INVESTIGATION OF MODEL-BASED PRACTICES AND PEDAGOGIES FOR AN INTEREST PROMOTING PHYSICAL EDUCATION

INVESTIGAZIONE DI PRATICHE BASATE SU MODELLI E PEDAGOGIE PER LA PROMOZIONE DELL'INTERESSE NELL'EDUCAZIONE FISICA

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ABSTRACT
Attitudes in physical education (PE) decline with age leading to high levels of dissatisfaction in secondary school. Negative experiences in PE can have an adverse impact on future engagement in physical activity. To address this issue educators might employ pedagogical approaches that are either based on students' personal interest or designed to promote interest in PE. This paper examines existing literature about approaches to promote interest in PE to create a new interest promoting model.

Le attitudini verso l'educazione fisica (EF) calano con l'età portando ad alti livelli di insoddisfazione nella scuola secondaria. Esperienze negative in EF possono avere un impatto deleterio sulla futura attività fisica. Per risolvere questo problema gli educatori potrebbero usare approcci pedagogici basati su o pensati per promuovere interesse negli studenti in EF. Questo articolo esamina approcci per la promozione dell'interesse per creare un nuovo modello di promozione di interesse nell'EF.

KEYWORDS
Interest, affective learning, pedagogy, model-based practice, physical education
Interesse, apprendimento affettivo, pratica basata su modelli, educazione fisica

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Introduction

Physical education is widely considered as a key occasion for children and adolescents to engage in physical activity and to acquire a wide range of skills that should facilitate a lifelong engagement in physical activity (WHO, 2021). However, most importantly, physical education should be an occasion for young people to learn within inclusive, enjoyable and developmentally appropriate experiences (UNESCO, 2015). Nevertheless, there is evidence that high percentages of young people go through negative experiences during physical education and develop negative attitudes towards this subject in school. For instance, Gallé et al. (2015) reported that 33.5% of 1049 freshmen university students were dissatisfied with their secondary school physical education teaching. Similarly, Gallé et al. (2016) stated that around one third of 7033 Italian university students were not satisfied with their past experience in physical education. In line with this, a more recent study by Adamcak et al. (2020) including 3353 secondary school students from Slovakia showed that physical education was the least favourite subject for 16% of the girls and 11 % of the boys while around 14% of the girls and 13% of the boys reported feeling either mostly bad or always bad during physical education and lastly 50% of the girls and 37% of the boys were glad when physical education lessons were cancelled. On top of this, research demonstrated a decline in the attitudes towards physical education from primary to secondary school. For example, Adamcak et al. (2020) reported lower attitudes towards physical education in secondary school students (i.e. 3353 students) compared to primary school students (i.e. 3606 students) in Slovakia. Furthermore, Pereira et al. (2020) observed a decline in attitudes towards education in the final years of secondary school in 476 Portuguese students. Different negative experiences have been described in physical education comprising boredom, low interest, social isolation, anxiety and shame (Metz et al., 2024; Mitchell et al., 2013). Unfortunately, several research articles reported that negative experiences in physical education have a long-lasting adverse effect on future physical activity engagement (Beltrán-Carrillo et al., 2010; Ladwig et al., 2018). This is very worrying as young people face increased challenges to maintain their physical activity habits after finishing their secondary school potentially due to work or university commitments (Corder et al., 2019). A further issue includes the fact that girls consistently report lower attitudes towards physical education when compared with boys (Aktaş & Assistant, 2021; Toksöz et al., 2024). Lastly, as traditional physical education culture mostly revolves around sport and performance, sporty children are generally the ones that enjoy physical education the most and consequently – as suggested by Säfvenbom et al.,

