Theme ISSUE 2/2021

Psychological and Sociological Foundations

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The topic of IJPE 2/2021 is “Psychological and sociological foundations”. This issue contains two research articles and one sport international article.

The first research article ‘Trauma-sensitive Physical education teacher education’ by the US researchers Prof. Dr Prithwi Raj Subramaniam and Dr Deborah A. Wuest (both Ithaca/USA) moving for a paradigm shift in physical education teacher preparation programs to address trauma with the COVID-19 pandemic posing new challenges.

The second research article contributed by Prof. Dr Stefan König (Weingarten, Germany) in collaboration with a Swiss research team from Zurich presents the results of a qualitative experiment with German and Swiss teachers while introducing them to the ‘Teaching Games for Understanding’ (TGfU) approach.

This issue is rounded off with a sport international article by the Greek scientist Dr Manolis Adamakis (Cork, Ireland) discussing COVID-19 policy inconsistencies during the lockdown and physical distancing measures imposed on children and adolescents in relation to current recommendations for exercise during the pandemic, and physical education school re-entry considerations.

In addition, IJPE issue 2/2021 contains news of the following six associations: AIESEP, ECSS, EUPEA, FIEP, ICSSPE and ISCA. The Upcoming Events section provides an outlook on scientific conferences until the end of 2021.

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Abstract
Trauma is an epidemic and a public health crisis affecting schools and institutions of higher education globally. Childhood trauma has detrimental impacts on the brain, learning, and socio-moral development into adulthood. Trauma is a mental health as well as an educational problem that poses a serious threat to the academic achievement of students. Public schools have made some progress to become more trauma-sensitive to help build resiliency in students impacted by trauma, but institutions of higher education are lagging in the area of trauma-sensitivity. Physical education teacher preparation programs need a paradigm shift to address trauma with the COVID-19 pandemic posing new challenges. Preparing preservice physical education teachers to be trauma-informed lays the foundation for future teachers to mitigate trauma in schools. Such an effort will align physical education teacher education with public schools in addressing trauma and closing the trauma-sensitivity loop.

Key words: physical education teacher education, adverse childhood experience, trauma-informed teaching, learning, preservice teachers

1 Introduction
Trauma is a silent epidemic and possibly the largest public health crisis facing children in schools today (Craig, 2016; Centers for Disease Control [CDC], 2019a; Plumb et al., 2016; Vandelinde, 2018). The prevalence of trauma in schools is an educational problem facing the education community globally. Trauma is not a localized problem for public schools but also a gnawing issue in higher education. Public schools serve as pipelines for student entry into higher education. Issues related to trauma in public schools by default are transferred to institutions of higher education. Although some public schools have instituted trauma-informed practices in their curriculum, a large majority of teachers globally do not possess the knowledge, understanding and pedagogical practices to mitigate trauma. Research findings on the deleterious effects and imminent threat posed by trauma on student success in schools (Craig, 2016; Romero et al., 2018) has garnered attention from stakeholders invested in education. As a result, trauma-sensitive schools are beginning to emerge to help build resiliency in students impacted by trauma (Craig, 2016; Romero et al., 2018). However, this has not been the case with institutions of higher education.
Universities and colleges worldwide are lagging in the area of trauma-sensitivity (Stephens, 2020) specifically in teacher preparation programs. Physical education teacher education (PETE) programs that do not address trauma and its negative impact on student learning in the curriculum produce physical education (PE) teachers who are ill-equipped to handle trauma in schools. PETEs are partly to blame because PE teachers are byproducts of teacher preparation programs. As PETEs, we cannot expect our students to become trauma-sensitive on the job. Addressing trauma deliberately in our PE curriculum should be a high priority for PETEs given the increase in anxiety, depression, psychological distress, post-traumatic stress disorder symptoms (PTSD), and suicidality experienced by college students globally due to COVID-19 (Essadeck & Rabeyron, 2020; Kecojevic et al., 2020; Power et al., 2020; Prothero, 2020; Salerno et al., 2020; Xiong et al., 2020). The purpose of this article is to: (a) give an overview of adverse childhood experience and trauma, (b) expose the impact of trauma on the brain and learning, and (c) provide strategies to prepare preservice PE teachers to be trauma sensitive.

2 Overview of adverse childhood experience and trauma
The history of research on trauma has its roots in the landmark study conducted by Felitti and colleagues. Using a retroactive approach, Felitti et al. (1998) sought to investigate traumatic or stressful events experienced during childhood. The term adverse childhood experience (ACE) emerged from this study which included abuse (physical, sexual, and emotional), neglect (physical and emotional), and household dysfunction (substance abuse, divorce, incarceration, violence in home and mental illness). Results from this study found a positive relationship between childhood traumatic events and health and social behavioral outcomes into adulthood. In addition, ACE was found to be common and pervasive. Almost two-thirds of participants reported at least one or more ACEs, and 1 in 5 reported three or more ACEs. Another interesting finding reported in the study is a dose-response relationship between the number of ACEs and a wide array of negative health and social problems in adulthood. The more ACEs you have, the higher the risk for overall poor physical and mental health.

ACEs are stressful or traumatic events experienced by children before the age of 18. ACE is a toxic stress and complex trauma. Toxic stress refers to excessive or prolonged activation of the stress response without buffering protection from a supportive adult relationship. Toxic stress can impede emotional and social development leading to engagement in health risk behaviors. Complex trauma, on the other hand, refers to the cumulative effect of traumatic experiences repeated or prolonged over time (Plumb et al., 2016; Terrasi & de Galarce, 2017; Shonkoff et al., 2012) and has detrimental impacts on the brain, learning, and socio-moral development into adulthood (Hobbs et al., 2019; Shonkoff et al., 2012). ACEs are also an “equal opportunity occurrence” (Romero et al., 2018, p. 3) that affects all groups regardless of socioeconomic status or geographic location. There is a growing body of research that links ACE to the likelihood of developing post-traumatic stress disorder [PTSD] (Brockie et al., 2015; Kalmakis et al., 2020).

Trauma is a complex and multifaceted concept—it can happen to individuals and communities (e.g., COVID-19); epigenetic (inherited or intergenerational); sociocultural (e.g., racism) or vicarious (Stephens, 2020). According to van der Kolk (2014) “trauma is not just an event that took place sometime in the past; it is also the imprint left by that experience on mind, brain and body” (p.21). The effect of trauma can be different for different individuals. An event or circumstance that is traumatic for one individual may not be traumatic for another. Trauma has long lasting impact on the psyche of individuals (Hobbs et al., 2019).
2.1 COVID-19 and trauma

Many college students arrive on campus with a history of being exposed to traumatic events (Carello & Butler, 2014; Smyth et al., 2008). Adding COVID-19 to the mix has changed the educational landscape drastically and poses serious physical, psychological, emotional and academic challenges for college students globally. Recent studies in Ireland (Power et al., 2020), Italy (Essadeck & Robeyron, 2020), China (Cao et al., 2020), South America (Parra & Mireya), Spain (González-Sanguino et al., 2020), and the United States (Kecojevic et al., 2020) indicate a surge in psycho-social problems for this population. In essence, the COVID-19 pandemic has exacerbated the impact of trauma on college students globally.

Transitioning to remote learning has increased stress and inability to focus on academic work (Kecojevic et al., 2020). The confinement to home environment, lack of social life, COVID-19 infected family member, traumatic loss of a family member to COVID-19, job loss of caregiver, and exposure to COVID-19 deaths on media regularly has negatively impacted the mental health of college students. Multiple studies have reported high levels of anxiety, depression, psychological distress, suicidality and the emergence of PTSD symptoms for this population. In comparison to male college students, female college students were reported to show higher levels of anxiety, depression, and psychological distress (Essadeck & Rabeyron, 2020; Kecojevic et al., 2020; Power et al., 2020; Prothero, 2020; Xiong et al., 2020). Similar mental health issues are afflicted by COVID-19 on LGBTQ college students (Salerno et al., 2020).

COVID-19 also has disproportionately impacted communities of color. The COVID-19 pandemic has magnified toxic stress of racial and social inequities experienced by these communities. These traumatic experiences and social inequities have a profound impact on the physical and mental health of communities of color (Fortuna et al., 2020).

3 The brain, trauma and learning

The Centers for Disease Control and Prevention (CDC, 2019b) provided a stark warning about the detrimental effects of childhood trauma on healthy brain development and learning. More importantly, there is a growing body of research that indicates the deleterious effects of childhood trauma can last throughout the lifespan (Blodgett & Lanigan, 2018; McEwen, 2012; Sciaraffa et al., 2018; Shonkoff et al., 2012).

Neuroplasticity of the brain in early childhood has been reported to make children more vulnerable to adverse experiences (McEwen, 2012; van der Kolk, 2003) and represents what Nelson and Carver (1998) term “adverse form of neural plasticity” (p.779). Meaning, toxic stress in early childhood converts adversity to impairments in the brain. The brain plays a central role in the protective and damaging effects of stress and adaptation through the process of allostatics and allostatic load (McEwen, 2012). Typically, the body responds to stressors by releasing stress hormones in the brain to protect the body to regain homeostasis through allostatic load (fight, flight or freeze response). This process is a normal part of life and healthy development. However, in a state of toxic stress the body’s stress response system is activated for a prolonged period resulting in allostatic load. In this situation, the brain goes into “overdrive” (survival mode) from the elevated stress hormone levels. Allostatic load curtails the ability of the brain to adapt and regain homeostasis. Thus, high levels of stress hormones in the brain becomes toxic and subsequently impacts the normal progression of brain development and can produce detrimental effects on cognition, learning, memory and attention (Barr, 2018; Bick & Nelson, 2016; Nelson & Carver, 1988; McEwan, 2012; Saleh et al., 2017; Shonkoff et al., 2012; Teicher et al., 2002).

There is unequivocal evidence to support that toxic stress leaves an indelible imprint in the structure and function of the brain and neural circuitry. Different regions of the brain...
are affected by toxic stress leading to physical, social, emotional, and cognitive impairment (Barr, 2018; Bick & Nelson, 2016; McEwen, 2012; Saleh et al., 2017; Shonkoff et al., 2012; Teicher et al., 2002; Terrasi & Galarce, 2017). Understanding the underlying mechanisms associated with how toxic stress remodels the architecture and function of the brain and neural pathways is a critical first step for teacher educators prior to engaging in trauma-sensitive practices in the classroom and providing buffering support to students.

The body relies on two major stress response systems that assists with physiological responses to stressors and threats: a) autonomic nervous system (ANS), and b) hypothalamic-pituitary-adrenal (HPA) axis. The ANS releases the hormones epinephrine and norepinephrine to initiate responses to stress. A cascade of physiological changes such as elevated heart rate, increased blood supply to muscle and brain, increased release of glucose, rapid breathing, and increased blood pressure follow in preparation for the “fight or flight” response. Simultaneously, the HPA axis is activated and stimulates the release of the stress hormone cortisol. However, repeated exposure to stress (toxic stress), a chronic activation of the stress response system, results in dysregulation of the HPA axis and elevated levels of cortisol in the brain. Such dysregulation culminates in allostatic load which ultimately exceeds the coping skills of the individual (Boullier & Blair, 2018; Jones et al., 2019; Shonkoff et al., 2012; van der Kolk, 2003). It is the allostatic load that is responsible for remodeling the architecture and function of the brain and its neural circuitry (van der Kolk, 2003).

