

# Pre-Service Physical Education Teachers' Perceptions of Anticipated Challenges and Needs during Teacher Education Programs

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Résumé de l'article

Pour faciliter l'insertion professionnelle des enseignants d'éducation physique et à la santé (ÉPS) et pour diminuer l'abandon hâtive de la profession, certains auteurs soulignent l'importance de prendre en compte les besoins des futurs enseignants durant la formation initiale ainsi que leurs préoccupations quant aux défis à relever lorsqu'ils commenceront leur profession (Richards et al., 2013). En utilisant une approche qualitative, la présente étude vise à : identifier les défis anticipés en général par les futurs enseignants d'ÉPS, identifier les défis qu'ils anticipent en ce qui concerne le soutien de la motivation des élèves et décrire comment ils peuvent être mieux préparés pour soutenir la motivation des élèves. Quatre groupes de discussion ont été conduits auprès de 18 enseignants d'ÉPS en formation initiale ( $M_{\text{âge}} = 25$  ; ET = 3,61 ans) provenant d'universités francophones québécoises (Canada). Les résultats, analysés conformément aux quatre étapes suggérées par Boutin (2007), indiquent que les défis anticipés sont principalement la gestion de classe et le manque de motivation des élèves. En ce qui concerne le soutien de la motivation, cinq défis ont été relevés : 1) l'hétérogénéité des élèves, 2) l'apprentissage d'activités soutenant la motivation, 3) l'engagement des élèves, 4) la gestion des élèves désengagés et 5) les différences entre les sexes. En ce qui concerne leurs besoins en formation initiale, les participants souhaitent apprendre à planifier comment motiver les élèves, avoir plus d'occasions de pratiques et apprendre comment mettre en œuvre les stratégies apprises. Les recommandations pour la formation initiale sont présentées dans la conclusion.

# PRE-SERVICE PHYSICAL EDUCATION TEACHERS' PERCEPTIONS OF ANTICIPATED CHALLENGES AND NEEDS DURING TEACHER EDUCATION PROGRAMS

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## Abstract

Given that teacher dropout is an issue for beginning teachers, it is important to be proactive in order to retain teachers within the profession. Physical Education pre-service teachers' education programs represent a crucial part of their professional development in preparing them to face the challenges that often explain retirement, especially students' motivation. Authors recognize the importance of considering pre-service teachers' needs during teacher education programs and their concerns about the challenges to be faced once they start teaching (Richards et al., 2013). Using a qualitative approach, this study aims to: (1) identify pre-service Physical Education teachers' perceptions of anticipated challenges in general, (2) identify the specific challenges they anticipate about supporting students' motivation and (3) describe how they can be prepared to support students' motivation. Participants consisted of 18 pre-service Physical Education teachers ( $M_{\text{age}} = 25$ ;  $SD = 3.61$  years) from French-language universities in Quebec (Canada). Four focus groups were conducted, and data were analyzed consistent with the four steps suggested by Boutin (2007). Results indicate that the main challenges anticipated by pre-service Physical Education teachers are classroom management and students' lack of motivation. In terms of supporting students' motivation, five specific challenges were highlighted: (1) student heterogeneity, (2) proposal of learning activities to support motivation, (3) student engagement, (4) management of disengaged students, and (5) gender differences. As for their needs during teacher education program, participants wished to learn how to plan motivational strategies, be given more opportunities to practice, and discuss how to implement these strategies. Recommendations for teacher education programs are discussed in the conclusion.

**Keywords:** pre-service teachers' challenges, pre-service teachers' needs, physical education, teacher education, motivational climate

## Résumé

Pour faciliter l'insertion professionnelle des enseignants d'éducation physique et à la santé (ÉPS) et pour diminuer l'abandon hâtive de la profession, certains auteurs soulignent l'importance de prendre en compte les besoins des futurs enseignants durant la formation initiale ainsi que leurs préoccupations quant aux défis à relever lorsqu'ils commenceront leur profession (Richards et al., 2013). En utilisant une approche qualitative, la présente étude vise à : identifier les défis anticipés en général par les futurs enseignants d'ÉPS, identifier les défis qu'ils anticipent en ce qui concerne le soutien de la motivation des élèves et décrire comment ils peuvent être mieux préparés pour soutenir la motivation des élèves. Quatre groupes de discussion ont été conduits auprès de 18 enseignants d'ÉPS en formation initiale ( $M_{\text{age}} = 25$  ;  $ET = 3,61$  ans) provenant d'universités francophones québécoises (Canada). Les résultats, analysés conformément aux quatre étapes suggérées par Boutin (2007), indiquent que les défis anticipés sont principalement la gestion de classe et le manque de motivation des élèves. En ce qui concerne le soutien de la motivation, cinq défis ont été relevés : 1) l'hétérogénéité des élèves, 2) l'apprentissage d'activités soutenant la motivation, 3) l'engagement des élèves, 4) la gestion des élèves désengagés et 5) les différences entre les sexes. En ce qui concerne leurs besoins en formation initiale, les participants souhaitent apprendre à planifier comment motiver les élèves, avoir plus d'occasions de pratiques et apprendre comment mettre en œuvre les stratégies apprises. Les recommandations pour la formation initiale sont présentées dans la conclusion.

**Mots-clés :** besoins des futurs enseignants, défis anticipés par les futurs enseignants, éducation physique et à la santé, formation initiale des enseignants, climat motivationnel