2015 – “reap most of the benefits” in physical education. This is paradoxical as the children who do not engage regularly in sport and physical activity are the ones that would need more than anybody else to engage in positive and meaningful experiences in physical education that could inspire their lifelong physical activity journey. Students in physical education classes often present highly heterogeneous characteristics in terms of motivation, needs, prior sport experience, expectations, interests and motor competence (Van Munster et al., 2019). For this reason, it can be challenging for teachers to design physical education lessons that satisfy the needs and expectations of all students. Nevertheless, the physical education field should not accept to fail the young people who present higher risk to become sedentary adults. Examples of individuals at high risk include young people who do not regularly engage in physical activity and girls in particular as they generally present lower levels of physical activity and higher sedentary behaviours compared to boys over the course of their lives. Considering the mentioned critical issues in physical education, teachers, pedagogists and policy makers should reflect on the best strategies to maximise positive experiences and attitudes in physical education with a key focus on secondary school students during their final years. To achieve this, educators and experts in the physical education field should first rethink priorities in physical education. Therefore, this paper aims to help educators consider important strategies to promote positive experiences in physical education.

1. Affective learning in physical education

International guidelines (e.g. UNESCO quality physical education guidelines) as well as physical education curricula all over world suggest that physical education should promote the development of multiple outcomes including psychomotor, cognitive, social and affective skills as well as high levels of physical activity engagement (Hashemi et al., 2021; UNESCO, 2015). Addressing all these outcomes in physical education would be ideal. However, prioritising all the mentioned learning outcomes simultaneously is not feasible. In order to select suitable learning outcomes to prioritise, Don Hellison - author of the well-known pedagogical model “Teaching personal and social responsibility”- suggested that educators should ask themselves “what is worth doing” in physical education (Hellison, 2011). For example, when working with adolescents from low-income areas frequently exposed to stress, traumas, violence and crime Don Hellison came to the conclusion that promoting students’ personal and social responsibly could be considered

worth prioritizing in physical education (Hellison, 2011). It should be noted that prioritising one educational outcome does not mean that other important secondary outcomes must be ignored. In line with this, Don Hellison focused his physical education lessons on responsibility outcomes (primary outcomes) while teaching motor competence skills and knowledge about sport disciplines (considered as secondary outcomes) (Hellison, 2011). Following the rationale outlined by Don Hellison and considering the negative attitudes towards physical education observed in secondary school students in particular, teachers might consider prioritising "affective" learning outcomes over other learning outcomes. Focusing on affective outcomes would maximise positive experiences and attitudes in physical education. Affective outcomes could include many aspects such as motivation, enjoyment, self-esteem, resilience, emotional responses, interest and positive attitudes towards other individuals as well as towards lesson content (Bailey et al., 2009; Teraoka et al., 2020). In other words, teachers should focus more on creating physical education experiences that are positive and meaningful for the students rather than expecting students to merely achieve motor competence and sport knowledge learning outcomes. Promoting positive affective experiences in physical education could have long-lasting effect on physical activity and consequently on physical and mental health (Teraoka et al., 2020). Affective outcomes are often seen as secondary aims in physical education and as a by-product of achieving goals such as improving performance, collaborating with peers and increasing knowledge in a discipline (Teraoka et al., 2020). For instance, educators might think that by improving students' motor competence they would automatically increase their attitudes towards a specific discipline. In contrast with this, research suggested that the improvement of affective outcomes should be planned ad prioritised in order to obtain significant results (Teraoka et al., 2020). In other words, educators should design activities that specifically target affective outcomes in order to achieve positive results in these learning domains. As mentioned earlier affective outcomes encompass a wide range of constructs such as motivation, self-perception and interest. Therefore, it might be difficult for educators to identify specific affective outcomes to target. Furthermore, educators often do not know the best pedagogical approaches to promote affective outcomes in order to increase attitudes in physical education. It is therefore important disseminate evidence-based approaches as well as pedagogical models that could be applied in physical education to maximise positive attitudes and experiences in physical education.