How does trauma affect learning? Multiple studies indicate that toxic stress remodels different regions of the brain such as hippocampus, amygdala, prefrontal cortex, and corpus callosum (Barr, 2018; Bick & Nelson, 2016; McEwen, 2012; McLaughlin et al., 2014; Nelson & Carver, 1998; Sheridan & McLaughlin, 2014; Shonkoff et al., 2012; Teicher et al., 2002; van der Kolk, 2003). Trauma causes HPA to release increased levels of cortisol causing hippocampal cell death resulting in hippocampus atrophy (Nelson & Carver, 1998). Hippocampus serves as the communication center for the storage and retrieval of memory, and also is responsible for language learning and linguistic competencies. Additionally, volume of the prefrontal cortex also is reduced (atrophy) and results in the loss of neural connectivity between hippocampus and prefrontal cortex. As a result, the ability to access vital parts of the brain that help in learning, memory, and executive function is curtailed (Shonkoff et al., 2012).

The size and neuronal structure of the amygdala also is altered by elevated hormonal levels. Amygdala hyperactivity causes it to enlarge (McEwen, 2012; Shonkoff et al., 2012). The amygdala functions as emotional memory, and any sensory stimuli reminiscent of a trauma triggers the amygdala forcing the individual to consider it a threat to their safety and engage in hypervigilance (Terrasi & de Galarce, 2017; van der Kolk, 2003). As a corollary, an enlarged amygdala also is responsible for quick and exaggerated emotional responses and an inability to focus on academic content since brain activity is “held hostage” by relentless fear and hyperarousal. In essence, the attention is focused on survival rather than learning (Craig, 2016; Terrasi & de Galarce, 2017; van der Kolk, 2003). It has also been reported that toxic stress influences neural circuits that underlie emotional learning involving the amygdala and hippocampus (McLaughlin et al., 2014; Sheridan & McLaughlin, 2014).

Research indicates that trauma reduces corpus callosum volume. Reduction in corpus callosum reduces neural transmissions and communication across the right-left brain hemispheres. These critical network pathways play a vital role in higher level cognitive and emotional functioning (Bick & Nelson, 2016; Teicher et al., 2002). There also is evidence to suggest that trauma is linked to slower processing speed and working memory performance. In essence, allostatic load deteriorates working memory (Saleh
et al., 2017). The dysregulation of stress response system from ACEs create a lasting imprint in different regions of the brain (Shonkoff et al., 2012). In other words, childhood trauma converts the protective nature of the regular stress response system into a destructive mechanism that has long lasting physiological and psychological impact on key regions of the brain and neural circuitry associated with memory, attention, learning and executive function into adulthood. A recent study (Ching et al., 2020) indicates that neuroscience literacy in teacher education can help improve preservice teachers’ brain knowledge to combat neuromyths. Brain knowledge allows preservice teachers to unpack trauma and its impact on the brain and learning. Only with such an understanding can preservice teachers value trauma-informed pedagogy and develop skillsets to become trauma-informed practitioners.

Now that we understand how trauma impacts the brain and learning, making small changes in our PETE curriculum and pedagogy will go a long way in mitigating trauma in our classrooms. Neuroplasticity of the brain allows plasticity facilitating approaches to reverse the damage caused by trauma to the brain (Craig, 2016; McEwen, 2012). As Terrasi and de Galarce (2017) so eloquently point out “while trauma has a negative effect on learning, learning also can undo trauma” (p.37). The environment we create in our PETE classrooms and the strategies we employ to provide the buffering support play a critical role in shaping the brain’s architecture and nurturing the restorative effects of neuroplasticity (Craig, 2016).

4 Preparing pre-service PETE students to be trauma-informed

PETEs, given the privilege of preparing the next generation of teachers, recognize this privilege carries with it a myriad of responsibilities foremost among them preparing future physical education teachers to work effectively with all students, including those who have been impacted by trauma. As PETEs, ensuring that preservice teachers acquire an understanding of the pervasive and powerful impact trauma can have on students’ learning, its influence on their behaviors, and impact on their future is critical. Future physical education teachers need both knowledge and opportunities to hone their skills, so they are better prepared to be trauma-informed practitioners (Miller & Flint-Stipp, 2019; Patterson et al., 2020).

Before thinking about what to teach, and how to teach it, PETEs need to realize that teaching about trauma might bring to the forefront their own past and/or current experiences with trauma, including the possibility of retraumatization. Additionally, given the widespread prevalence of trauma, PETEs are likely to have preservice teachers in their courses that are trauma-affected. Therefore, PETEs need to be cognizant that learning trauma-informed practices is not without risks and may trigger retraumatization for some preservice teachers and could possibly lead to secondary traumatization by preservice teachers’ peers as well as themselves. Carello and Butler (2014) stress the paramount importance of educators themselves using trauma-informed pedagogy that “recognizes these risks and prioritizes student emotional safety in learning” (p.153).

In preparing preservice teachers to be trauma-informed educators, PETEs need to help preservice teachers understand how traumatic experiences may play a role in the lives of their students. The impact of trauma can extend beyond its influence on the brain and its impact on learning and academic success. Trauma’s influence on social-emotional behavior can be profound, leading to low self-esteem, lack of self-awareness, negativity, poor relationships, misbehavior, lack of motivation, inattention, and high levels of anxiety and stress, just to name a few of the many manifestations of trauma that may be seen (Substance Abuse and Mental Health Service Administration [SAMHSA], 2014). While the identification of students at risk of trauma is often rooted in looking at the deleterious effects of ACEs on students, it is important to note that many other
experiences may promote trauma and/or magnify its effects, including the sociopolitical context of the community in which students live as well as institutional and systemic racism (Blitz et al., 2016; Brown et al., 2020; McIntosh, 2019). Furthermore, the trauma associated with the global pandemic is yet to be fully understood but will likely have widespread impact.

PETEs may find guidelines offered by the Substance Abuse and Mental Health Service Administration (SAMHSA, 2014) for key stakeholders in trauma-informed systems helpful in identifying knowledge preservice teachers need as foundational to trauma-informed practice. SAMHSA (2014) characterizes trauma-informed care, and by extension, education as reflecting the “4 Rs”, realize, recognize, respond, and resist” (p. 9). Specifically, trauma-informed educators understand the widespread prevalence of trauma and recognize the signs of trauma (e.g., toxic stress, misbehavior, disconnection) in their students, themselves and other professionals (Cavanaugh, 2016; SAMHSA, 2014). They strive to incorporate trauma-informed principles into their practices, procedures and policies in their classroom as well as within the school and educational system. Most importantly, trauma-informed educators prioritize the physical and emotional safety of individuals with whom they work, taking care to ensure their actions do not lead to retraumatization (Cavanaugh, 2016; SAMHSA, 2014). Brown et al. (2020) stress the importance of trauma-informed pedagogy being culturally responsive, while Blitz and colleagues (2016) advocate for the inclusion of the tenets of culturally responsive pedagogy within trauma-informed pedagogy.

4.1 **Principles of trauma-informed teaching**

Trauma-informed teaching principles provide an organizing focus for PETEs in their work with preservice teachers. Through implementation of these principles in their professional courses and practice, PETEs model for future teachers how these principles can be applied effectively, responsibly, and compassionately in educational practice to help all students learn. Building on the work of Fallot and Harris (2009) and SAMHSA (2014), Carello (2020) advanced seven principles for college educators to guide their trauma-informed teaching which hold relevance for PETEs. The principles are safety; trustworthiness and transparency; support and connection; collaboration and mutuality; empowerment, voice and choice; social justice; and resilience, growth, and change. Soliciting feedback and suggestions from future teachers about how these principles might be explicitly or implicitly implemented within their professional preparation programs helps them see multiple ways to use trauma-informed approaches (Stephens, 2020). Coupling clinical experiences with guided reflections (e.g., “How did the teacher provide for the emotional safety of students?”) enables preservice teachers see how these principles are reflected in a real-world setting.

Safety awareness belongs at the forefront of every teacher’s mind. PETEs must be mindful, as should be their future teachers, that it is likely in every classroom some “unknown group of students will be at heightened risk for traumatization or vicarious traumatization as a result of personal trauma histories, mental illness experiences, and current challenges or difficult life transitions” (Carello & Butler, 2015, p. 269). Teaching strategies, content and presentation, assignments, teachers’ and peers’ behaviors and interactions, class climate and environment, and emphasis on self-care should be viewed from a trauma-informed lens, with a focus on reducing the risk for trauma for those known and unknown students with trauma experiences. Additionally, PETEs should have in hand information about support services on campus, like the counseling center or student support services, in case a student requires additional assistance (Carello & Butler, 2015). Including contact information for assistance in the course syllabus or posting it on the department bulletin board offers students the
opportunity to independently and privately seek help. This models for future teachers the importance of knowing where and when to refer a student in distress to school mental health professionals while also knowing and respecting their own abilities to provide assistance.

Teachers’ awareness of safety extends to many dimensions: physical, emotional, social and academic (Carello, 2020; Stephens, 2020). PETEs demonstrate their commitment to safety in many different ways. It could mean allowing students to choose where to sit; this allows a student who is anxious and might want to flee the classroom for a few minutes to choose to sit by the door. Warnings in advance prior to the discussion of sensitive material (e.g., “Next class we are going to discuss child abuse and the role of the teacher in addressing this issue.”) and not giving assignments that require personal disclosure (e.g., “For this assignment, write about a time you felt unsafe in school.”) are two ways to create a safe environment. Academically, using frequent formative assessments that offer feedback enables students to learn from their mistakes and prioritizes student growth over grades. This approach reduces the fear of making mistakes and enables students to take risks in learning. Infusing the ethics of caring (Noddings, 2005) and fostering acceptance and respect for all class members contributes to a safe learning environment. PETEs also need to intervene to address angry and disrespectful behavior such as microaggressions, modeling for future teachers ways to promote a safe environment and assertively address inappropriate student behavior or resolve conflicts.

Trustworthiness and transparency are integral in a trauma-informed approach. The abuse of authority by someone in power over a vulnerable individual (e.g., parent or relative over child, coach over athlete) is a common form of trauma (National Child Traumatic Stress Network [NCTSN], 2020; SAMHSA, 2014). PETEs can help those impacted by the abuse of authority regain some degree of trust by not engaging in displays of power and maintaining appropriate, respectful boundaries and professional roles (Carello, 2020). As course instructors, PETEs can contribute to perceptions of transparency by communicating clear expectations for assignments, fair and logical consequences for inappropriate behaviors, and consistently holding students accountable for their actions.

Providing support and facilitating connections help those impacted by trauma more fully utilize their skills and develop additional competencies. Carello (2020) points out the importance of connecting students to resources, both on and off campus, to help them succeed academically and professionally, while strengthening personal competencies such as social-emotional skills. PETEs can lend support and connect with their students during office hours, before or after classes, and/or via zoom. Students’ peers are an important source of support. Collaborative, small group projects provide opportunities for peers to connect with each other, offering mutual support in completing assignments but also creating personal relationships that might extend to support in other areas as well (e.g., roommate problems). Development of learning communities within the class provide future teachers with the opportunities to support to each other, foster a sense of belonging, and offer insight about the value of these communities for professional practice (Le Cornu, 2009).