## Introduction

Teacher dropout is common in the educational system, particularly for beginning teachers. In fact, the dropout rate after the first year is around 25–30% and rises to 50% after five years (Létourneau, 2014). Scientific documentation suggests many reasons for early dropout, including problems with classroom management (Buchanan, 2010) and student motivation (Ingersoll, 2001), issues that are particularly obvious in physical education (PE) courses. Indeed, many students, mostly teenagers, are not inclined to engage in physical activities (Dishman et al., 2018), which results in disengagement behaviours and disruption in PE classes (e.g., refusing to participate, making jokes or comments, showing little effort, and ignoring instructions; Girard & Blais, 2019). Aelterman et al. (2012) and Van Doren et al. (2021) propose that, despite teenagers' differences and varying degrees of interest in physical activities and sports, the environment and the actions of PE teachers may be important reasons for students' (dis)engagement in PE classes. Hence, PE teachers play an important role in managing many particular features of their teaching contexts, including their relationship with students and the relations between students and the PE-specific environment (McCaughy et al., 2008). On one hand, the PE context can make it more difficult for teachers to develop a strong relationship with their students, since they see them less frequently than teachers of other subjects. Indeed, in Quebec, an average of two hours of PE courses per week is the norm (Loi sur l'instruction publique, 2022). On the other hand, students may feel more uncomfortable in PE classes because of the public nature of hygiene management during puberty as well as differences in athletic ability, which may lead to critical and judgemental behaviours (Casey et al., 2014). Such behaviours can then affect students with less confidence in their physical abilities. Indeed, a key reason for disengagement in PE classes is certain students' perception that they lack the ability to successfully carry out the proposed tasks (Valentini et al., 2020). This dynamic shows why PE teachers must adapt their teaching strategies to encourage students' participation (Sarrazin et al., 2006). For example, when PE teachers create a learning environment that matches students' interests and enables their success based on their own skills and perseverance, student engagement tends to improve (Ntoumanis et al., 2004). However, PE teachers report they have difficulty supporting students' motivation and engagement (Turcotte et al., 2018) and therefore require additional assistance in this regard (Verret et al., 2017).

## Motivational Framework

Duda's (2013; Duda et al., 2017) empowering and disempowering conceptualization of the motivational climate in sport, which was adapted to the PE context (Girard, Desbiens, et al., 2023; Mastagli et al., 2022; Milton et al., 2018), provides a comprehensive framework for understanding how PE teachers can support students' motivation formed from a combination of self-determination theory (SDT; Deci & Ryan, 2000) and achievement goal theory (AGT; Ames & Archer, 1988). The SDT framework suggests that an environment that satisfies an individual's basic psychological needs (autonomy, competence, and relatedness) promotes autonomous motivation and results in positive consequences for the individual, whereas a climate that frustrates these needs encourages controlled motivation, or even amotivation, and leads to negative consequences (Ryan & Deci, 2017). To satisfy the need for autonomy, individuals must assign meaning to a particular task and act in accordance with their own interests and will. The need for competence is satisfied when they evolve within a structured environment that provides resources enabling self-confidence and the ability to achieve success. The need for relatedness is satisfied when an individual feels psychologically and physically safe thanks to feeling accepted as a full-fledged member of the group (Deci & Ryan, 2000).

The AGT framework likewise refers to the need for competence, but bases it on how individuals self-evaluate and the type of achievement goal they pursue. According to AGT, the motivational climate determines the type of goals an individual pursues (Ames, 1992). In a mastery motivational climate, individuals tend to adopt mastery goals: they seek personal improvement and self-evaluate in line with their own progress. In a performance climate, they tend to adopt performance-approach or performance-avoidance goals—that is, they self-evaluate in comparison with others (Blais et al., 2020; Elliot & Church, 1997). When pursuing performance-approach goals, they often feel confident and aim to surpass others. When pursuing performance-avoidance goals, they feel less competent than others and, as a result, tend to adopt avoidance behaviours to protect self-esteem (Elliot & Church, 1997). All in all, the use of motivational strategies to create an empowering motivational climate that supports students' basic psychological needs and encourages the adoption of a mastery goal in PE has proved effective for supporting student motivation in PE (De Meester et al., 2020; García-González et al., 2019; Girard, Desbiens, et al., 2023; Girard & Blais, 2019; Haerens et al., 2018).

## A New Professional Competency to Develop During Teacher Education Programs

In relation to the challenges awaiting PE teachers in terms of students' disengagement behaviours and lack of motivation, teacher education programs play a crucial role in the preparation of pre-service teachers. Indeed, in Quebec, teacher education programs consist of four years of training. To accommodate students' and teachers' new reality, in 2020 the Minister of Education published an updated version of the teachers' reference framework for professional competencies. The new version includes "a new competency related to the role that teachers play in supporting students' motivation to learn" (Ministry of Education, Quebec, 2020, p. 11), which is termed "support students' love for learning" (p. 64). Specifically, this competency indicates that, in teacher education programs, pre-service teachers are to develop strategies providing meaningful learning situations that nourish students' curiosity, help them experience successful learning, and nurture a sense of belonging (Ministry of Education, Quebec, 2020). As well, the reference framework includes nine key elements detailing the importance of satisfying students' basic psychological needs (e.g., "encourages students to use learning strategies that promote and foster their autonomy," "helps students persevere in their learning by supporting their efforts and progress," "builds and maintains positive relationships with students in order to spark their motivation to learn") (Ministry of Education, Quebec, 2020, p. 65). Given the scientific literature reveals these strategies to be effective for supporting student motivation, they offer a promising avenue for developing this new professional competency among pre-service teachers during teacher education programs.

### Study Rationale

In the opinion of Capel and Blair (2007), problems developing specific competencies during teacher education programs sometimes occur because pre-service teachers are trained as technicians, rather than professionals who reflect on their practices and challenge their own beliefs. Indeed, beliefs shaped by past experiences act as a filter for learning during teacher education programs (Bernstein et al., 2013; Pajares, 1992). This is especially true in terms of supporting motivation, given the particular profile of PE teachers who often have a background as competitive

athletes (Desbiens et al., 2009; de Guise, 2021; Sympas et al., 2017): the strategies effective for motivating them in sports are not necessarily effective for all PE students. Accordingly, PE teacher education programs need to use theoretical and practical pedagogical approaches and courses that take into account pre-service teachers' beliefs, needs, and concerns (Richards et al., 2013). Yet, in contrast to the scientific literature on PE teachers, little research has been done on how pre-service teachers can support students' motivation. To our knowledge, there are two studies on pre-service teachers' beliefs concerning the motivational strategies to promote in PE prior to (de Guise et al., 2021) and during (de Guise, 2021) teacher education programs, and both conclude that further research is needed on the issue. In view of this context, the present study has a three-fold aim: (1) to identify pre-service teachers' perceptions of their anticipated challenges in general so as to understand the extent and nature of these challenges and verify if motivational support is in fact a part of them; (2) to identify pre-service PE teachers' anticipated challenges with specific regard to supporting students' motivation; and (3) to describe what PE teacher education programs require to be better prepared to deal with the issue.