2. Making a case for the importance of interest in physical education

A review by Teraoka et al. (2020) examined the effect different pedagogical approaches on affective outcomes in physical education and found out that using pedagogical models or frameworks (e.g. TARGET framework) can have positive effects on affective domains in physical education. Furthermore, over the last two decades there has been an increased interest in affective outcomes such as motivation with a key focus on Self-determination theory (Ryan & Deci, 2020). Nevertheless, there is lack of research examining the promotion of "interest" in physical education. Several pedagogists argued that promoting interest can be a valuable approach to foster positive experiences and engagement in physical education (A. Chen & Wang, 2017; Harackiewicz et al., 2016). Interest has been defined as a psychological state as well as a predisposition where an individual presents high levels of attention, engagement and affect in relation to a specific object of interest (Hidi, 2006). Interest is considered as a variable that promotes motivation towards something but it has been identified as a separate affective outcome due to aspects that will be described later in this article (Renninger & Hidi, 2022). A key characteristic of interest is that it can be an enduring predisposition that leads to consistent reengagement with the object of interest (Renninger & Hidi, 2022). Educators could reduce negative attitudes and adverse experiences in physical education by promoting interest in different ways (Harackiewicz et al., 2016). First of all, educators could design physical education lessons that take into account the existing interests of their students. In line with this, research showed that students are more likely to undergo positive learning experiences when engaging in lesson contents that they are interested about (Renninger & Hidi, 2022). Furthermore, a qualitative investigation by Murfay et al. (2022) suggested that high school students want their interest to be taken into account by teachers when designing their physical education curriculum. Secondly, educators could design strategies to increase existing students' interests toward physical education content. This is linked with the idea that interest is not a static feature but it could be improved (Renninger & Hidi, 2022). Lastly, educators could promote the development of new interests in students. Increasing interest or creating new interests could lead to enduring effects on individuals' engagement in physical activity even after completing secondary school (Renninger & Hidi, 2022). For example, students who developed interest towards racquet sports or towards the discipline of yoga would be more likely to engage in these activities throughout their life. Addressing interest in physical education calls for a shift from rigid teacher centred pedagogical approaches, where teachers deliver standard skill-oriented

curricula, to embrace student centred pedagogical approaches that are built around students' needs. Specifically, teachers should shift away from a perspective about physical education that is anchored to achieving standard sport techniques or knowledge outcomes in order to create experiences that empower students to shape their interests and their future physical activity journey. To the best of our knowledge no pedagogical model has been developed to prioritise interest. Such a model would support educators in their quest to promote positive experiences in physical education. To address this gap the next sections of this article will to talk about existing theories and research about interest in physical education and will outline the proposal of a new Interest promoting pedagogical model.

3. Theory about interest

Interest has been described as both a psychological state and a source of motivation (Renninger & Hidi, 2022). With psychological state we mean a condition of increased affect, attention and concentration when engaging with an object of interest (Renninger & Hidi, 2022). Interest is also a source or motivation as it leads to positive emotions in relation to specific contents and it predisposes individuals to seek engagement with objects of interest (Renninger & Hidi, 2022). It was also suggested that interest presents both and affective component and a cognitive component (Hidi, 2006). The affective component consists in positive psychological states while the cognitive component consists in increased attention as well as seeking increased knowledge, proficiency and understanding about an object of interest (Hidi, 2006). Interest is not merely a mental predisposition that individuals have, it is also something that can be acquired and developed over time (Hidi, 2006). A person presenting interest about something is likely to devote energy and effort towards the object of interest (Renninger & Hidi, 2022). Furthermore, interest leads to a systematic search of information and knowledge that is perceived as rewording (Gottlieb et al., 2013; Gruber et al., 2019). Neuroscientific research demonstrated that seeking information has a physiological basis suggesting that all individuals are predisposed to develop interests (Hidi, 2006). Renninger and Hidi (2022) designed a model describing the development of interest. The model distinguishes between two types of interest including situational interest and individual interest (Renninger & Hidi, 2022). Situational interest was described as the affective and cognitive reaction that takes place with the exposure to an object of interest or interest trigger (Renninger & Hidi, 2022). Situational interest is a temporary condition and it can be influenced by factors that

could attract attention (e.g. an enthusiastic teacher) (Renninger & Hidi, 2022). Conversely, Individual interest is an enduring state that concerns a stable disposition towards something (Renninger & Hidi, 2022). Individual interest is therefore a stable state that is not easily swayed by situational changes. The model developed by Renninger & Hidi (2022) described four phases of interest development as follows:

- Phase 1 concerns "triggered situational interest" that consists in the beginning of a new interest due to the exposure to trigger experiences. In this phase individuals generally present low levels of knowledge or low experience about the object of interest. Educators could trigger learners' interest in differed ways such has: highlighting usefulness, promoting critical reflection, utilizing teaching methods that promote attention and that are designed to be fun and to be engaging for the learner.
- Phase 2 concerns "maintained situational interest" that consists in reengaging multiple times with something that stimulated interest. In this phase individuals start to value and to further develop their knowledge and understanding about an object interest. In this phase external factors such as social interactions with other people and other forms of external support often help maintain the situational interest towards specific objects of interest.
- Phase 3 concerns "emerging individual interest". In this phase individuals actively seek further information about an object of interest and create opportunities to engage with it. Individuals within this phase start to build a personal connection with the object of interest. This phase could be distinguished from prior phases as individual interest, rather that external factors, are the primary driver of engagement. Within this stage individuals possess a good knowledge about the object of interest and they are curious about it.
- Phase 4 concerns "well developed personal interest". In this phase individuals have a strong drive towards the content of interest and they are eager to get a deeper understanding and knowledge about it. During this phase individuals are persistent when seeking their object of interest and they are able to face difficulties or set-backs or frustration in order to meet their goals. At this point individual present a deep connection with the object of interest that might link with personal values and identity.

Situational interest can be triggered in all four phases (Renninger & Hidi, 2022). For example, in phase 3 and 4 individuals might look for new challenges in order to

trigger their interest. Chen et al. (1999) identified five dimensional constructs or sources of situational interest including:

- Novelty: learning new information.
- Challenge: facing a level of difficulty that is not too low (as it would lead to boredom), not too high (as it would lead to frustration) and that would require a level of effort from the learner.
- Attentional demand: focusing and concentrating on the activity at hand.
- Exploration intention: going through a process of discovery.
- Instant enjoyment: engaging in an activity that leads to positive feelings and satisfaction.

Different theories mentioned the importance of interest in education. For instance, interest can be linked to what Beni et al. (2017) described as personal relevant learning that that is a key feature of meaningful experiences in physical education. To put it simply, when students recognise the importance of what they are learning and develop interest they are more likely to undergo meaningful experiences (Beni et al., 2017). Interest was also mentioned by Ryan and Deci (2020) when describing intrinsic motivation within the self-determination theory that was described as engaging in activities for their own sake or for their inherent interest and enjoyment (Ryan & Deci, 2020). The theories mentioned about interest reported in this section can serve as framework to evaluate learners' progress in their development of interest and could help design strategies to maximise interest in education.

4. Interventions to improve interest in physical education

The majority of research examining interest in physical education is observational and there is limited research examining the effect of interventions addressing interest in physical education. In this article we focus on intervention studies as we aim to discuss practical approaches to improve interest in physical education.

Delivery of an interest based curriculum

Erdvik et al. (2019) presented an interesting approach to address interest in physical education. Specifically, Erdvik et al. (2019) conducted a trial comparing a physical education intervention designed to account for interest and a control group including secondary school students that lasted 18 months. The intervention group took part in an "interest-based curriculum" where participants could choose

between a “sport based program” focusing on sport activities and an “explorative approach program” focusing on alternative movement activities such as modified games. Over the same period, the students in the control group received physical education as usual. At the beginning of the program students within the intervention group were invited to choose between the 2 mentioned physical education programs. The 2 programs were created with the purpose of accommodating students’ interests. Specifically, the “sport based program” was designed for adolescents who are highly interested in sports while the “explorative approach program” was designed to enhance engagement in students that are not very interested in sports. In line with what expected by the authors, the children who were less interested in sport decided to take part in the “explorative approach program” while conversely the children who were highly interested in sports choose the “sport based program”. Despite the attempt to address different interests, no difference in self-reported autonomy, competence, and relatedness in physical education were found between the intervention groups and the control group. Erdvik et al. (2022) subsequently reported qualitative findings from the same interest-based intervention that might help clarify why the intervention did not lead to changes in affective outcomes. The study suggested that participants did not feel any substantial change from traditional physical education. Nevertheless, the fact that sporty children were choosing the “sport based program” while the less sporty students were choosing “explorative approach program” was generally perceived positively by students as they got to play with people presenting similar motivation towards physical education. However, this situation emphasised a traditional view that physical education is merely focused on teaching sports and that the sporty children are the ones benefitting the most from physical education. The findings by Erdvik et al. (2022) suggest that providing the choice between a sport based curriculum and a softer version of it in physical education might not be enough to foster meaningful changes in affective outcomes in adolescents. Approaches that take further steps to account for students’ interest might be more effective. For example, teachers could involve students in the process of planning physical education content using participatory methods to select topics that align with their interests.