Collaboration invites teachers and students to share the educational journey (Carello, 2020; Stephens, 2020). It fosters a sense of mutuality, a shared purpose, and commitment to success for all involved. PETEs invite collaboration when they provide opportunities for their students to give meaningful input into class practices (e.g., rules or late assignment policies), to choose how to demonstrate their achievement of a student-learning objective (e.g., articulate the difference between an authoritarian and authoritative teaching style), and to undertake leadership roles within the classroom.
(e.g., facilitate class discussion or serve as a class ombudsman). Mutuality might be reflected in the often-heard pandemic phase “We are all in this together.” Class members appreciate each other’s strengths and focus on helping all their members to be successful, rather than on competition for the best grades. This mutuality might be expressed through actions like studying together, assisting each other on projects, and extending a kind word of support to a peer struggling with academic or personal issues. Students impacted by trauma may feel powerless, unaware of their strength, and see themselves forging on alone (SAMHSA, 2014). Collaboration and mutuality offer these students opportunities for shared power, to become aware of their strengths, and to experience support in reaching their goals and begin to heal (Hobbs et al., 2019).

Empowerment, voice and choice are often stripped from trauma-affected individuals, replaced with feelings of victimization, helpless, hopelessness, and silence (Craig, 2016; NCTSN, 2020; SAMHSA, 2014). PETEs who model how to strengthen empowerment, allow for student voice, and offer meaningful choices to help future teachers learn how to develop and strengthen these behaviors in their own students. Empowering those who have been, in a sense, disenfranchised by trauma is an ongoing intentional process that focuses on the strengths individuals have, rather than on their deficits. Highlighting competencies, developing self-confidence, changing negative beliefs to positive ones, and nurturing autonomy all help individuals impacted by trauma regain their power and restore their voice. Learning experiences and assignments provide opportunities for students to participate in decision-making, assume increased responsibilities for their learning and self-control, engage in small group discussion that enable their voice to be heard, compassionately reflect on their performances and work, and receive constructive feedback that contributes to their growth. PETEs need to counter preservice teachers’ deficit discourse (e.g., Browning, 2018) and demonstrate confidence and conviction that their students can grow and reach their potential.

An emphasis on social justice recognizes the systemic and institutional racism in society and schools, and the perpetuation of inequalities and injustices (Brown et al., 2020; Carello, 2020). PETEs need to take the initiative in facilitating discussions among preservice teachers about privilege and oppression, the marginalization experienced by some students, and injustices within schools (e.g., punitive discipline approaches, labeling “at risk”) that continue to disadvantage and traumatize disproportionate numbers of minority and underprivileged students (Blitz et al., 2016). Moreover, PETEs’ sensitivity to the lived experiences of their students, and willingness to engage in discussion of issues they may experience, such as micro-aggressions, shows future teachers the importance of addressing these issues versus being silent. PETEs need to address and provide opportunities for discussion of how biases, stereotypes, discrimination may influence teaching and negatively impact students’ learning. Future teachers need help in cultivating skills to address controversial topics in ways that ensure the safety of those in the classroom and create a classroom climate that respects the dignity and value of all students (Carter Andrews et al., 2018).

Resilience, growth and change offer hope for the future for those impacted by trauma (Carello, 2020). Resilience helps individuals recover from experiences that could be overwhelming and allows them to weather adversity (Newman, 2005). Newman (2005) emphasizes the individual nature of resilience, noting “Picking and choosing from among the array of behaviors and actions associated with resilience is an individualized process dependent, in part, on each individual’s strengths, skills, and experience” (p. 227). Therefore, PETEs should assist preservice teachers to discover and build upon their strengths as well as introduce them to a wide array of strategies so individuals can identify and then develop strategies that work best for them. Strategies such as cognitive reappraisal, reflection, mindfulness, self-compassion, social support, humor, exercise
and self-care can be incorporated and practiced throughout pre-service teachers’ education, offering a buffer against stress (Le Cornu, 2009; McKay & Barton, 2018; Patterson et al., 2020; Wu et al., 2013). The development of preservice teachers’ resilience-related skills is critical, given the likelihood that preservice teachers will be interacting with trauma-affected students in their clinical placements, making preservice teachers vulnerable to re-traumatization and secondary trauma (Miller & Flint-Stipp, 2019). Building resilience-related skills and strategies in preservice teachers and helping them become more aware of the experiences they will encounter during practicums can mitigate their stress, reduce burnout, enhance teacher effectiveness, and potentially reduce the high rate of teacher attrition seen today (e.g., Brown et al., 2020; Gu & Day, 2007; McKay & Barton, 2018; Miller & Flint-Stipp, 2019). Opportunities to develop resilience skills should be incorporated throughout the professional teacher preparation program.

Cultivating a growth mindset is also an important aspect of trauma-informed pedagogy (Brunzell et al., 2016, 2019). Developing a growth mindset can help fuel upward spirals of growth, strengthening students’ psychological resources and positively affect academic achievement (Brunzell et al., 2015, 2019; Dweck, 1999). By using a strength-based approach, PETEs can provide synergy for future growth and foster within their preservice students’ positive expectations, persistence, and hope for the future.

5 Conclusion

Trauma is an epidemic and a public health crisis affecting schools and institutions of higher education globally. Childhood trauma has detrimental impacts on the brain, learning, and socio-moral development into adulthood. Trauma is a mental health as well as an educational problem; it impacts the brain and learning and poses a serious threat to the academic achievement of students (Craig, 2016). Teachers are ill-equipped to provide the buffering support that students impacted by trauma need in their classrooms. While there is some progress made in public schools to become trauma-sensitive to help build resiliency in students impacted by trauma, institutions of higher education have lagged in this endeavor. Teacher education, in particular, needs to rethink how to address trauma as it is solely responsible for preparing and supplying future teachers to public schools (Patterson et al., 2020). There is an urgent need in PETE to prepare teachers to be trauma-informed with the COVID-19 pandemic posing new challenges. Preparing preservice PE teachers to be trauma-informed lays the foundation for future teachers to mitigate trauma in schools. It is only through a deliberate and concerted effort to institute trauma-sensitive pedagogy into the curriculum that PETE can align itself with public schools in addressing trauma and close the trauma-sensitivity loop to prevent attrition of both in-service and preservice PE teachers. Until we attain this goal, “…teaching students impacted by trauma can feel like walking in a minefield uncertain of which move is going to trigger an explosion” (Romero et al., 2018, p. 69).

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### Abstract
The professionalization of teachers is one central topic in both educational sciences and subject didactics. Within this debate pedagogical content knowledge (PCK) has turned out to be a core component of professional competence. Consequently, PCK must be a primary task for teacher education. In Physical Education teaching games has been a conflicting issue in sport didactics for more than fifty years, especially considered from the perspective of game vs. skill orientation. In this case, the concept of TGfU has proved as an adequate and effective conception; thus, it can be assumed that this approach should be integrated into the education of PE teachers. This article deals with the issue of teaching TGfU to preservice teachers in Germany and Switzerland. We first deal with a framework for teacher education and its main target dimensions. Second, we present TGfU as a didactical conception for teaching sport games and its possibilities of implementing quality dimensions. Third, we present a study in which a qualitative experiment was conducted. It aimed at teaching the concept of TGfU to a variety of teachers over nine months. Some ideas and recommendations for teacher education round off the article.

**Key words:** teacher education, pedagogical content knowledge, Teaching Games for Understanding, qualitative experiment, biographical knowledge

### 1 Introduction
Pedagogical content knowledge (PCK), a heuristic concept developed by Shulman (1986), is assumed to be the central parameter of professional competence of teachers. It has empirically turned out to be the most influential issue among different factors influencing students’ learning outcomes. In general, PCK is defined as a core component of professional competence that is likely to predict both the quality of teaching and the achievement of teaching goals (Heemsoth & Wibowo, 2020; Meier, 2018). However, this could only be shown for the cognitive subjects, e.g., mathematics (Vogler, Messmer, & Allemann, 2017); there are only a few studies that focus on Physical Education (PE) didactics and even fewer empirical approaches which describe the structure of PCK in PE. There seems to be consensus that PCK is part of a domain-specific knowledge about making students understand subject-specific issues, with respect to physical education about various themes of and around sportive contexts.

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### 6 Summary and perspectives
PCK is sometimes regarded as an integration of content knowledge and general pedagogical knowledge (Heemsoth & Wibowo, 2020; König, 2014), and represents a prevalent approach of professional knowledge (Shulman, 1986).

Currently, the professionalization of teachers is one central topic in both educational sciences and subject didactics (Hapke & Cramer, 2020). In particular, this applies to teacher education, needless to say, also to the education of PE teachers. With regard to that assumption, teaching games has been a conflicting issue of sports didactics for more than fifty years, especially under the perspective of game vs skill orientation (Baumberger, König, & Bislin, 2021; König, 2019). However, future teachers need to have specific PCK to manage game-oriented instructional situations; consequently, Research on Teacher Education (RTE) should deal with this question from an empirical perspective.

This article deals with the issue of teaching TGfU to preservice teachers in Germany and in-service teachers in Switzerland, two countries in which this conception is not very widespread. To realize our research target, we first describe a framework for teacher education and its main dimensions. Second, we present TGfU as a didactical conception for teaching sports games and its possibilities of implementing quality dimensions into PE. Third, a study is presented in which a qualitative experiment was conducted; it evaluates the learning outcomes and consequences for the participants’ teaching behaviour. Finally, we draw some conclusions for the future education of Physical Education teachers.

2 A framework for teacher education

Structure and themes of teacher education have changed since the beginning of its scientific orientation in the 1960s due to current demands (BMBF, 2003; Oelkers, 2003). This resulted in both various general developments, e.g., output orientation, and also in teacher education in PE (König, in print). A great deal of competence models resulted from that, each of them describing which abilities, skills, and knowledge future teachers should have. Meanwhile there is consensus that teacher education and professionalization has to handle and focus on the difficult relation between content knowledge, e.g., in sport science, (subject-specific) pedagogical content knowledge, i.e., in sports didactics, and general pedagogical knowledge, e.g., classroom management (Shulman, 1987). However, PCK is sometimes regarded as an integration of content knowledge and general pedagogical knowledge because it identifies the distinctive bodies of knowledge for teaching. It represents “the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to … learners, and presented for instruction” (Shulman, 1987, p. 8). Figure 1 gives an overview of this cross-linking.

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1 Shulman (1987, p. 8) differentiates between seven categories of teacher knowledge; however, according to Baumert and Kunter (2006) the above-mentioned are the most relevant.
In various countries teacher education is organized along university subjects and scientific disciplines (Rabensteiner & Rabensteiner, 2014). Focussing on teacher education in PE we have to discuss structure, domains, and crosslinks of content knowledge in sport science and pedagogical content knowledge in sports didactics. Whereas the first domain is described as knowledge about both facts and concepts in sport science as well as the rules and principles knowledge is generating, the second may shortly be explained as knowledge about “putting subject-specific contents across” (Krauss, 2011, p. 182) or “subject matter knowledge for teaching” (Shulman, 1986, p. 9). This requires knowledge to present different subjects and make them comprehensible to others, i.e., students (Shulman, 1986, p. 9):
- the most regularly taught topics in one’s subject area,
- the most useful forms of representation of those ideas,
- the most powerful analogies, illustrations, examples, explanations, and demonstrations.

