions, journaling, or online discussion threads. Reflection can be tied into formative assessment methods where teachers can assess in the affective, physical, and cognitive learning domains.

By using reflection students may also begin to understand their own thinking concepts and become more conscious about their PE experiences. It is through mindfulness and thoughtfulness that individuals can focus on their personal commitments to being physically active and connect what they have learned during PE to their everyday lives (Ennis, 2017). Australian content example Years 3 and 4: Describe their own strengths and achievements and those of others, and identify how these contribute to personal identities.

Omit peer competitions between class colleagues and increase self-directed competency tasks. It may be prudent to allow students to decide the goals they want to achieve by a designated time period (i.e. the end of the unit/class). Teachers can also provide platforms for peer, self and teacher feedback by incorporating reciprocal learning activities, cooperative, and reflection activities that promote and facilitate opportunities for informal feedback during lessons. Fernandez-Balboa (1993) has critiqued competition in PE commenting that the learning process, when competitive, is too self-focused, rather than being about the collective good. This competition reinforces hostility within peer groups whereby only some students are able to succeed, which can detrimentally affect students' motivations to participate in PE (Fernandez-Balboa, 1997). Australian curriculum example Years 5 and 6: Recognise how media and important

people in the community influence personal attitudes, beliefs, decisions and behaviours.

Teach self-love and self-respect.

Students are heavily influenced by numerous normative concepts such as heterosexuality, body image, clothing styles, hair styles, and specific ways to act among their peers. Within PE, these issues should be addressed by discussing subject positions, difference and concepts of the body (Azzarito, Macdonald, Dagkas, & Fisette, 2017). By confronting normative, stereotypical concepts, students may be better able to recognize, acknowledge and potentially act on what they feel is right and desirable instead of societal expectations. As teachers, we can adopt and implement units of instruction such as body image or critical obesity curricula and allow students to discuss what is portrayed by the media. For example, some may associate being "healthy" with being "thin" or "skinny" due to social media messaging, which is often misleading. Instead, teachers may wish to downplay the emphasis on comparative fitness tests, which can deter overweight students from enjoying PE, and instead discuss health concepts at an individual level and help their students to understand the ways in which they can maintain an active and healthy life. This may encourage students to love themselves and appreciate their own unique bodies. Australian curriculum example years 7 and 8: Practise and apply strategies to seek help for themselves or others.

Inclusion. Provide opportunities for students to learn in a positive environment where they feel included. Students should learn to recognize that everyone is equal regardless of their background, personality, appearance, and mindset. Physical education is one of the only places that individuals from low socioeconomic backgrounds can learn and participate in physical activities as they may not have adequate resources (space, time, money) to partake in physical activity outside of school (Rovegno, 2008). With this in mind, we need to capitalise on



existing opportunities within PE and integrate all cultures, backgrounds, and ethnicities in class for equitable PE experiences. One approach to actively appreciating diversity and difference could be working on student relatedness (the strong sense of connection to others). Through adopting an adventure-based learning curriculum, based on intrapersonal and interpersonal relationships, individuals can increase their communication, reflection, and transferable skills (Stuhr, Sutherland, Ressler, & Ortiz-Stuhr, 2016). Adventure-based learning, when executed effectively, can enhance students' feelings of relatedness to the content and their peers, ultimately enhancing student engagement. Another factor affecting student engagement is related to activity inclusion. Teachers should avoid elimination games such as dodgeball where students are marginalized from activities and therefore not provided with a positive experience with their peers or class content. Dodgeball is one of the elimination games highlighted by (Williams, 1994) in a series of physical education "Hall of Shame" articles. Other activities to be avoided due to their potential embarrassment, increased risk of danger and eliminative elements are outlined in the Hall of Shame and include: relay races, tag, kickball, Simon says, line soccer, and duck-duck goose. Australian curriculum example Years 9 and 10: Investigate how empathy and ethical decision making contribute to respectful relationships.

Value the activity chosen; it needs to be relevant for the students in the specific context. Teachers must demonstrate that they are passionate about games and activities they are teaching in order to elicit the same responses in their students. Activities should be chosen that resonate with and are relevant for students so they are more likely to want to take part during and outside of school. If working in low-income school settings, teachers may wish to avoid instructional units that require a lot of equipment, in order to increase the likelihood that students will seek participation outside of the school setting. Accordingly, relevant contextual activities could include taking students outside of the school to neighbouring parks or leisure centres. Furthermore, when implementing a cultural studies unit, Kinchin and O'Sullivan (2003) found that content such as body image, gender stereotypes, and sport media were relevant to students which in turn enhanced their desires to participate. These findings hold strong implications for teachers who wish to meet the needs of a diverse group of learners. Australian curriculum example Years 5 and 6: Participate in physical activities from their own and others' cultures, and examine how involvement creates community connections and intercultural understanding.