## Methods

### Approach and Context

To meet this study's three objectives, a qualitative approach was privileged using focus groups to obtain the overall perspective of participants from different universities in a safe and supervised space (Mishra, 2016). Qualitative approach is particularly interesting to use in education to take into consideration the reality of individuals (Savoie-Zajc, 2004). In this approach, we are mainly interested in the meaning given by participants to their lived experience (Merriam, 1988). The present study is therefore part of this type of methodology. The present study is part of a larger-scale project (FRQSC 2020-NP-266901) and received ethics certification (CER-20-22607.09). After they had completed a questionnaire for the first stage of the project (548 pre-service PE teachers from five francophone universities in Quebec offering a PE program; de Guise, 2021), participants interested in continuing on were invited to leave their email address.

## Participants and Procedures

Among interested participants from the previous step of the study, 20 persons representing four PE teacher education programs out of the five that participated in the first step of the study (one PE teacher education program had no students who were interested in participating in the focus group) were randomly selected and reached by email. A Doodle survey was used to create groups that matched their availability, resulting in four focus groups made up of five participants each. To facilitate pre-service teachers' participation and comply with the health measures implemented due to the pandemic, focus groups were conducted using Zoom. The final sample consisted of 18 participants ( $M_{\text{age}} = 25$ ;  $SD = 3.61$  years), as two persons (one in the first group and one in the fourth group) were not available at the time agreed on. The distribution of participants among the four focus groups is presented in Table 1.

As Table 1 demonstrates, focus groups were defined by mixed age and year of teacher education program, showing that all realities were taken into consideration.

## Measurement Tool

The focus groups were formed to allow participants to share their lived experiences and to encourage exchange and the

emergence of social representations (Baribeau & Germain, 2010). Specifically, focus groups enable discussions of how ideas and representations are expressed and articulated socially, the factors opposing this process, and the nuances between participants' vision and opinions (Baribeau, 2009; Geoffrion, 2009). Thus, the open-ended questions asked during focus groups offer flexibility to the participants, which provides a depth of data collected (Geoffrion, 2009). A discussion guide created to meet the objectives of the study included three questions: (1) As a future PE teacher, what challenges do you expect to face once you enter the profession? (2) What challenges do you expect to encounter regarding student motivation in your internship? (3) What about once you enter the profession? For which of the motivational challenges previously identified do you need further support at this point in your professional development? After each question, and to ensure everyone had fully expressed their opinions, participants were asked if they wished to discuss other issues related to the subject. Each focus group lasted approximately 90 minutes and was recorded, with the participants' agreement, to facilitate data transcription.

## Data Analysis

Analysis was conducted consistent with the four steps proposed by Boutin (2007) using NVivo 10 software. First, we

**Table 1**

*Distribution of Participants in the Four Focus Groups*

	Group 1		Group 2		Group 3		Group 4		Group 5	
	N	%	N	%	N	%	N	%	N	%
Number of participants	4	22.2	5	27.8	5	27.8	4	22.2	18	100
Gender										
Female	2	11.1	2	11.1	1	5.6	2	11.1	7	38.9
Male	2	11.1	3	16.7	4	22.2	2	11.1	11	61.1
Years of initial training										
1st	0	0.0	0	0.0	1	5.6	1	5.6	2	11.1
2nd	1	5.6	2	11.1	2	11.1	0	0.0	5	27.8
3rd	1	5.6	1	5.6	0	0.0	1	5.6	3	16.7
4th	2	11.1	2	11.1	2	11.1	2	11.1	8	44.4

read the data to appropriate it and identify emerging ideas among the responses. Second, statements were grouped according to three themes (one for each question): (1) overall anticipated challenges as a PE teacher, (2) anticipated challenges as a PE teacher that are specific to student motivation, and (3) PE pre-service teachers' needs in education programs regarding anticipated challenges specific to student motivation. Third, sub-themes were created for all three themes. The first theme included two sub-themes: (1) classroom management and (2) students' lack of motivation. For the second theme, there were five sub-themes: (1) student heterogeneity, (2) proposal of learning activities to support motivation, (3) student engagement, (4) management of disengaged students, and (5) gender differences. The third theme included three sub-themes relative to the need for: (1) additional support on planning motivational strategies, (2) learning about ways to implement these strategies, and (3) additional opportunities for practice. Fourth and finally, the results were described and interpreted. Two judges validated the process, and the percentage obtained was 91% for the entire work analyzed, as recommended by Yardley (2008).

## Results

### Overall Anticipated Challenges

Regarding the first objective, participants were asked to indicate their overall anticipated challenges when teaching PE. Participants in the four focus groups identified two challenges: classroom management and students' lack of motivation. For the first challenge, participants shared concerns about how to manage a variety of inappropriate behaviours, as well as students with learning difficulties. One person noted that "We might have a course on all kinds of oppositional disorders, ADD, ADHD. And it's really not enough. The course is really about theory, and everybody agrees that theory and hands-on work just isn't the same" (Participant [P] 2, from group [FG] 3).

Regarding lack of motivation, participants reported that students in high school appear unmotivated in PE and that it was hard to find activities and tasks that both matched each student's ability and were interesting for everyone. One pointed out that "in high school you often get the sense that students are bored or unmotivated, so you feel you can only get them interested by coming up with activities and organizing learning experiences" (P2, FG1).