Incorporating interests from contexts outside physical education

Another study targeting adolescents by Roure and Pasco (2022) evaluated the effect of physical education content personalization on interest in students aged between 11 and 17 years. In this study participants were divided in an intervention

and a control group. Both groups took part in a handball physical education unit. However, the intervention group handball unit was modified to include video games principles based on “Mario Kart” video games. For examples students could chose a character and each character had super powers (e.g. earning point when making a jump shot). Conversely, the control group experienced a traditional physical education unit about handball. The inclusion on video games principles in physical education within the intervention group was based on the rationale that video games are a common out of school interest within the target age group. As a result, the intervention group presented higher levels of situational interest, individual interest and perceived competence compared to the control group. This study represents and interesting attempt to increase of interest in physical education by including students’ interests that are not traditionally linked with physical education such as video games.

The effect of lesson content on interest

Other relevant studies targeting interest physical education involved primary school students. For instance, Kolovelonis and Goudas (2023) designed a randomised controlled in 5th grade primary school students comparing the effects of cognitively challenging physical activity games (i.e. participants took part in games that included contextual interference, manipulation of information and discovery practice), and health-related fitness activities (i.e. participants took part in activities to improve strength endurance and flexibility) in physical education. The results showed that the cognitively challenging games intervention presented higher instant enjoyment and overall situational interest that the fitness intervention. This study suggests that games as well as cognitive challenges could be a viable option to promote situational interest in primary school children.

Similarly, Sun (2012) investigated the effect of different physical lesson contents on interest within primary school children. This study compared interest within 4 weeks of exergaming activities and 4 weeks of fitness activities in a counterbalanced design. As a results, higher levels of situational interest (i.e. attention, challenge, exploration, enjoyment and novelty) were observed during the first lessons about exergaming activities compared to the fitness activities. However, towards the end of the 4 weeks programs only challenge, exploration and instant enjoyment were still higher during the exergaming activities compared to the fitness activities. Furthermore, all situational interest variables decreased from the beginning to the end of the 4 weeks both within the exergames and the fitness activities. This study suggests that games lead to higher situational interest in

primary school children and that that situational interest tends to drop over time if no strategy is taken to foster high levels of interest.

Linking physical education activities with scientific topics

Lastly, Chen et al. (2021) described the intervention called "Science, PE, & Me!" that was designed for primary school children. Participants were randomly allocated to the intervention "Science, PE, & Me!" or to a control group that took part in traditional sport and fitness activities during physical education. The intervention called "Science, PE, & Me!" was designed for students to learn science through physical activity. In other words, while doing physical activity children were invited to go through experiments to gain a better understanding about fitness, being active and nutrition. Furthermore, the intervention was designed including strategies to address the five components of situational interest described by Chen et al. (1999) including attention, challenge, exploration, enjoyment and novelty. As a result, the intervention group reported higher levels of situational interest in terms of attention, challenge, exploration, enjoyment and novelty compared to the control group. This intervention represents a good example of designing strategies to cater interest in students by linking physical activity with scientific content and by targeting specific features of situational interest.

Summary

Even though secondary students are at higher risk of presenting negative attitudes in physical education compared to primary school children, our narrative screening of the existing research about interest in physical education suggested that there is lack of intervention studies addressing interest in secondary school students. Furthermore, a limited number of pedagogical strategies to promote interest have been investigated and most studies focused on the effect of different types of physical education contents (e.g. games versus fitness). It should also be noted that no pedagogical model was specifically designed to address interest as an affective learning outcome in physical education. We therefore suggest that more research is needed to investigate strategies to promote interest in physical education.