In a study on pedagogical content knowledge of PE teachers (Heemsoth, 2016) various research projects and approaches were summarized, and the following heuristics of pedagogical content knowledge could be presented:

![Diagram](image.png)

**Figure 2.** Summary of subject-specific domains of knowledge based on the Shulman heuristics (Heemsoth, 2016, p. 51).
Regarding the effects of teacher education on the amount and quality of PCK, two issues should be emphasized: First, various studies showed that PCK has greater impact on students’ learning progress than content knowledge (Heemsoth & Wibowo, 2020), and, second, the greatest variance of PCK is associated with the type of educational training for teachers (Vogler, Messmer, & Allemann, 2017). Referring to this, it is essential in teacher education and Research on Teacher Education to substantiate the term PCK (cf. figure 2) with relevant and adequate issues (Meier, 2018). With regard to PE in Germany and Switzerland, it is the concept of the double mission with its various pedagogical perspectives, its fields of movement, and the idea of reflexion which both represents the basis for most of the curricula in Germany (Uhrmeister, 2021) and has been elaborated in various approaches for teaching (e.g., Balz & Neumann, 2013; Scheid & Prohl, 2017). One of the most popular issues within this conception is the domain of “playing-games-play” because it is one of students’ and teachers’ most favourite contents in PE (DSB, 2006). As a consequence, pedagogical content knowledge for teaching games is a ‘must’ for teacher education. There has been a multitude of different and even contradicting teaching concepts for games for at least 50 years (König, 2019; Roth & Kröger, 2015). However, it is strange that today as 50 years ago teachers tend to favour and implement skill-orientated concepts, although a lot of them theoretically advocate game-oriented approaches (e.g., Wurzel, 2008). Additionally, researchers from game research blame the biggest outcome and highest attractiveness for students on these conceptions (Roth, Kröger & Memmert, 2015). This discrepancy needs further research, in particular with regard to teacher education and its element of teaching PCK because we assume that teachers are familiarized with game-oriented approaches during their studies and training, but relapse into skill-orientation with the beginning of their active service (Wurzel, 2008).

3 TGfU – A concept for teaching sports games

One of the most popular models for teaching sports games and game intelligence is the conception ‘Teaching Games for Understanding’ (Bunker & Thorpe, 1982) which may be regarded as the ‘mother of game orientation’. The approach represents an explicit teaching strategy and was developed for school sports in general as well as for PE. Furthermore, it is considered as a central concept for conveying decision-making ability and tactical knowledge (Bunker & Thorpe, 1982). There are several varieties of this model, but they do not differ in their core assumptions. In contrast to the game-based and implicit learning model (Memmert, 2015; Roth & Kröger, 2015), TGfU is considered as a conception that interlinks play and practice (Mitchell, Oslin, & Griffin, 2006). Figure 3 presents the pedagogical goals and didactic structure.
Figure 3. The interaction of the game and the learner and the learning process (Bunker & Thorpe, 1982).

The most relevant basic pedagogical content principles of TGfU are the following (Mandigo, Butler, & Hopper, 2007; Ellis, 1986; Serra-Olivares et al., 2015):

- **Sampling** means that teachers provide their students with a wide range of game situations to realize that skills, rules, and particularly tactical solutions can be transferred between different games.

- **(Game) Representation** requires from the educator to create developmentally appropriate game-like situations to demonstrate how to use a certain skill in a game. It means that teachers should maintain the core of a specific team sport, e.g., throwing at a goal in team handball, even if they simplify it.

- **(Modification) Exaggeration.** Modification exaggeration means that instructional settings often demand measures that ‘overdo’ elements of the sport at focus, e.g., larger goals. Thus, educators have to focus on one particular point and create a game element that enables students to learn more easily.

- **Tactical Complexity.** This principle expects the teacher to instruct with a developmental progression of tactical solutions, or, as Loibl (2001) said: “Instead of practicing complicated techniques in simplified game situations, the complex situations are … preserved and solved with simplified techniques.”

Additionally, TGfU provides decision-making abilities as well as tactical knowledge to players by interrupting specific game situations (‘freezing’) and ‘discuss’ different solutions for a particular game constellation in a student-orientated manner (Ellis, 1986). The results of such discussions lead over to skill exercises in which students learn how to solve game situations by exerting adequate skills and their variations. Finally, the effects of skill practice are transferred to a new game environment. Consequently, TGfU represents a circular process that is continued by enhancing the complexity of the games (Wurzel, 2008). Figure 4 presents this idea.
Figure 4. The basic instructional concept of TGfU (adapted from Wurzel, 2008).

In the field of teaching in PE and, of course, teacher education, TGfU offers various starting points for planning lessons and instruction in Physical Education:

- **On a macro level**, teachers might profit as it offers pedagogical principles of teaching team sports, namely modification exaggeration and modification representation. They may help teachers to make decisions concerning their planning. Additionally, TGfU illustrates a framework for structuring single lessons as it is explained in which order playing and exercising should be arranged.

- **On a micro level**, TGfU helps teachers to communicate with their students in the situations of freezing and activate them cognitively. These short conversations in class - usually not longer than 90 seconds (Greve, 2013) - are based on a constructivist approach, i.e., the learners’ understanding and analysis of tactical situations should be based on their perceptions, experiences, and cognitive construction; Butler (2016, p. 27) calls this ‘emergent learning’.

Summarizing TGfU and its requirements to pedagogical content knowledge teachers are expected to have expertise in the following issues and teaching skills: They should be able to

- … choose and arrange games adequately, i.e., age-adjusted game situations which contain the core of the game itself,
- … observe these games and students’ interactions while playing and freeze actions in tactically valuable situations,
- … moderate tactically oriented discussions in class, hereby activating the students and motivating them to think how to solve game situations,
- … derive drills which provide enough and suitable chances for students to exercise skills and understand how they can solve tactical situations, and
- … organize more complex games which fulfil the expectation of tactical progression.

However, the effectiveness of TGfU as a teaching method is limited by the skill of its practitioners in developing appropriate games and questions to generate learning opportunities for their students. If practitioners do not obtain these skills, there may be
limited opportunities for their students to gain skills in critical analysis, deep knowledge, and deep understanding, essential in any productive pedagogy (Forrest, Webb, & Pearson, 2006). As a consequence, we hypothesize that preservice teachers must learn to initiate, maintain, and direct the discussions at focus to provide learning effects.

4 A qualitative experiment with German and Swiss teachers

We know that currently there is a lack of progress with the use of TGfU, particularly among preservice teachers (Kirk, 2016). To improve this, it is necessary to identify relevant impediments because only when we can name problems, then not “only test pilots can fly this model” (Kirk, 2016). Additionally, and with regard to Germany and Switzerland it must be put on record that the TGfU concept is seldom addressed and taught at universities, although the advantages of this approach are substantial in PE (e.g., Allgäuer et al., 2016; Roth, Kröger, & Memmert, 2015). Thus, we conducted a research project which aimed at familiarizing German and Swiss preservice and inservice teachers with TGfU: We first introduced them to the basic ideas in a one-day workshop which included theoretical and practical lectures. In a second step, we asked them to plan some lessons within a professional learning community consisting of two colleagues each and to implement their plans in a teaching unit of their own choice; the units lasted four to five weeks and embraced approximately six to eight lessons. Our overall research questions were the following:

− Which teaching concepts do the teachers know and apply?
− What are the most relevant quality dimensions for game lessons?
− In how far do the participants address students’ learning progress adequately and meet different conditions?

The structure of the aforementioned process guided our research approach. It orientated itself towards a qualitative experiment which is based on the idea that a single and one-dimensional intervention is not satisfactory. Consequently, we decided to influence the level of university knowledge with a specific training course on TGfU first as well as with a working group in which the trainee teachers prepared and analysed lessons in professional learning groups. Additionally, we wanted to know, if potential changes regarding TGfU develop in a phase of working as a teacher. The research process is displayed in table 1.

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2 The authors want to give thanks to Maren Haubner, Joanna Vetter, Felix Böning, Marvin Engler, Carina Fivian, Larissa Ljaskowsky, Christian Broder, Fabian Künzi and especially to Pascal Schopenhauer. They were responsible for data collection and data analysis; additionally, Pascal worked as a research assistant during the whole project.
Table 1

Research process

<table>
<thead>
<tr>
<th>Measurement point</th>
<th>Research activities</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Interviews (initial)</td>
<td>Describing and explaining preservice and experienced teachers knowledge, attitudes, and preferences for teaching games</td>
</tr>
<tr>
<td></td>
<td>Workshop on TGfU</td>
<td>Introduction to TGfU</td>
</tr>
<tr>
<td></td>
<td>Instructional phase (intervention)</td>
<td>Applying TGfU in practical situations</td>
</tr>
<tr>
<td>T2</td>
<td>Videography of one lesson</td>
<td>Describing and explaining preservice teachers real teaching behaviour and attitudes about teaching experiences with TGfU</td>
</tr>
<tr>
<td></td>
<td>Interviews (experiences)</td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>Interviews (sustainability)</td>
<td>Describing and explaining preservice teachers long-term knowledge and attitudes</td>
</tr>
</tbody>
</table>

The following instruments and data analysis techniques were used:

− **Sampling.** Our participants were recruited by means of purposeful sampling, i.e., we deliberately requested preservice and in-service teachers with different backgrounds as to teaching experience, socialization in sport, and personal data. Altogether eight German preservice and eight Swiss in-service teachers took part in the study. Their teaching experience ranged from 0 to 30 years.Everybody was teaching class five or six at that time.

− **Data collection and analysis:**

  1. At T1, T2, and T3 semi-structured interviews were conducted; we used a guideline which consisted of a list of relevant and obligatory questions, e.g., on attitudes, on teaching experiences and knowledge about TGfU, but left enough space for ad hoc questions. Data analysis was based on grounded theory methodology (Strauss & Corbin, 1996) and on Qualitative Content Analysis which offers various approaches of analysis (Stamann, Janssen, & Schreier, 2016); at T2 and T3 we decided to follow a rather deductive version based on our research interest and the referring foreknowledge.

  2. Videography was used to document a PE lesson from each participant towards the end of the intervention phase (around T2). The videotapes were analysed both on a grounded theory approach (Bücker, 2020) and video-based interaction analysis (Tuma, Schnettler, & Knoblauch, 2013). Thus, we could unfold a first heuristic framework.

To conclude, our study represents a multistrand and multimethod approach based on the constructivist, qualitative paradigm. It is multistrand because there are several consecutive research strands with differing research interests, and it is multimethod
because we used interviewing and qualitative observation as methods (Johnson & Christensen, 2014) based on a qualitative approach.

5 Results
This result section is organized along the research process, i.e., outcomes are presented in the order of data collection and analysis (cf. table 1). An overview of the relevant categories and codes is summarized in table 2.