Avoid direct instruction as the predominant style of teaching. Smith (2016) has encouraged teachers

to move away from the traditional command approach in teaching to a more student-centered pedagogical approach. This allows for a more democratic classroom which focuses on a growth mindset where students want to learn at all costs, and believe they can grow as individuals with persistence, effort and a focus on learning. This may mean altering pedagogical models from traditional multi-activity models (Smith, 2016) or reducing harsh behaviour management strategies that may deter students from being interested in PE. Australian curriculum example Years 5 and 6: Participate positively in groups and teams by encouraging others and negotiating roles and responsibilities.

Task orientated environments that promote success can increase student engagement. This can be done using task progressions in sports. From a self-determination perspective, students must feel competent and recognise the feeling of success to be motivated in physical education, however it is important that they are provided with challenging opportunities and are able to make mistakes. Students may then be able to address mistakes, which can be achieved through seeking out knowledge and assistance rather than playing the blame game, for example: "He didn't pass me the ball, so I couldn't score" or, "My swimming goggles leaked". Such behavioral attributes may indicate that a student possesses greater ego goal orientation than task goal orientation to participation, which in turn hinders intrinsic motivation to participate. Australian curriculum example Years 9 and 10: Design, implement and evaluate personalised plans for improving or maintaining their own and others' physical activity and fitness levels.

Include multiple socio-cultural perspectives within PE curriculum. Physical education teachers can unintentionally contribute to social injustice and inequality by failing to notice interpersonal conflicts, and reinforcing cultural stereotypes

(Fernandez-Balboa, 1993). However, teachers can address matters of social justice and equality by allowing students to talk about socio-cultural issues within society, and how they relate to the sport and physical activity context. Azzarito (2017, p. 261) articulated this by stating, "physical education is the only school subject that can dismantle the boundaries of gender/sex, race/ethnicity, and social class that often limit young people's development". By discussing controversial topics, students are able to use critical thinking skills to acknowledge and appreciate individual differences in their cultures. This can be achieved by intertwining social justice topics such as sexism, ableism, ageism, racism, and classism, into common content areas. An example of this in athletics is teaching about the black power salute. The black power salute was an act of unity, but also an act of protest to represent African American poverty, and discrimination in the 1968 Olympics. This was one of the most cited political statements of the modern Olympic Games and has strong links to uncover racism topics. Australian curriculum example Years 5 and 6: Participate in physical activities from their own and others' cultures, and examine how involvement creates community connections and intercultural understanding.

Opportunities for positive emotions to develop can boost student interest. Teachers who build student-student and student-teacher rapport and learn more about their students yield a greater appreciation and enjoyment during lessons turning social interactions meaningful experiences (Kretchmar, 2006). Physical education is one of the only areas in the school where students do not have to sit at a desk between four walls. Teachers should allow for self-expression within an environment where students can laugh and enjoy their time in PE within an emotionally safe environment. It is with enjoyment that students are more likely to view PE as meaningful to their education rather than something they are doing for a

grade (Kretchmar, 2008). Australian curriculum example Years 3 and 4: Investigate how emotional responses vary in depth and strength.

Negotiate curriculum and assessments with students.

Students need to feel empowered in the learning process; this can occur when they take responsibility for their learning. Researchers (Enright and O'Sullivan, 2010) have advocated that increasing student voice and choice in PE and allowing students to negotiate their curriculum can improve student accountability in class. By allowing students to pick activities, sports, locations, equipment, assessment methods, and grading policies, they will take greater responsibility to attend class and give their best effort during activities. Teachers might feel comfortable by introducing one aspect at a time in classes or slowly integrating negotiated practices with one class at a time, rather than trying to implement completely new pedagogical practices simultaneously. Australian curriculum example Years 9 and 10: Provide and apply feedback to develop and refine specialised movement skills in a range of challenging movement situations.

Conclusion

The purpose of this article was to introduce concepts of student motivation pertaining to physical education, and ways in which teachers may foster a task-oriented environment in their lessons. The strategies provided are not exhaustive and teachers may find that some suggestions work better than others and that they have their own method of cultivating positive learning environments. Importantly, despite these recommendations, it is vital for teachers to individualise these approaches to meet the needs of their students. Further, given that there are many strategies and approaches to fostering motivation and inclusive learning environments, we recommend introducing these concepts in a gradual fashion by implementing one strategy at a time. Inspiring students to transfer what



they have learned during school to other aspects of their lives is the ultimate goal for physical educators, therefore by increasing student engagement we have the ability to foster positivity towards physical activity and personal development.

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