### Anticipated Challenges Regarding Student Motivation

Regarding the study's second objective, participants were asked to identify the challenges they anticipated in terms of student motivation in PE. The five challenges given the most attention in the focus groups were: (1) student heterogeneity, (2) proposal of learning activities to sustain motivation, (3) student engagement, (4) management of disengaged students, and (5) gender differences. Student heterogeneity was the challenge discussed most. Indeed, participants from three groups worried about the difficulty of motivating students with different abilities, interests, preferences, and personalities. For example, as one person commented, "It's not like in a classroom where a student can get ahead, and it is individual work and all. You really have to have a group perspective, and it's hard to find an activity that everybody likes" (P4, FG3). The difficulty of proposing educational activities or tasks to suit everyone was also discussed in three groups: "I'd say you always have to choose the one that'll satisfy the most students, but it'll never be everybody" (P3, FG3). Three focus groups highlighted the third challenge pertaining to student engagement. Participants were surprised to observe that high school students had little enthusiasm for PE courses and tried to find ways to avoid it. One participant in particular reported that some students took their time in the locker room because "they don't feel like going to phys ed, so they stall as much as possible, then drag their feet on the way to class" (P1, FG4). The fourth challenge, related to managing the behaviours of disengaged students, was discussed in three different groups—pre-service teachers mentioned their concern about what to do when students are disengaged. One commented that:

We don't know what to do when they refuse outright to participate. Even if we say "OK, I'll give you a note, you can leave," that won't encourage them to participate the next time either. All they'll do is say "OK, throw me out, I couldn't care less." (P2, FG3)

The final challenge, gender differences, was discussed by participants in the first and third groups. Those in the first group spoke more specifically about the difficulty of motivating girls: "When you're a guy it's hard to reach out to the girls because it seems we can't manage to develop a bond with them" (P3, FG1). Participants in the third group talked more about the difficulty of motivating girls toward sports activities in general. One observed: "I'd say the problem

is motivating girls. In third, fourth and fifth year secondary. I know it's already been pointed out...that girls have more trouble keeping sports in their life" (P2, FG3).

## Participants' Needs during Teacher Education Programs

Regarding the third objective, participants were asked what preparation they required in their teacher education program to better face the challenges identified in terms of supporting students' motivation. In their answers, pre-service teachers mentioned: (1) additional support on planning motivational strategies, (2) tools on ways to implement these strategies, and (3) additional opportunities for practice. Participants from focus groups 1, 2, and 3 specifically discussed the need to learn more about ways to plan motivational strategies so as to avoid constantly reacting to their students' disengagement or lack of motivation. One participant observed:

I get the sense I'm really being prepared for everything to do with planning, everything to do with evaluation, really everything that's formal.... Motivation could be included in the courses on evaluation, on planning. Really incorporate that aspect...okay, you're planning, but you're planning your students' motivation at the same time. Really consider it in your planning, your evaluation.... For me, incorporating that variable into courses you're already taking would be very logical, because it has its place in teaching and everything that has to do with teaching. (P1, FG1)

Furthermore, other participants in groups 1 and 4 asked for more concrete examples of how to implement motivational strategies during teacher education. They wanted to know not just what to do, but how to do it. Accordingly, one noted:

I think we know the main guidelines, like for example: create motivating tasks, create mobilizing projects, lead students into an area of delicious uncertainty. So we know what to do generally speaking...but exactly how are we supposed to put them in an area of delicious uncertainty, how are we supposed to ensure the project is a motivating one? They don't teach it to us. (P1, FG4)

Finally, several participants from two groups expressed the need for more opportunities to implement what they learn in theory courses. In the opinion of one participant, "offer more

opportunities for hands-on work because I think experience pretty much comes from working in the field" (P2, FG3).

## Discussion

This study aimed to describe pre-service PE teachers' perceptions of their overall anticipated challenges, their specific challenges with regard to supporting students' motivation, and their needs for further preparation during teacher education programs in this regard.

## Anticipated Challenges

When asked about the overall challenges they anticipated when teaching PE, participants identified two in particular: classroom management and students' lack of motivation. The issue of classroom management, which refers to professional competency number 6—"Manage how the class operates" (Ministry of Education, Quebec, 2020)—has been raised by several teachers in the last decade (Dias-Lacy & Guirguis, 2017) and is one reason for early retirement from the teaching profession in PE (Mäkelä et al., 2014). Here, inappropriate behaviours often occur because students have little enthusiasm for physical activity (Rodrigues et al., 2020). Indeed, inappropriate or avoidance behaviours can sometimes be explained by a lack of motivation toward proposed learning activities. Confronted with these behaviours, pre-service teachers find it difficult to distinguish between interventions focused on classroom management (professional competency number 6) and those focused on supporting student motivation (professional competency number 8). Even though the teacher's role is to try to understand the cause of student disengagement by identifying which needs are not being met, results from post-interview discussions conducted with PE teachers indicate they did not take "much time to consider the various reasons pupils might disengage from PE" (Gray et al., 2019, p. 250). Instead, (pre-service) teachers tend to use a controlling approach, which ends by thwarting students' need for autonomy (Bonniot-Paquier et al., 2009). This matches results from the present study, as participants said they did not know which "consequences" to apply when students were not motivated or engaged in PE classes. Similarly, teacher education programs should offer pre-service teachers' opportunities to identify—in terms of motivation and in keeping with the key elements of professional competency number 8—which basic psychological needs are not being met. For example, is it because students don't understand

the usefulness of the task, or because they have no interest in it (need for autonomy)? Is it because they don't understand what they have to do (need for competence related to structure), or because they don't feel able to do it (need for competence related to mastery)? Is it because they find it difficult to develop and maintain positive relationships with others during a task (need for relatedness)? The ability to answer these questions could also help pre-service teachers deal with additional anticipated challenges regarding student motivation, such as student heterogeneity, for example, which involves still other challenges like gender differences and planning motivating activities for all students. As indicated by professional competency number 7, pre-service teachers should also develop the ability to "take into account student diversity" during teacher education programs. Said ability would help them offer "a diversity of content, structures, tasks and processes adapted to students' needs...so as to foster their success and support their development" (Ministry of Education, Quebec, 2020, p. 62). This objective, therefore, is intrinsically linked to the implementation of strategies that nurture the motivational needs of all students.

According to Weeldenburg et al. (2020), as well as many participants in the present study, designing instructional activities targeted to students' different motivational needs is a complex task given their variety of interests, abilities, and personalities. Indeed, one of the main challenges identified by pre-service PE teachers was designing educational activities in line with all students' interests. Even though pre-service teachers are correct to maintain that sparking students' various interests helps increase their motivation and engagement specifically because it supports their need for autonomy (Deci & Ryan, 2000; Haerens et al., 2018; Girard et al., 2021), the belief that one task alone can attract the interest of all students at once is unrealistic. Other strategies need to be put in place to arouse students' curiosity in a task; these may include various activity triggers or explaining the relevance of the task by specifying its usefulness or relationship to other types of activities that may seem more appealing (Girard, Desbiens, et al., 2023; Reeve et al., 2002).