5. Features of an "interest promoting" pedagogical model

Several model-based practices and pedagogies have been developed to promote a wide array of learning outcomes in physical education (Kirk, 2013). These models

were created to provide educators with a structure to organise teaching practices and consequently to provide guidance to teachers aiming to achieve specific aims. Furthermore, employing model-based practice was found to be effective in promoting different learning outcomes (Kirk, 2013). Few existing pedagogical models explicitly take into account interest. A rare example is represented by the model "Tactical game model" that targets students' interest by designing game activities where they play games and increase their knowledge about strategy within the games (Michael & Gavin, 2021). However, To the best of our knowledge no pedagogy or pedagogical model has been designed to target interest as a primary outcome in physical education. In this article we aim to propose approaches that could form the basic structure of an "interest promoting pedagogical model". It should be considered that the we are presenting a preliminary overview of elements that could form an "interest promoting pedagogical model" and that further empirical research in needed to refine the proposed model. The model aims both to recognise existing interests as well as improve interest and create new interests towards physical education and physical activity engagement in students. The "interest promoting model" is based on the theories about interest outlined in this article and it includes teaching strategies that are likely to promote different aspects of interest. We believe that each educator should choose which teaching strategies to employ in physical education considering factors such as students' needs and characteristics, curricular aims, teacher personal preferences and values, equipment availability and time constraints. In other words, we do not expect educators to use all the teaching strategies outlined below. We recommend teachers to employ, personalize and mix the teaching strategies we outlined considering what works best for their students. Nevertheless, we believe that a higher alignment with the proposed teaching practices might lead to higher levels of interest in students.

We propose that an "interest promoting model" could include the following teaching strategies divided in 3 macro areas.

1. Promoting situational interest

To foster situational interest educators could work on the following aspects that represent an adaptation of what proposed by Hudo and Perlman (2024):

Novelty

- Educators should propose new content periodically or should find creative ways to add novelty elements within topics that student know already.
- Students could be invited to create novelty by modifying an existing task.
- Teachers could promote creative activities.
- Students could be invited to create new games as a group and engage other children in the game they created.

Challenge

- Educators should propose tasks that are challenging but feasible for students.
- The level of difficulty could be negotiated and personalised together with students.
- Teachers could provide students with the opportunity to incorporate aspects of an activity they enjoy within a different learning activity.
- Teachers should promote a focus on personal improvement.

Attention demand

- Teachers should use engaging methods to keep high levels of attention such as employing videos, technology (e.g. tablets to video record performances), appealing equipment, positive communication and enthusiasm.
- Teachers should explain the relevance, value and utility of proposed activities for their students.

Exploration intention

- Teachers should use strategies to foster students' exploration of the content they are experiencing. For example, educators cold ask question and promote problem solving instead of providing answers.

Instant enjoyment

- Educators should build a positive relationship with each student. To do so educators should take some time to interact one on one and periodically acknowledge the progress of each student.
- Teachers should promote positive interaction between students.

- Teachers should incorporate activities that are considered appealing ad exciting by their students.

2. Taking into account individual interest

To take into account existing individual interests, teachers might employ the strategies described below.

- Providing curricular choice**:** Educators could design strategies to take into account students' preferences throughout the year. For instance, teachers could ask students to vote their favourite lesson content topics at the beginning of the year and accommodate the preferences throughout the year trying to find balanced solutions. Teachers could provide choice between different activities that can take place at the same time to accommodate different interests. Furthermore, teachers could be open to content requests by their students.
- Incorporating different interests: Students' interest could be incorporated within curricular activities. An example could be the gamification of sport units based on students' interest outside physical education (e.g. video games).
- Student as interest promoters: Students could be invited to share their interests. For example, students could be invited to create a physical education session about the sport or physical activity discipline they love and propose it to their class.
- Setting own challenges: Students could be invited set new achievable goals within the activities they are experiencing.