Table 2

Results of interview analysis (P = participants)

<table>
<thead>
<tr>
<th>T1 (base level interviews)</th>
<th>T2 (after intervention)</th>
<th>T3 (after six months of teaching)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P report …</td>
<td></td>
<td>P report …</td>
</tr>
<tr>
<td>☐ ... that ideas of game instruction are mainly coined by individual attitudes towards PE</td>
<td>☐ ...positive experiences with game-orientation</td>
<td>☐ ...familiarity with game-orientation and small-sided games</td>
</tr>
<tr>
<td>☐ ... they know game- and skill-oriented approaches</td>
<td>☐ ...game-orientation requires intensive planning</td>
<td>☐ ...change in understanding their roles as teachers: from instruction towards support</td>
</tr>
<tr>
<td>☐ ... that the most difficult problem is handling students’ differences in performance</td>
<td>☐ ...lack of content knowledge to assess game performance uncertainty implementing reflexive, student-oriented dialogues</td>
<td>☐ ...enhanced pedagogical knowledge (e.g., self-assurance, motivation)</td>
</tr>
</tbody>
</table>

5.1 Results 1: Attitudes and Knowledge at T1
The first wave of interviews brought some interesting codings to light: First, we learned that a lot of our participants had limited experience in teaching team sports in general; consequently, they felt uncertain, without confidence in their own teaching skills, and overchallenged. Second, TGfU lessons were rather seldom during their courses at university; in some cases, our participants did not have contact with this conception at all. Finally, it became evident that most of our participants tended to adhere to old-fashioned methods, e.g., drills, to develop a secure framework for their teaching. However, at least one basic target of TGfU could be found: In addition to the issue of teaching technical skills, the trainee teachers pretended to promote the tactical skills of the students.

5.2 Results 2: Attitudes, Behaviour, and Knowledge at T2
The second wave of interviews revealed small modifications: First, our participants reported some positive experiences with TGfU, a process that seemed to be influenced by their professional learning communities. However, it was difficult for them to adapt the concept to the current temporal and organizational framework conditions. Second, and due to their small experience in teaching games, the planning of lessons required time-consuming preparations, a fact that is counterproductive in a traineeship with many demands and challenges. Finally, when teaching our participants felt subjected to an enormous time-pressure and to the demand of permanent concentration. Nevertheless, we had the impression that the participants were partially more convinced of the TGfU concept than initially.
However, some of their statements stood in contrast to the lessons which were videotaped:

− We only observed one lesson that was in complete accordance with the ideas and principles of TGfU; only two of our preservice teachers implemented the concept partially, e.g., we could ascertain the idea of ‘playing before exercise’ and the principle of ‘modification representation’. We also found that this behaviour might be explained with some contradicting principles of German approaches which are mainly taught in teacher education. They prefer deliberate, but free play and the process of implicit learning. Thus, we assume that our participants seem to “draw on approaches” they know from university courses.

− As to the sequences and discussions in which students are asked to explain their perception of the game (“freezing”), our participants too often proceeded with deductive questions from the very beginning. Only one experienced teacher was able to implement the concept in accordance with the ideas of TGfU by an inductive and student-oriented approach. This certainly impedes the construction of students’ game awareness and cognitive activation which are two focal targets of TGfU.

− Finally, our analysis revealed that typical framework conditions of PE in Germany and Switzerland seem to complicate or even obstruct the implementation of some TGfU principles. We found that the application of small-sided games which means that three or more playing fields have to be handled simultaneously was a real problem for realizing the primacy of decision-making.

Summarizing the effects of our intervention at T2, we can say that our participants worked hard to implement the TGfU concept, but all in all, they failed. This can be supported by various interview passages, but mainly the videotaped lessons brought severe teaching problems to light. However, we believe that our preservice teachers have been convinced of the concept at least to a certain extent.

**Results 3: Attitudes and Knowledge after the Intervention T3**

The analysis of the third wave of data collection took place five or six months after the end of experiment. It brought the following results to light:

− First, the preservice teachers still regard the instructional approach of using small and modified games as an advantage. In addition, they believe that a gradual development of rules is suitable to expand the game idea.

− Second, our participants put on record that the implementation of reflection phases had sustainable influence on their teaching; they felt encouraged to include the ‘reflexive method’ of the TGfU concept in their own lessons. However, the time points of application differed from teacher to teacher: While some of them use reflexive conversations during short game interruptions, others only used it after the games, i.e., as a kind of summarizing the lesson, or for introduction. In general, reflections during game interruptions seemed to be much more effective.

− Third, the necessity of providing various types of adequate drills appeared to be challenging (phase 3 in figure 4) for implementing TGfU. Our participants described the preparation and especially the appropriate selection of exercises as very complex and challenging. In this context, they also regarded the diverging skills of the students as difficult to handle simultaneously.

In summary, the instructional approaches of the preservice teachers still seem to be very much oriented towards practicing sports games traditionally. Therefore, TGfU is implemented only sporadically, and is often limited to the use of the reflection phases.
Following our focal idea of change over time, i.e., in how far our participants have adopted the principles of TGfU into their teaching skills and habits, we can summarize the following results based on the analyses of 48 interviews and 14 videotapes:

− Examining recorded lessons on handball, soccer and hockey by means of an inductive analysis procedure we can ascertain that preservice teachers had considerable difficulties in organizing small sided-games, in freezing tactical valuable situations, and in moderating student-oriented discussions about task solutions. A considerable number of situations showed that our participants lose control over the pitches while being tied down to a small group of students of one team. Additionally, the relevant discussions in the TGfU circle revealed teacher-centred behaviour which was full of instructions instead of open questions.

− Contrasting these impressions with what our participants said about themselves showed some contradictions (cf. table 2): Despite the fact that they were partially dissociated from TGfU, we saw that they got more and more familiar with this pedagogical conception and seem to be convinced of its advantages. However, this only refers to beliefs and attitudes. They actually failed on their way “from knowing to acting”; probably, it requires a longer lasting engagement with this concept and more teaching experiences.

All in all, our qualitative experiment showed the difficulties of changing deadlocked teaching patterns, particularly in a short time span, or as Altmann (1983) put it: “Teachers teach as they were taught, not as they were taught to teach”. This may also apply to the trainee phase preservice teachers pass through. Consequently, we should integrate more teaching experience into teacher education at universities and the combination of content and pedagogical content knowledge in the study programmes.

6 Summary and perspectives
Summarizing the goals of our article, we first wanted to show that pedagogical content knowledge has to be regarded as a central module of teacher professionalization because it is likely to predict both the quality of teaching and the achievement of teaching objectives. Transferring this assumption to teaching games in Physical Education, it is widely accepted that game-centred approaches seem to be promising; consequently, TGfU took centre-stage because of two reasons: several studies showed that it is highly adequate and effective, but also put in second place in teacher education in the countries of our interest. We then presented a study which analysed the implementation of TGfU into the education of German and Swiss teachers and its consequences. Finally, we want to draw some conclusions from our results.

First and with regard to teacher education, we state that applying a constructivist approach like TGfU might be challenging for teachers who did not acquire specific experiences in that respect and only underwent insufficient teacher training during their education. Bridges between the educational sciences and subject-specific didactics may show trainee teachers which idea TGfU follows, thus thwarting a fragmentation of teacher education (Hapke & Cramer, 2020). From a students’ perspective game-based teaching provides the possibility of cooperative learning and it might pave the way for a meta-cognitive perception of one’s own learning process (Godbout & Gréhaigne, 2020). However, implementing a complex method like TGfU requires a rather long-ranging process which will probably be most successful when teachers aid one another within informal groups to adapt it to their daily pedagogical routine (O’Leary, 2016).

Second, pedagogical content knowledge - a heuristic concept going back to Shulman (1986) - turned out to be a relevant predictor for quality of instruction and for school achievements of students. In doing so, it goes beyond pure expert knowledge (Heemsoth...
Admittedly, the latter is regarded as a necessary, however not as a sufficient criterion for fostering learning performances (Baumgartner, 2017). Student and trainee teachers tend to apply teacher-centred methods because they facilitate various aspects of classroom management, e.g., controlling activities; in contrast, student-centred enactments, like TGfU lessons, permit more liberty and autonomy thus making higher demands of teachers (Silva, Farias, & Mesquita, 2021). As a consequence, it will be necessary to complement teacher education with several issues such as getting familiar with small-sided games and heterogeneous groups. Confronting students only with aspects of rules or tactical themes will not suffice in the future. As student teachers and novices are only scarcely acquainted with constructivist teaching, they definitely need support for applying this to their teaching.

Finally, biographical knowledge seems to be very important and a guiding basis for students and teachers in their business routine (Altmann, 1983). PE teachers often rely on coagulated experiences from their school days and from their activities in sports clubs. As a consequence, it should be considered necessary to irritate their sportive habitus and to question the related patterns of perceiving, thinking, and acting. People ought to watch out that such changes can only be successful, if they tackle the overall objectives, i.e., the basic educational principles of a teacher, and subsequently focus on underlying acting levels (Haenisch, 2016). Thus, it seems to be a relevant task for teacher education to convince students to reflect on their own practice or to become a critically thinking practitioner.

References


Resurgence of Physical Education and physical activity in the COVID-19 era: Policy inconsistencies, implications and future considerations

M. Adamakis (Cork, Ireland)

Abstract
COVID-19 has already changed the world, not only because of the disease itself, but because of the long-term effects of the world’s reaction to the pandemic. Many countries worldwide have imposed large-scale or national closures of schools and sports facilities, and the practice of outdoor physical activity in public parks and playgrounds was not allowed, and these policy responses to reduce SARS-CoV-2 transmission have a direct impact on children and adolescents. Due to these measures, overall children’s physical activity has been reduced and sedentary behaviour has increased during the COVID-19 pandemic. This policy brief aims to discuss policy inconsistencies during lockdown and physical distancing measures imposed on children and adolescents [i.e., school closures, screen-based (in)activity, curricular Physical Education, hygiene measures, active school travel, sport facilities and physical activity], in relation to current recommendations for exercise during the pandemic, and Physical Education school re-entry considerations.

Key words: SARS-CoV-2, coronavirus, school closures, sport facilities, children, sedentary behaviour, social distancing, lockdown, exercise

1 Introduction
COVID-19 has already changed the world, not only because of the disease itself, but because of the long-term effects of the world’s reaction to the pandemic (Harper et al., 2020). Multiple policy responses have been implemented to reduce SARS-CoV-2 transmission and prevent health system strain, including the detection and isolation of infected individuals, contact-tracing, physical distancing, and closure of non-essential businesses (Hartley & Perencevich, 2020). Quarantine measures are widely used as part of national strategies to contain the spread of the COVID-19 pandemic, which are usually mentioned as confinement, nationwide quarantine, curfew, movement outside of the house for specific reasons, isolation, general lockdown, protective restrictions, and stay-at-home orders (Stockwell et al., 2021). These measures have a direct impact on children and adolescents, since many countries have imposed large-scale or national
school and sport facilities closures, affecting millions of children and young people worldwide. As a result, curricular and extracurricular Physical Education (PE) has been restricted or even cancelled, leading to increased physical inactivity levels.