As for heterogeneous abilities, students may lack interest in a learning activity because they feel it's too difficult or, conversely, too easy. Thus, using "differentiated teaching practices" becomes a key competency for teachers (Ministry of Education, Quebec, 2020, p. 63). Applying differentiation helps nurture students' need for competence and refers to other motivational strategies to create a mastery motivational climate, such as providing variations between

or within the learning activities or emphasizing effort and personal improvement in the learning process (Girard, Desbiens, et al., 2023). Moreover, making sure that all interests and preferences are taken into consideration in PE classes can lead to new ways to play sports games according to other perspectives of sports rules. As the participants in this study point out, beginning teachers, such as pre-service teachers, find it difficult to foresee the potential problems students will experience during a task and, as a result, feel at a loss when faced with unexpected behaviours. During teacher education programs, learning to plan a lesson with a view to student heterogeneity is of crucial importance in helping pre-service teachers avoid such disengagement. However, our results indicate that participants would appreciate understanding the rationale of constraints or requests and receive significant explications about how these motivational strategies can be used during planning (professional competency number 3), assessment (professional competency number 5), and classroom management (professional competency number 6), as expected based on the teacher education program curriculum (Ministry of Education, Quebec, 2020).

In terms of gender differences, participants mentioned the challenge of supporting girls' motivation, which was even more important for male pre-service teachers. This result is consistent with a study by Gibbons and Humert (2008) indicating that the instructional activities and sports suggested in PE classes fail to interest girls and do not correspond to what they would really like to do. This is hardly surprising given the extensive literature on girls' lack of motivation and engagement in PE and physical activities, especially during adolescence (Borghese & Janssen, 2019; Gibbons & Humert, 2008; Guthold et al., 2019; Laird et al., 2016; McNamee et al., 2017; ParticipACTION, 2020). However, gender stereotype could also explain these results. Indeed, Preece and Bullingham (2020) suggest that, in PE, a lot of pedagogical choices are oriented according to the conceptions teachers hold about girls and their interest in physical activity and sports. Moreover, according to the results of previous research, girls tend to engage in situations where they feel their competence and their bodies are respected (Gray et al., 2019). When PE is oriented to competition, which frustrates their need for competence, girls report a negative experience and lack of interest (Garrett, 2004). Fortunately, considering how girls' disengagement in PE can be explained by teachers' strategies and by the activities they are inviting girls to engage in, it is encouraging to feel that such disengagement could be prevented.



Indeed, by supporting girls, offering them the opportunity to express what they want, and providing rational explanations in line with their sociocultural context, their participation is therefore encouraged because it corresponds to their experiences and values (Enright & O'Sullivan, 2010). In this regard, PE teachers' programs should focus learning on how pre-service teachers should adapt their approach to the needs, preferences, and interests of all their students, notably by talking with them.

## Needs during Teacher Education Programs

Most of pre-service PE teachers' needs during their education program concern the addition of elements that would increase the value of their education relative to the challenges previously discussed. For example, a suggestion was made to address the concept of motivation and its underlying processes in courses unrelated to the topic (e.g., planning, assessment, didactics) in order to provide rationale and significant explanations about how the content of these courses can help pre-service teachers sustain student motivation. This suggestion is perfectly in line with the "program approach" recommended by the Accreditation Committee for Programs of Professional Education and the Quebec Ministry of Education, which is to make coherent links between courses and from one year of teacher education program to another (Comité d'agrément des programmes de formation à l'enseignement-CAPFE, 2022). To adopt an approach of this kind, consultation and collaboration mechanisms must be set up to ensure a shared vision of teacher education programs among the various actors involved, notably by ensuring:

- "alignment between teaching, learning and the assessment of professional competencies defined in the *Reference framework for professional competencies – For teachers* (2020)...;
- ...coherence between the pedagogical methods retained and the purposes of the program...;
- ...coherence between the organization of content and courses and the logic of their progression to favour the development of professional competencies...;
- coordination and reinvestment between theoretical learning and practical training, and vice versa" (Comité d'agrément des programmes de formation à l'enseignement-CAPFE, 2022, p. 18).

Similarly, with a view to developing professional competency number 3, "Plan teaching and learning situations," and

number 4, "Implement teaching and learning situations" (Ministry of Education, Quebec, 2020), several key elements also refer to a few motivational strategies for creating an empowering motivational climate even when the motivational aspect is not explicitly identified as such. For example, planning learning activities that students can integrate or transfer to their own life refers to support for autonomy; coherence between the aims of the lesson and the proposed tasks, which involves presenting the content of the lesson in a structured way and refers to support for competence in terms of structure (SDT); and considering student diversity when preparing learning situations refers to support for competence in terms of mastery climate (AGT). Furthermore, professional competency number 6 relative to classroom management also provides strong guidelines on how to "maximize student development, learning, and socialization" (Ministry of Education, Quebec, 2020, p. 60). This competency, more specifically, concerns the ways teachers can support the need for competence by offering students a structured environment and supporting the need for relatedness (SDT; Deci & Ryan, 2000); for example, by promoting respectful behaviours in the school and classroom. These examples show that, although many pedagogical strategies are taught during teacher education programs, information is not offered regarding their links to motivational processes. Indeed, according to our results, participants do not seem to recognize how these strategies can help them deal with students' disengagement behaviours, which suggests pre-service teachers need more rational and significant explanations about these links. Participants also mentioned the relevance of having further opportunities for practice with students, which aligns with previous research to the effect that teaching experiences help pre-service teachers develop a clear understanding of teaching in a real-life context (Tsangaridou, 2008).

Many authors (Capel & Blair, 2007; Crahay et al., 2010; Tsangaridou, 2008) advise taking into account pre-service teachers' beliefs during teacher education programs given their influence on professional development. More specifically, Higgings (2018) suggests that practitioner inquiry, in the context of teacher education development, should be used in teacher education programs, given its considerable contribution on the evolution of pre-service teachers' beliefs. Indeed, previous studies reveal that pre-service PE teachers hold both favourable and unfavourable beliefs regarding ways to support students' motivation (de Guise, 2021). Thus, these beliefs, which can differ from what is thought by teacher trainers, may influence the way they

acquire information taught during teacher education programs. Pre-service teachers also maintain that training on how to implement an empowering motivational climate can help positively change in-service PE teachers' beliefs about motivational strategies (Aelterman et al., 2014; Girard, de Guise, et al., 2023; Reeve et al., 2014).