3. Sustaining existing interest or promoting new interests

To sustain existing interests or promote new ones the teacher might employ the strategies described below.

- Wishlist: Inviting students to create a wishlist of activities they would like to experience over the year.
- Out of school opportunities: Informing students about physical activity events or opportunities in their area.
- School trips: organizing school trips to experience physical activities.

- Guests: Inviting experts about different disciplines (e.g. local athletes, coaches or instructors) to share their experiences with students.
- Getting to know interests: Finding time to learn about students' physical activity experiences outside school making sure that all experiences (not only elite level experiences) are valued.
- Tracking interest: Teachers could invite students to keep track of physical activity experiences they enjoyed for example through photos or keeping a physical education diary.
- Transfer outside physical education: Teachers should find strategies for students to apply what they learn outside schools. For example, during a basketball unit teachers could suggest students to test their new skills and play basketball with other people in other contexts. Furthermore, teachers should explain how physical education activities might be transferred outside school.
- Knowledge and understanding: Teachers should explain their students the reasons why different physical activity behaviours can have positive effects on their lives. Educators should also find engaging ways to increase the knowledge about a discipline over time.
- Teacher advocate: Educators could share their meaningful physical activity experiences with their students. Moreover, teachers could take part in physical activities with the students.
- Promoting autonomy: Promoting autonomy in physical education can foster positive educational outcomes. Students should be provided with a degree of autonomy throughout the lessons such as choosing equipment, rules, activities, level of effort.

Conclusion

Negative attitudes and adverse experiences, particularly in secondary school, are an issue in physical education. The promotion of affective outcomes in physical education might be an important strategy to tackle the problem. In particular, working on students' interest in physical education represents a viable way to foster positive experiences in physical education that could be transferred outside school. Nevertheless, no pedagogical models have been developed to help educators promote interest in physical education. This article represents the first step to develop an interest promoting model in physical education. We reported a preliminary overview of elements that could form an "interest promoting"

pedagogical model. Furthermore, we presented a solid theoretical background justifying why an “interest promoting model” might lead to positive outcomes for students in physical education. A key novelty of the “interest promoting model” concerns the inclusion of multiple strategies to foster situational interest as well as to promote and account for individual interest in physical education. A further innovative characteristic of the proposed model concerns empowering students to make decisions about their physical education journey (e.g. providing curricular choice to the students) as well as inspiring students to develop their personal physical activity journey outside school (e.g. creating a physical activity wishlist). The development of an “interest promoting model” could help shift away from teacher centred approaches where teachers make all the decisions about physical education content and delivery. The shift could help teachers embrace student centred approaches where pupils are actively involved in the design of physical education based on personal aspirations and interests. Additionally, this model could help students develop interests that might have a positive impact on their future physical activity lifestyle. To achieve these aims we suggest teachers to employ, personalize and mix the teaching strategies we outlined considering what works best for their students as well as their school and community context.

Future empirical research is needed to further shape the model and to evaluate whether and how applying the model can lead to increased interest and positive attitudes in physical education. As a first step in this process, future research should employ cocreation methods that include the collaboration between students, educators and researchers to better understand how to shape and apply an “interest promoting model” in physical education. This process is necessary to understand both educators’ and students’ perceptions about the proposed model. Furthermore, a cocreation process could help refine and improve the interest promoting strategies suggested in this article. Subsequently, researchers should evaluate the feasibility and acceptability of applying the “interest promoting model” in physical education lessons within pilot intervention studies assessing both teacher’s and students’ perspectives about the model delivery. Lastly, future research should evaluate whether applying the “interest promoting model” might influence affective outcomes such as interest, self-esteem, resilience, emotional responses as well as other important outcomes (e.g. motor competence) in physical education.

Author contributions

This article was conceptualised by Matteo Crotti. The first draft of the manuscript was written by Matteo Crotti who is the author of the paragraphs 2,3,4,5; Antonio Borgogni is the author of the paragraph 1, critically reviewed the manuscript and agreed to its final version. The authors jointly wrote the Introduction and the Conclusions.

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