2 School closures
Currently, over 800 million students still face significant disruptions to their education, ranging from full school closures for all levels in 31 countries, to reduced academic schedules or school closures at some levels in another 48 countries (OurWorldInData, 2021; UNESCO, 2021). Although school closures reduce the number of contacts children have, and may decrease virus transmission, this assumption is not confirmed for COVID-19. Even though SARS-CoV-2 transmission can occur within school settings and clusters have been reported by countries in all school levels, in-school transmission accounts for the minority of all COVID-19 cases, while the prevalence of SARS-CoV-2 transmission is mainly associated with community transmission (CDC, 2021; ECDC, 2020). Recent findings suggest that children transmit COVID-19 far less than adults, since their ability to pass the virus is estimated to be 63% relative to that of adults (Dattner et al., 2021), and they cannot be considered the main drivers of SARS-CoV-2 transmission (Bullard et al., 2021). Based on the data available, in-person learning in schools has not been associated with substantial community transmission, especially in primary education, because studies have found very low rates of symptomatic or asymptomatic SARS-CoV-2 infection in students and staff following partial and full schools’ reopening (Ladhani et al., 2021). Though outbreaks do occur in school settings, multiple studies have shown that transmission within schools is typically lower than, or at least similar to, levels of community transmission, when mitigation strategies are in place in schools (CDC, 2021).

In addition to children’s low transmission rates, the overall risk to children and young people from COVID-19 is limited (Spiegelhalter, 2020), and hyperinflammatory syndrome is extremely rare in these age groups (Riphagen et al., 2021). For example, in Sweden, a country that kept schools and preschools open, there was a low incidence of severe COVID-19 among schoolchildren and children of preschool age. Among the 1.95 million children aged one to 16 years, 15 children were tested positive to COVID-19 and were admitted to an intensive care unit, which is equal to one child in 130,000 (Ludvigsson et al., 2021). Recent modelling studies of COVID-19 predicted that school closures alone would prevent only 2-4% of deaths, much less than other social distancing interventions (Viner et al., 2020). Overall, children have a low risk of being infected by COVID-19, and, on the other hand, are disproportionately harmed by these precautionary measures (Snape & Viner, 2020).

The negative physical, mental health and educational impact of proactive school closures on children, as well as the economic impact on society more broadly, would likely outweigh the educational benefits (ECDC, 2020). COVID-19, via these school closures, will exacerbate the epidemic of childhood obesity and increase disparities in obesity risk. Furthermore, social distancing and stay-at-home orders have reduced the opportunities for physical activity (PA) among children and youths, particularly for those in urban areas living in small apartments, and sedentary behaviours (SB) and screen time have expanded (Rundle et al., 2020; Zhou et al., 2021). In healthy children, PA during lockdown decreased and SB increased compared with pre-lockdown, despite the fact that various organisations, health and exercise professionals provided useful recommendations and guidelines on how to stay physically active during home confinement (Stockwell et al., 2021).
3 Screen-based activity
In these recommendations on how to stay physically active during home confinement, exercise videos that focus on PA delivery through the Internet, mobile technologies (e.g., smartphone apps), and television, are considered viable pathways for maintaining PA and mental health during quarantine (Chen et al., 2020). This approach is backed up by recent studies, which showed that PA through exergaming can be classified as moderate-to-vigorous PA (MVPA) (Cortis et al., 2020), and fitness apps may help buffer the PA decline (but do not increase PA) during lockdown (Yang & Koenigstorfer, 2020). Currently, a growing body of literature informs the rising trends of screen time and associated health outcomes during the COVID-19 pandemic (Carroll et al., 2020; Hu, Lin, Chiwanda Kamina, & Xu, 2020).

In addition to this, the U.S. Ambassador of the World Health Organization (WHO) tweeted his support of playing video games and asking people to continue social distancing by picking up a videogame. He used the hashtag “play apart together” as part of WHO's growing movement to unite people around the world while also keeping their distance (CNN NewsSource, 2020). While the above-mentioned recommendation might be useful in certain cases, it should not be disregarded that WHO (2020) officially claimed videogame addiction a mental health disorder and added “Gaming disorder” to its global medical guide, the International Statistical Classification of Diseases and Related Health Problems or “ICD-11”, which will go into effect in January 2022. The line between “gaming” and “gaming disorder” is very thin and in times of unforeseen pressure and decreased mental health status (as in times of pandemics), such recommendations should be interpreted and practiced with extreme caution, while parents and children should be aware of the negative consequences that “crossing the line” might have on wellbeing. The adverse effects of increased video gaming and smartphone usage will potentially lead to a “screen-based pandemic”, following the end of the COVID-19 pandemic.

4 Curricular physical education
Due to school closures, PE classes have been impacted negatively, because in many cases PE classes have been cancelled (even if schools remained open), and the need for social distancing and enhanced personal hygiene practices posed further practical restrictions (Harrington & O’Reilly, 2020), while other classes are delivered through online platforms. Particularly related to the COVID-19 situation, PE is being internationally advocated as a critical face-to-face experience for students and face-to-face PE lessons are the only methodology for learning PA (EUPEA, 2020). In the absence of face-to-face learning, PE educational institutions raise well-founded concerns for their education principles, specifically the diversity of content lost through the medium of online learning environments (O’Brien et al., 2020). The minimisation of the practical PE components poses a serious threat over the core PE principles, as well as the delivery of quality PE, which is grounded in the equality of opportunity for all students to access a well-balanced and inclusive curriculum.

Furthermore, PE classes might now see a change in terms of the activities proposed (more individual activities instead of group ones), the personal space around each student and the increased avoidance of physical contact (Varea & González-Calvo, 2020). Indeed, as suggested in various PE re-entry recommendation documents, individual activities should be prioritised as these present less risks, rather than traditional team sports (SHAPE America, 2020). It is further advised to avoid as much

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3 The ICD-11 describes “Gaming disorder” as recurrent videogame playing that leads to “impaired control over gaming” and an “increasing priority given to gaming to the extent that gaming takes precedence over other life interests and daily activities”, despite “the occurrence of negative consequences”.

as possible the contact aspect of contact sports and instead focus on fitness and skills (Department of Education and Skills, 2020). These recommendations are based on the notion that the close proximity of participants and the increased respiration rate due to PA demands pose potential risks for SARS-CoV-2 transmission during team and contact sports, however the actual transmission rate is unknown. To answer this question, current research in outdoor rugby and soccer shows that despite the frequent interactions between SARS-CoV-2 positive players and other players, transmission and severe illness are limited during matches, when preventive measures are in place (Jones et al., 2021; Schumacher et al., 2021). It should not be disregarded that curricular PE has broader developmental goals (and not only physical health), such as psychological, affective, social, and cognitive outcomes and mental health (OECD, 2019). Games and sports, including individual and/or team sports, are part of most countries’ PE curriculums, including sports to promote healthy competition, or to promote collaboration and teamwork (OECD, 2019). “Social distancing” games might be an adequate substitute during times when virus community transmission is high, however these games and/or sports have limited efficacy in promoting social and teamwork-related curricular outcomes. More research is definitely needed to determine the virus transmission risk during indoor and outdoor sport activities, and to assist traditional team and contact sports to survive following the COVID-19 pandemic and be fully incorporated in PE classes.

5 Hygiene measures in physical education

Regarding hygiene practices, it has been suggested that students and staff should take good care of their personal hygiene (e.g., sanitize hands, avoid sharing of water bottles, wear face masks when possible), as well as sanitise shared PE equipment and surfaces on a regular basis (e.g., Department of Education, 2021; Department of Education and Skills, 2020; SHAPE America, 2020). The latter strategy (equipment sanitization) was imposed by guidelines which mentioned that the virus that causes COVID-19 can spread through contaminated surfaces, known as fomites. However, Goldman (2020) took a closer look at the evidence around fomites and found that there was little evidence to support the idea that SARS-CoV-2 passes from one person to another through fomites. He further argued that surfaces presented a relatively low risk of transmitting SARS-CoV-2.

The overall risk of SARS-CoV-2 infection via the fomite transmission route is low, and generally less than one in 10,000, which means that each contact with a contaminated surface has less than a one in 10,000 chance of causing an infection (Harvey et al., 2021; Pitol & Julian, 2021). Now it is agreed that SARS-CoV-2 transmits through the air, in both large droplets and small particles called aerosols, and surface transmission, although possible, is not thought to be a significant risk (Lewis, 2021). This lack of clarity about the risks of fomites, compared with the much bigger risk posed by transmission through the air, has serious implications. People and organizations continue to prioritize costly and time-consuming disinfection efforts, when they could be putting more resources into emphasizing the importance of masks, hand washing and investigating measures to improve ventilation systems (Nature Editorial, 2021; Lewis, 2021) in PE and sport facilities.

6 Active school travel

A side effect of school closures, which results in further reduction of students’ daily PA, is the minimization of active school transport. School-based active travel is important because children and adolescents go to school every day, and this environment is a natural and ongoing opportunity to develop active travel behaviours (Carlin et al., 2016).
Schoeppe et al. (2013) found that children who have the freedom to play outdoors and travel actively without adult supervision accumulate more PA than those who do not, while Larouche et al. (2014) identified positive associations between active travel and health outcomes. In general, active transport can be a major contributor to total MVPA, with the mode of commute having a significant role in the level of this contribution to total MVPA (Gbadamosi et al., 2020). Between 2015-2017, one in two school-aged children used active transport (i.e., they walked or cycled) to get to and from school (Whiting et al., 2020).

Unfortunately, due to current lockdowns and home confinement measures, millions of children worldwide do not actively commute to school, leading to further decrease in opportunities to be physically active. Active travel to school cannot resume when schools are closed, and this is another major reason for the resumption of schooling activities. Without access to structured PE and active travel, children and adolescents are at risk of weight gain, lowered physical functioning and increased screen time use (Rundle et al., 2020).

7 Sport facilities and physical activity
In addition to school closures, PE classes amendments and/or cancellations, active travel minimization, and screen time increase that negatively affect children’s PA, citizens were allowed and even encouraged by governments to exercise, but with considerable restrictions (Constandt et al., 2020). It is well-known that since the beginning of the pandemic, due to the restrictive measures adopted worldwide, sports facilities were closed and the practice of outdoor PA in public parks and playgrounds was not allowed (Di Stefano et al., 2020). Also, organized sports activities were to be discontinued and several businesses ceased their function, including stadiums, gyms, professional and amateur sports, leisure centres and swimming pools (Ernstsen et al., 2020).

These restrictions and sport closures were adopted due to the close proximity of individuals in crowded places, where personal contact between participants is inevitable and a “safe distance” cannot be maintained. Furthermore, the increased respiration rate due to the demands of exercise poses a potential risk for SARS-CoV-2 transmission during sports. Indeed, initial data from indoor fitness dance classes suggested that large class sizes, small spaces, and intensity of the workouts (five to 22 participants in a room ≈60 m² during 50 minutes of vigorous exercise) facilitated the transmission of the virus (Jang, Han, & Rhee, 2020). On the other hand, more recent data confirms that gyms and leisure centres provide safe public spaces in which to exercise (following good hygiene and distancing measures), with a self-reported incidence rate of 1.12 positive COVID-19 cases per 100,000 visits (Jimenez et al., 2020). Additionally, current studies from soccer (Schumacher et al., 2021) and rugby (Jones et al., 2021), which are both considered outdoor close-contact team sports, show that there is a limited risk for SARS-CoV-2 infection and severe illness when preventive measures are in place, suggesting a lower risk of viral transmission than previously predicted. It is possible that the number of new weekly COVID-19 cases in professional sports (e.g., rugby) is related to community COVID-19 cases, and when community prevalence is increased, more professional players athletes are likely to have COVID-19 (British Journal of Sports Medicine, 2021). This potentially means that gyms, leisure centres, and outdoor sports do not contribute significantly to the increase of COVID-19 cases in the wider community and when implementing hygiene and distancing measures protocols, structured physical and exercise activities can resume. The association between COVID-19 cases in the community and sport requires further evaluation, which may help the implementation of evidence-informed risk mitigation strategies. The safe resumption of these activities is extremely important because, depending on the national
context, sports organisations may function as an essential facilitator for PA and sport participation among children (Whiting et al., 2020).