## Limitations of the Study

The present study is not without limitations. Although participants were from different universities and backgrounds, the small size of the sample means their views and opinions are not representative of all pre-service PE teachers. Furthermore, universities were all located in the province of Quebec. Studies conducted with participants from different provinces in Canada might potentially extend our knowledge and understanding of pre-service PE teachers' needs and concerns. Results, however, present a first picture of pre-service PE teachers' anticipated challenges and needs while suggesting avenues for improvement in teacher education programs, particularly with regard to the integration of the new professional competency "support students' love of learning." As well, because of the focus on student motivation, other challenges faced by pre-service PE teachers may have been overlooked. The first question in the interview nevertheless offered participants an opportunity to identify other factors. Despite this precaution, students' lack of motivation emerged as a key concern, which emphasizes the importance of the present article.

## Conclusion

Overall, the results of the present study offer valuable insight into pre-service PE teachers' anticipated challenges and needs during teacher education programs when it comes to support for students' motivation. Specifically, we conclude that pre-service teachers do not feel that the actual teacher education programs in Quebec are meeting their needs, mostly with regard to the challenges they anticipated about ways to motivate their students. Richards et al. (2013) stress the importance of considering pre-service teachers' needs and concerns relative to their professional development. Participants' recommendations with regard to providing more opportunities for practice and ensuring that professors and lecturers create explicit links between course content and motivational processes are promising avenues, particularly insofar as they correspond to the expectations of the Minister of Education (Ministry of Educa-

tion, Quebec, 2020). Given the newness of the professional competency related to supporting students' motivation, university professors and lecturers may require additional support on motivational theories and their underlying processes in order to incorporate them into their course content. To this end, pedagogical tools (in French) are available online—see website Apprendre à motiver ([https://oraprdnt.uqtr.quebec.ca/pls/public/gscw031?owa\\_no\\_site=6661](https://oraprdnt.uqtr.quebec.ca/pls/public/gscw031?owa_no_site=6661)) for review.

## References

- Aelterman, N., Vansteenkiste, M., Van den Berghe, L., De Meyer, J., & Haerens, L. (2014). Fostering a need-supportive teaching style: Intervention effects on physical education teachers' beliefs and teaching behaviors. *Journal of Sport and Exercise Psychology, 36*(6), 595–609. <https://doi.org/10.1123/jsep.2013-0229>
- Aelterman, N., Vansteenkiste, M., Van Keer, H., Van den Berghe, L., De Meyer, J., & Haerens, L. (2012). Students' objectively measured physical activity levels and engagement as a function of between-class and between-student differences in motivation toward physical education. *Journal of Sport and Exercise Psychology, 34*(4), 457–480. <https://doi.org/10.1123/jsep.34.4.457>
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261–271. <https://doi.org/10.1037/0022-0663.84.3.261>
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*(3), 260–267. <https://doi.org/10.1037/0022-0663.80.3.260>
- Baribeau, C. (2009). Analyse des données des entretiens de groupe. *Recherches qualitatives, 28*(1), 133–148. <https://doi.org/10.7202/1085324ar>
- Baribeau, C., & Germain, M. (2010). L'entretien de groupe : Considérations théoriques et méthodologiques. *Recherches qualitatives, 29*(1), 28–49. <https://doi.org/10.7202/1085131ar>
- Bernstein, E., Herman, A. M., & Lysniak, U. (2013). Beliefs of pre-service teachers toward competitive activi-

- ties and the effect on implementation and planning for physical education classes. *Teacher Education Quarterly*, 40(4), 63–79. <https://www.jstor.org/stable/teaceducquar.40.4.63>
- Blais, D., Girard, S., & Lemoyne, J. (2020). Contribution des buts d'accomplissement en éducation physique sur la pratique d'activités physiques : Comparaison entre les classes spécialisées et classes ordinaires. *Revue canadienne de l'éducation*, 43(1), 87–120.
- Bonniot-Paquier, N., Cogérino, G., & Champely, S. (2009). Les enseignants d'ÉPS face aux élèves qui décrochent de l'activité : Intervention selon le sexe des élèves et discours relatifs aux comportements observés. *Revue internationale des sciences du sport et de l'éducation physique*, 84(2), 77–92. <https://doi.org/10.3917/sta.084.0077>
- Borghese, M. M., & Janssen, I. (2019). Duration and intensity of different types of physical activity among children aged 10-13 years. *Canadian Journal of Public Health*, 110, 178–186. <https://doi.org/10.17269/s41997-018-0157-z>
- Boutin, G. (2007). *L'entretien de groupe en recherche et formation*. Éditions nouvelles.
- Buchanan, J. (2010). May I be excused? Why teachers leave the profession. *Asia Pacific Journal of Education*, 30(2), 199–211. <https://doi.org/10.1080/02188791003721952>
- Capel, S., & Blair, R. (2007). Making physical education relevant: Increasing the impact of initial teacher training. *London Review of Education*, 5(1), 15–34. <https://doi.org/10.1080/14748460701241444>
- Casey, A., Hill, J., & Goodyear, V. A. (2014). “PE doesn't stand for physical education. It stands for for public embarrassment”: Voicing experiences and proffering solutions to girls' disengagement in physical education. In S. B. Flory, A. Tischler, & S. Sanders (Eds.), *Sociocultural issues in physical education - Case studies for teachers* (pp. 37–54). Rowman & Littlefield.
- Comité d'agrément des programmes de formation à l'enseignement-CAPFE. (2022). *Guide de rédaction. Demande d'agrément d'un nouveau programme de formation à l'enseignement de 1er cycle ou de deuxième cycle*. [https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/education/publications-adm/education/organismes-lies/CAPFE/CAPFE\\_guide\\_redaction\\_nouveau\\_programme.pdf?1648654492](https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/education/publications-adm/education/organismes-lies/CAPFE/CAPFE_guide_redaction_nouveau_programme.pdf?1648654492)
- Crahay, M., Wanlin, P., Issaieva, É., & Laduron, I. (2010). Fonctions, structuration et évolution des croyances (et connaissances) des enseignants. *Revue française de pédagogie*, (172), 85–129. <https://doi.org/10.4000/rfp.2296>
- De Meester, A., Van Duyse, F., Aelterman, N., De Muynck, G.-J., & Haerens, L. (2020). An experimental, video-based investigation into the motivating impact of choice and positive feedback among students with different motor competence levels. *Physical Education and Sport Pedagogy*, 25(4), 361–378. <https://doi.org/10.1080/17408989.2020.1725456>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human need and the self-termination of behavior. *Psychological Inquiry*, 11(4), 227–268. [https://doi.org/doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/doi.org/10.1207/S15327965PLI1104_01)
- de Guise, A.-A. (2021). *Formation initiale en enseignement de l'ÉPS : Croyances et expériences préprofessionnelles des étudiants face au soutien de la motivation des élèves* [Dissertation doctorale, Université du Québec à Trois-Rivières]. Cognitio. <https://depot-e.uqtr.ca/id/eprint/9900/>
- de Guise, A.-A., Deschênes-Gagné, J., Lemoyne, J., & Girard, S. (2021). Motiver les élèves dans les cours d'éducation physique et à la santé : Perceptions de futurs étudiants en enseignement. *Revue canadienne des jeunes chercheuses et chercheurs en éducation*, 12(2), 47–57.
- Desbiens, J.-F., Borges, C., & Spallanzani, C. (2009). Investir dans la formation des personnes enseignantes associées pour faire du stage en enseignement un instrument de développement professionnel. *Éducation et francophonie*, 37(1), 6–25. <https://doi.org/10.7202/037650ar>
- Dias-Lacy, S. L., & Guirguis, R. V. (2017). Challenges for new teachers and ways of coping with them. *Journal of Education and Learning*, 6(3), 265–272. <https://doi.org/10.5539/jel.v6n3p265>
- Dishman, R. K., McIver, K. L., Dowda, M., & Pate, R. R.