8 Discussion
Currently, there is plenty of evidence that children’s PA has been reduced and SB has increased during the COVID-19 pandemic (e.g., Dunton et al., 2020; Stockwell et al., 2021), due to the previously discussed reasons, and we are facing a “physical inactivity crisis in waiting”. Unfortunately, even though exercise and many drug interventions have often similar mortality benefits in the prevention of various diseases (Naci & Ioannidis, 2015), PA and fitness have preventive potential on many chronic diseases that are risk factors for COVID-19 outcomes (Burtscher et al., 2020), and the consistent meeting of PA guidelines is strongly associated with a reduced risk for severe COVID-19 outcomes among infected individuals (Sallis et al., 2021), the role of children’s curricular and extracurricular PA and exercise during the pandemic is clearly underestimated. Extreme lockdown measures (usually non-evidence-based) for postponing the pandemic wave for many months, which may have even worse consequences than a pandemic wave that runs an acute course (Ioannidis, 2020), may further have irreversible effects on children’s PA levels and intention to remain physically active.

For children to achieve the updated WHO recommendations to do at least an “average of 60 min/day” of MVPA, rather than the previously stated “accumulate 60 min of PA daily” (Bull et al., 2020), it is not feasible to rely only on their “individual responsibility” to be active, home-based PA and exergaming, when at the same time many of the “Eight investments that work for PA” (i.e., whole-of-school programmes, active travel, sport and recreation for all, and community wide programmes; International Society for Physical Activity and Health, 2021) are neglected. Children are currently confronted with two pandemics occurring at the same time, COVID-19 and physical inactivity. They are at risk of a continuous cycle where current and potentially accelerated physical inactivity patterns and SB may worsen the impact of future pandemics (Hall et al., 2020). Active play (during PE and unstructured, outdoor PA in children’s free time), active transport (cycling or walking) and participation in sports, are the major contributors to total PA among children. Schools are crucial because children spend a lot of time there and school PE contributes significantly to reducing students’ daily physical inactivity and SB (Mayorga-Vega et al., 2018). The closing of schools and sport facilities prevents children from being physically active and pose an increased threat on future PA participation levels. Additionally, curricular PE is not only related to health outcomes, and continuous cancellation of regular PE classes might have an adverse effect on children’s psychological, affective, and social development.

It is important that governments, policymakers, and other stakeholders (e.g., health and care services, schools, and civil society organizations) work collaboratively to support increased opportunities for children to be physically active. Yet, one year into the COVID-19 pandemic, it is crucial that WHO, CDC and other public-health agencies update their guidance and recommendations on the basis of evidence-based data and current knowledge. These agencies have the responsibility to present clear, up-to-date information that provides what people need to keep themselves and others safe in various environments. Developing guidelines is an important stepping stone in the pathway of translating science into policy, however change will only come about when evidence-based governmental policies are translated into actual practice. Extreme, not-scientifically justified measures (e.g., nationwide lockdowns and school closures; thorough equipment disinfection before and after use; compulsory, horizontal use of
face masks from a young age, even during school breaks and outdoor unstructured play) may impose to children further limitations and discouragement to be physically active. This policy brief aimed at identifying policy inconsistencies, which relied on exaggerated information and non-evidence-based measures, and their negative impact on children’s PA. A central point in this approach is the closure of schools and sport facilities, leading to cancellation of PE classes and extracurricular PA. Reliable evidence and better information are needed to guide decisions and actions of monumental significance and to monitor their impact.

Lewis et al. (2021) claim that in the absence of strong evidence for benefits of school closures, the precautionary principle would be to keep schools open to prevent catastrophic harm to children. Given the severe consequences of school closures on children and their communities, this measure should be employed as a last resort for disease control and, even then, should be time limited (ECDC, 2020). In addition, resumption of PE, and structured PA and sports, given the health, social and financial benefits, requires substantial planning, however it is a feasible goal. The benefits of exercise during the COVID-19 pandemic may outweigh the risks of infection (Dominski & Brandt, 2020); caution is needed mainly in small indoor spaces where participants exercise in high intensities, where contamination could be airborne. In this case, high intensity building ventilation is considered as the most straightforward measure (Blocken et al., 2020), as well as social distancing measures.

If the use of masks is necessary during indoor classes and PA, it is important to carry out the lesson with light exercises and to ensure that students rest intermittently, and if excessive facial sweating occurs, the masks should be changed (Filiz & Konukman, 2020). If activities require high effort to be performed over a prolonged period of time, masks should be avoided because cloth face masks are associated with 14% reduction in exercise time and 29% decrease in VO₂max, attributed to perceived discomfort due to mask-wearing (Driver et al., 2021).

On the other hand, policymakers should not promote exercise and PA as social isolation, and “social distancing” games should not be considered the “new normal” in PE and PA. Also, sports that involve high-risk elements (such as prolonged face proximity) may have to be played with modified rules to limit contact activity, mainly during training but also in matches. Children’s recommended amounts of moderate-intensity PA can be consistent with enhanced immunosurveillance and lowered risk for respiratory illness, minimizing virus transmission through lower respiration rate.

The information presented can be used to ensure that schools, PE, and sports activities continue during and after the pandemic, protecting the health of everyone involved and supporting the national agenda of reducing COVID-19 in the population. It is of vital importance that opportunities for children and young people to participate in daily PA increase with the resumption of their normal, everyday activities, as well as to explore solutions to address excessive SB and screen time to improve children’s overall physical and mental health.

References


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Message to all of our AIESEP members

The AIESEP Board sends our best wishes to all of our members, their family and friends in these very difficult times. It is clear that the global pandemic is changing how we work and live. In fact, it has been said that we are living in two pandemics – (i) Covid19 and (ii) physical inactivity and sedentary behaviour. This elevates the importance of AIESEP’s research in sport, physical activity and physical education praxis.

AIESEP Strategy Development 2019-22

The AIESEP Board continues to develop the AIESEP strategy. We will be sharing the outputs of our work at our international virtual conference in Banff in June 2021.

AIESEP International Scientific Conference Banff 2021 (Virtual Conference)

The 2021 AIESEP International Scientific Conference is jointly hosted by the University of Alberta, McGill University and in collaboration with Ever Active Schools. It will run from the 7th to 10th June 2021. It will be a virtual event (both live and on-demand). The theme of the conference is Descending the Mountain: Exploring the Impact of Research on Pedagogy and Practice.

Please see here for details on how to register and participate:
https://sites.google.com/ualberta.ca/aiesep2021/home

Connecting with our AIESEP membership: Future and Past Events

#AIESEPConnect Programme [2020 – 22]

Since last April, AIESEP has had nine #AIESEPConnect events (on the last Friday of each month). Please follow us on social media (@AIESEP) to find out when the next event is happening. It has fast become a unique way to share high quality research in a convivial environment.

The next #AIESEPConnect is on Friday 30th April at 1pm CET

The topic is:

Optimising Social Media for Physical Activity, Diet and Quality of Life: Lessons Learned from COVID-19

The discussion will be led by:

- Dr Vicky Goodyear, Senior Lecturer, School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, UK
- Dr Kyriaki Makopoulou, Lecturer, School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, UK

For further information please contact:
Association Internationale des Ecoles Supérieures d’Éducation Physique (AIESEP)
www.aiesep.org f.chambers@ucc.ie (AIESEP General Secretary).

4 Dr Fiona C. Chambers is Head of the School of Education at University College Cork (Ireland) and AIESEP General Secretary.
We’re busy preparing for our 26th Annual Congress of the European College of Sport Science: ECSS 2021 – Sport Science in a Virtual World, which is a virtual congress taking place 8-10 September 2021.

Every ECSS congress is multi-/interdisciplinary and covers the following general fields:

- Biomechanics & Motor Control
- Physiology & Nutrition
- Psychology, Social Sciences & Humanities
- Sports & Exercise Medicine & Health
- Applied Sports Sciences

We welcome members of the IJPE community to submit an abstract and/or join us at this virtual event! The abstract submission deadline is 30 April 2021.

Also of potential interest to the IJPE community are the exciting awards on offer at this year’s congress:

ECSS Young Investigators Award (deadline 30 April 2021)
GSSI Nutrition Award (deadline 30 April 2021)
GSSI Young Scholar Professional Development Award (entrants to this award need to submit an abstract to the congress by the 30 April 2021 deadline and then enter the award by 30 June 2021)

Visit the congress website for more information:
https://sport-science.org/index.php/congress/ecss-2021
Thank you for supporting the European College of Sport Science

For further information please visit:
European College of Sport Science (ECSS)
31st EUPEA Forum Meeting 2020 in Esch-sur-Alzette (Luxembourg)

EUPEA and the University of Luxembourg organised the 31st EUPEA Forum Meeting in Esch-sur-Alzette (Luxembourg) from Friday, November 27th, to Saturday, November 29th 2021 in a hybrid format. The Forum included the usual constitutional agenda, as well as the elections of the Board of EUPEA.

During the elections, the Executive Committee of EUPEA was confirmed and elected for another mandate of three years: Claude Scheuer (Luxembourg, President), Marcos Onofre (Portugal, Vice-President), Chris Murphy (England, General Secretary), Martin Holzweg (Germany, Project/Scientific Adviser), Lucas Janemalm (Sweden, Treasurer), Bruno Cremonesi (France, Person responsible for fundraising and development) and Rose-Marie Repond (Switzerland, Past-President).

The new EUPEA Board is composed by the following members:
North representatives: Kasper Salin (Finland), Olegas Batutis (Lithuania)
Central representatives: Susan Marron (Ireland); Elinor Steel (Scotland)
South representatives: Viviana Zito (Italy); Joao Costa (Portugal)
East representatives: Jana Vasickova (Czech Republic); Petr Vlcek (Czech Republic)
South East representatives: Yiannis Gryparis (Greece), Biljana Popeska (North-Macedonia)
Institution representatives: Tamas Csanyi (Hungary, HSSF); Sandra Heck (Luxembourg, University of Luxembourg)
Additional Board members: Garrett Coyle (Ireland); Avelino Acevedo (Portugal)

This new elected EUPEA Board is working during the next three years on the implementation of their new action plan for the period 2021-2023, including the following five topics: (1) Communication, information and members; (2) Cooperation; (3) Advocacy; (4) Projects; and (5) Research and publications.

The main objective based on EUPEA’s mission continues to be the promotion of and the advocacy for physical education in Europe, based on EUPEA’s slogan:

NO EDUCATION WITHOUT PHYSICAL EDUCATION

Finally, the EUPEA Forum adopted unanimously a new constitution, moving its seat from Switzerland to Luxembourg at the address of the University of Luxembourg, Campus Belval

EUPEA Meetings in 2021
- March 11\textsuperscript{th}-14\textsuperscript{th} 2021: Board Meeting #1 in Esch-sur-Alzette (Luxembourg, in hybrid format)
- June 10\textsuperscript{th}-13\textsuperscript{th} 2021: Board Meeting #2 in Dublin (Ireland)
- November 25\textsuperscript{th}-28\textsuperscript{th} 2021: 32\textsuperscript{nd} EUPEA Forum Meeting in Zaragoza (Spain)

For further information please contact:
European Physical Education Association (EUPEA)
Tel.: +41 55 640 75 46 www.eupea.com / info@eupea.com

\textsuperscript{5} Dr Claude Scheuer is researcher at the University of Luxembourg and EUPEA President.
16th FIEP European Congress and 18th Annual Scientific Conference of Montenegrin Sports Academy, Dubrovnik, 8-11 April 2021
The 16th FIEP European Congress together with the 18th Annual Scientific Conference of Montenegrin Sports Academy was held from 8-11 April 2021 in Dubrovnik. Topic of the congress was “Sport, Physical Education, Physical Activity and Health: Contemporary Perspectives”. The congress was organized by the Montenegrin Sports Academy, University of Montenegro and its partners. Special thanks belong to the FIEP national delegates of Montenegro Stevo Popovic and Jovan Gardašević and to the chair of the Organising Committee Duško Bjelica and to all others, who participated in the preparation of this important event. The organisation of the event was impacted by the Covid-19 pandemic. It was organised face-to-face and also on-line. Stevo Popovic (Montenegro) and Wesley O’Brien (Ireland) were awarded the “FIEP Europe Thulin Award 2021”.

FIEP World Elections for the period 2021-2024
FIEP General Assembly with elections for period 2021-2024 was held online on 30 December 2020. Basic results are as follows:

FIEP World Executive Board
President: Almir GRUHN (Brazil)
International Vice-President: Branislav ANTALA (Slovakia)
General Secretary: Rudolfo Pablo BUENAVENTURA (Argentina)
Secretary: André NESSI (Brazil)
Treasurer General: Fabio André CASTILHA (Brazil)
Treasurer: Paulo Ernesto ANTONELLI (Brazil)

FIEP World Regional Vice-Presidents
Africa: Djibril SECK (Senegal)
Asia: Eng Hoe WEE (Malaysia)
Caribe: Arnaldo Rivero FUXA (Cuba)
Central America: Milka GONZALES (Panama)
North America: Manuel GUERRERO (Mexico)
South America: José FERNANDES Filho (Brazil)
Europe: Branislav ANTALA (Slovakia) to April 2021, Dario NOVAK (Croatia)
Oceania: Dean DUDLEY (Australia)

For further information on FIEP please contact:
Fédération Internationale d’Education physique (FIEP)
www.fiepeurope.eu antala@fsport.uniba.sk

6 Dr Branislav Antala is professor at the Comenius University in Bratislava (Slovenia) and FIEP Europe President.
Sport+ or + Sport? - ICSSPE’s Draft Working Programme 2022-2023

Sport officials often emphasise the role sport plays within and for society. Among others, sport contributes to personal well-being and health, provides opportunities to learn values, and is an economic factor in many countries. Undoubtedly, as an important movement within civil society, sport in its most inclusive sense should be participated in sustainably. For this reason, ICSSPE leadership is promoting a programme for the biennium 2022-2023, which supports a number of intergovernmental, governmental and non-governmental initiatives to respond effectively to climate change, demographic developments, urbanisation, resource pressure, and clean technology.

Included in the science domain may be the investigation of:
- Physical activity behaviour and needs across regions and different age groups;
- How regions, countries, and societies face varying degrees of unfavourable conditions;
- How physical education in schools and the sport movement can cooperate effectively.

Education stakeholders may focus on the development of:
- Training and teaching programmes which use material in a sustainable manner;
- Educating those who work with pre-school children, aging populations, as well as with migrants and refugees, all in inclusive settings;
- Online training material for coach educators and teacher training institutions;
- Dynamic physical education curricula that adapt to local characteristics;
- Curricula for physical education classes that emphasise physical literacy and traditional sport and games, particularly using technology as teaching strategy.

Policy makers can:
- Promote active transportation;
- Implement physical activity, sport and physical education programmes for exceptional situations such as lockdown;
- Develop intersectional approaches to develop and maintain sport infrastructure in all neighbourhoods equitably through cooperation with city development, sport, health, education and transportation sectors;

This selection of possible research, educational and policy areas are linked to the 17 Sustainable Development Goals of which a number have been identified as central for the global sport movement and for the UN resolution, *Transforming our World: the 2030 Agenda for Sustainable Development*, signed on 25 September 2015.

ICSSPE will address these topics through research activities, virtual events, publications, and policy development support at governmental sport authority and sport movement meetings and requests. The 2021-2024 Development Committee will develop a grant initiative for ICSSPE members after July 2021.

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7 Detlef Dumon is ICSSPE’s Executive Director.
Physical Literacy for Life project builds momentum in 2021
ISCA is working together with EUPEA and partners around Europe and in Australia on the Physical Literacy for Life project, which runs until December 2021. The Erasmus+ Sport Collaborative Partnership is building on the Phylit project by aiming to present a shared concept of physical activity and movement that stretches beyond traditional sports cultures focusing on performance and can be translated into different European languages. Physical Literacy emphasises the joy of movement and the experience of learning how to move in ways that can improve our health and wellbeing.

New resources now being launched
In 2021, the partners are launching brand new resources for teachers, club staff and the general public throughout the year, culminating in multiplier events in six of the project partners’ countries. The first output is a new definition of physical literacy and its four domains, position statements from all partners and in-depth interviews on the topic.

The second resource will be a self-assessment tool including questionnaires for citizens, teachers and trainers to reflect on their own physical literacy and how it can apply to their work. The third is an advocacy toolkit, featuring two motion graphic videos, interviews with teachers and trainers and a guide on how to start working with the concept and how to create environments to teach and acquire physical literacy.

Finally, the project’s tools will be tested by 40 teachers and club-based trainers in Bulgaria, France, Slovenia and Spain to discover how the concept is accepted in different countries and how it can be used to increase engagement in physical activity in schools and clubs.

Podcast: New Perspectives on Physical Literacy
In our new podcast, as part of ISCA’s online learning resources, Physical Literacy experts Dean Dudley from Macquarie University in Australia and Rose-Marie Repond from EUPEA take an in-depth look at the concept from perspectives we may never have considered before, including how Physical Literacy can support the UN’s Sustainable Development Goals (SDGs), why we can compare physical literacy with the periodic table of elements, and many more exclusive insights.

The podcast and all of the Physical Literacy for Life resources are being published on the official website for the project. People who are interested in the topic can follow this page for updates: https://physical-literacy.isca.org/updates

For further information on ISCA please contact:
International Sport and Culture Association (ISCA)
Phone: +45 (0)2 9485551
www.isca-web.org  info@isca-web.org

8 Rachel Payne is ISCA’s Communications Manager.
IJPE Guidelines for Contributors 2021

The International Journal of Physical Education (IJPE) is concerned with research and scholarship in the social sciences and humanities that focus upon different aspects of physical education, including the eight IJPE review topics ‘instructional theory of sport’, ‘health foundations’, ‘sports curriculum theory’, ‘historical and philosophical foundations’, ‘physical education teachers and coach education’, ‘psychological and sociological foundations’, ‘comparative sports pedagogy’ and ‘conceptual and empirical sports pedagogy’.

All work submitted should be original, unpublished work, not under consideration elsewhere. All papers submitted for the sections ‘research articles’ as well as ‘sport international’ undergo a thorough double-blind peer-review process. Accepted papers come under the copyright of the Journal.

Articles should be submitted by e-mail as an attachment, preferably in Microsoft Word. Manuscripts should be in English. Contributors whose native language is not English are encouraged to consult an English language specialist to ensure that the manuscript is suitable for publication.

- Manuscripts (up to a maximum of 5500 words, including tables, figures and references) should include an abstract of 150-200 words on a separate sheet, and have three to five keywords placed at the beginning of the article. Should the manuscript contain tables and/or figures the amount of words is respectively less.
- The format of the article (including tables, figures and references) should conform to the American Psychological Association format (see APA Publication Manual, 2020, 7th Edition).
- As far as possible, any information that would lead to identification of the authors should be removed from the manuscript itself.
- A second file should be provided as a title page which includes the names of all authors in the appropriate order for publication and with details of their institutional affiliation(s). The lead or corresponding author must be clearly identified with full contact details.
- Articles not conforming to the above specifications will be returned to the authors for correction prior to the reviews
- The editors retain the right to make limited editorial changes to manuscripts that have successfully completed the initial review process. Such changes will be returned to the author for approval prior to publication.

Submissions should:
1. be headed attention: International Journal of Physical Education in the e-mail’s subject line
2. have attachments clearly labelled as a) title page b) manuscript, both with the name of the lead author
3. be e-mailed directly to: holzweg@dslv.de
Upcoming Events

Compiled by M. Holzweg (Berlin/Germany)

AIESEP International Conference 2021
‘Exploring the impact of research on pedagogy and practice’
virtual
9-12 June 2021
https://sites.google.com/ualberta.ca/aiesep2021/home

7th International Conference of Ministers and Senior Officials Responsible for Physical Education and Sport (MINEPS VII)
virtual
14-17 June 2021

26th ECSS Congress Sevilla 2021
Sevilla, Spain
1-3 September 2021
www.ecss-congress.eu/2021

19th Quadrennial IAPESGW International Congress
8-10 September 2021
Tianjin, China & virtual
www.iapesgw.com

ECER 2021
‘Education and Society: expectations, prescriptions, reconciliations’
virtual
9 September 2021
www.eera-ecer.de/ecer-2021-geneva

ISHPES Congress
14-16 September 2021
Lisbon, Portugal
www.ishpes.org/congresses/2021-ishpes-cesh-congress

27th TAFISA World Congress
6-10 October 2021
Portorož, Slovenia
www.tafisa.org/node/266

Asia-Singapore Conference on Sport Science 2021
7-8 December 2021
Singapore, Singapore
www.acss.ear.com.sg
It is the essence of human nature to compare, and nowhere are comparisons more commonplace than in sport. This book focuses specifically on the comparison of sporting nations. Making meaningful comparisons (i.e. comparing the similarities and differences between social phenomena based upon empirical observation) is difficult and resource intensive and faces a host of methodological limitations, trade-offs and practical compromises. Despite these ongoing issues, there remains no introductory texts that outline the philosophical, methodological and practical challenges of comparative analysis as it applies to sport. This book is therefore the first of its kind to provide a comprehensive overview of the theory and method of comparing sporting nations illustrated through specific examples and case studies drawn from the comparative elite sport policy/management domain. In doing so, the book provides an important point of departure and reference for anyone seeking to making comparisons and to generate more focus and attention towards the logic of comparative inquiry and methodology within sport.