- (2018). Declining physical activity and motivation from middle school to high school. *Medicine & Science in Sports & Exercise*, 50(6), 1206–1215. <https://doi.org/10.1249/MSS.0000000000001542>
- Duda, J. L. (2013). The conceptual and empirical foundations of Empowering Coaching™: Setting the stage for the PAPA project. *International Journal of Sport and Exercise Psychology*, 11(4), 311–318. <https://doi.org/10.1080/1612197x.2013.839414>
- Duda, J. L., Appleton, J. J., Stebbings, J. & Balaguer, I. (2017). Towards more empowering and less disempowering environments in youth sport. In C. J. Knight, C. G. Harwood & D. Gould (Eds.), *Sport psychology for young athletes* (pp. 81–93). Routledge. <https://doi.org/10.4324/9781315545202-8>
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72(1), 218–232. <https://doi.org/10.1037/0022-3514.72.1.218>
- Enright, E., & O'Sullivan, M. (2010). 'Can I do it in my pyjamas?' Negotiating a physical education curriculum with teenage girls. *European Physical Education Review*, 16(3), 203–222. <https://doi.org/10.1177/1356336x10382967>
- García-González, L., Sevil-Serrano, J., Abós, A., Aelterman, N., & Haerens, L. (2019). The role of task and ego-oriented climate in explaining students' bright and dark motivational experiences in physical education. *Physical Education and Sport Pedagogy*, 24(4), 344–358. <https://doi.org/10.1080/17408989.2019.1592145>
- Garrett, R. (2004). Negotiating a physical identity: Girls, bodies and physical education. *Sport, Education and Society*, 9(2), 223–237. <https://doi.org/10.1080/1357332042000233958>
- Geoffrion, P. (2009). Le groupe de discussion. In B. Gauthier (Ed.), *Recherche sociale : De la problématique à la collecte des données* (pp. 394–414). Presses de l'Université du Québec.
- Gibbons, S. L., & Humert, L. (2008). What are middle-school girls looking for in physical education? *Canadian Journal Of Education*, 31(1), 167–186. <https://journals.sfu.ca/cje/index.php/cje-rce/article/view/2998>
- Girard, S., de Guise, A.-A., Hogue, A.-M., & Desbiens, J.-F. (2023). Changes in physical education teachers' beliefs regarding motivational strategies: A quasi-experimental study. *The Physical Educator*, 80(6) 608–628. <https://doi.org/10.18666/TPE-2023-V80-16-11447>
- Girard, S., Desbiens, J.-F., & Hogue, A.-M. (2023). Effects of a training course on creation of an empowering motivational climate in physical education: A quasi-experimental study. *Physical Education and Sport Pedagogy*, 28(1), 56–75. <https://doi.org/10.1080/17408989.2021.1953457>
- Girard, S., & Blais, D. (2019). The impact of a physical education teacher's initiative on grade 4 students' motivation. *Physical & Health Education Journal*, 85(1), 1–8.
- Gray, S., Treacy, J., & Hall, E. T. (2019). Re-engaging disengaged pupils in physical education: An appreciative inquiry perspective. *Sport, Education and Society*, 24(3), 241–255. <https://doi.org/10.1080/13573322.2017.1374942>
- Guthold, R., Stevens, G. A., Riley, L. M., & Bull, F. C. (2019). Global trends in insufficient physical activity among adolescents: A pooled analysis of 298 population-based surveys with 1.6 million participants. *The Lancet Child & Adolescent Health*, 4(1), 23–35. [https://doi.org/10.1016/S2352-4642\(19\)30323-2](https://doi.org/10.1016/S2352-4642(19)30323-2)
- Haerens, L., Vansteenkiste, M., De Meester, A., Delrue, J., Tallir, I., Vande Broek, G., Goris, W., & Aelterman, N. (2018). Different combinations of perceived autonomy support and control: Identifying the most optimal motivating style. *Physical Education and Sport Pedagogy*, 23(1), 16–36. <https://doi.org/10.1080/17408989.2017.1346070>
- Higgings, M. (2018). Engaging in practioner inquiry in a professional development school internship. *School-University Partnerships*, 11(2), 3–9. <https://files.eric.ed.gov/fulltext/EJ1199816.pdf>
- Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534. <https://www.jstor.org/stable/3202489>
- Laird, Y., Fawcner, S., Kelly, P., McNamee, L., & Niven, A. (2016). The role of social support on physical activity behaviour in adolescent girls: A systematic review and

- meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 13(79), 1–14. <https://doi.org/10.1186/s12966-016-0405-7>
- Létourneau, E. (2014). *Démographie et insertion professionnelle : Une étude sur le personnel enseignant des commissions scolaires du Québec*. Congrès de l'Acfas « La démographie de demain : innovations, intersections et collaborations », Université Concordia, Montréal. [http://www.ciqss.umontreal.ca/Docs/Colloques/2014\\_ACFAS/Esther%20L%C3%A9tourneau.pdf](http://www.ciqss.umontreal.ca/Docs/Colloques/2014_ACFAS/Esther%20L%C3%A9tourneau.pdf)
- Loi sur l'instruction publique. (2022). <https://www.legisquebec.gouv.qc.ca/fr/pdf/cr/l-13.3,%20R.%208.pdf>
- Mäkelä, K., Hirvensalo, M., & Whipp, P. R. (2014). Should I stay or should I go? Physical education teachers' career intentions. *Research Quarterly for Exercise and Sport*, 85(2), 234–244. <https://doi.org/10.1080/02701367.2014.893052>
- Mastagli, M., Van Hoye, A., Hainaut, J.-P., & Bolmont, B. (2022). The role of an empowering motivational climate on pupils' concentration and distraction in physical education. *Journal of Teaching in Physical Education*, 41(2), 311–321. <https://doi.org/10.1123/jtpe.2020-0252>
- McCaughy, N., Tischler, A., & Flory, S. B. (2008). The ecology of the gym: Reconceptualized and extended. *Quest*, 60(2), 268–289. <https://doi.org/10.1080/0036297.2008.10483581>
- McNamee, J., Timken, G. L., Coste, S. C., Tompkins, T. L., & Peterson, J. (2017). Adolescent girls' physical activity, fitness and psychological well-being during a health club physical education approach. *European Physical Education Review*, 23(4), 517–533. <https://doi.org/10.1177/1356336X16658882>
- Merriam, S. B. (1988). *Case study research in education: A qualitative approach*. Jossey-Bass.
- Milton, D., Appleton, P. R., Bryant, A., & Duda, J. L. (2018). Initial validation of the teacher-created empowering and disempowering motivational climate questionnaire in PE (EDMCQ-PE). *Journal of Teaching in Physical Education*, 37(4), 340–351. <https://doi.org/10.1123/jtpe.2018-0119>
- Ministry of Education, Quebec. (2020). *Reference framework for professional competencies - For teachers*. Gouvernement du Québec. [https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/education/publications-adm/devenir-enseignant/reference\\_framework\\_professional\\_competencies\\_teacher.pdf](https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/education/publications-adm/devenir-enseignant/reference_framework_professional_competencies_teacher.pdf)
- Mishra, L. (2016). Focus group discussion in qualitative research. *TechnoLearn: An International Journal of Educational Technology*, 6(1), 1–5. <https://doi.org/10.5958/2249-5223.2016.00001.2>
- Ntoumanis, N., Pensgaard, A. M., Martin, C., & Pipe, K. (2004). An idiographic analysis of amotivation in compulsory school physical education. *Journal of Sport and Exercise Psychology*, 26(2), 197–214. <https://doi.org/10.1123/jsep.26.2.197>
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *American Educational Research Association*, 62(3), 307–332. <https://doi.org/10.3102/00346543062003307>
- ParticipACTION. (2020). Le rôle de la famille dans l'activité physique, les comportements sédentaires et le sommeil des enfants et des jeunes. *Bulletin de l'activité physique chez les enfants et les jeunes de ParticipACTION*.
- Preece, S., & Bullingham, R. (2020). Gender stereotypes: The impact upon perceived roles and practice of in-service teachers in physical education. *Sport, Education and Society*, 27(3), 259–271. <https://doi.org/10.1080/13573322.2020.1848813>
- Reeve, J., Jang, H., Hardré, P., & Omura, M. (2002). Providing a rationale in an autonomy-supportive way as a strategy to motivate others during an uninteresting activity. *Motivation and Emotion*, 26, 31–60. <https://doi.org/10.1023/A:1021711629417>
- Reeve, J., Vansteenkiste, M., Assor, A., Ahmad, I., Cheon, S. H., Jang, H., Kaplan, H., Moss, J. D., Olausson, B. S., & Wang, C. K. J. (2014). The beliefs that underlie autonomy-supportive and controlling teaching: A multinational investigation. *Motivation and Emotion*, 38, 93–110. <https://doi.org/10.1007/s11031-013-9367-0>
- Richards, K. A. R., Templin, T. J., & Gaudreault, K. L. (2013). Understanding the realities of school life: Recommendations for the preparation of physical education teachers. *Quest*, 65(4), 442–457. <https://doi.org/10.1080/00336297.2013.804850>

- Rodrigues, F., Teixeira, D. S., Neiva, H. P., Cid, L., & Monteiro, D. (2020). The bright and dark sides of motivation as predictors of enjoyment, intention, and exercise persistence. *Scandinavian Journal of Medicine & Science in Sports*, 30(4), 787–800. <https://doi.org/10.1111/sms.13617>
- Ryan, R. M., & Deci, E. L. (2017). Sport, physical activity, and physical education. In R. M. Ryan & E. L. Deci (Eds.), *Self-determination theory: Basic psychological needs in motivation, development, and wellness* (pp. 481–507). Guilford Press.
- Sarrazin, P., Tessier, D., & Trouilloud, D. (2006). Climat motivationnel instauré par l'enseignant et implication des élèves en classe : L'état des recherches [The establishment of a motivational environment by the teacher and student involvement in class: A survey of the latest research]. *Revue française de pédagogie*, 157(4), 147–177. <https://www.cairn.info/revue-francaise-de-pedagogie-2006-4-page-12.htm>
- Savoie-Zajc, L. (2004). La recherche qualitative/interprétative en éducation. In T. Karsenti & L. Savoie-Zajc (Eds.), *La recherche en éducation : étapes et approches* (pp. 123–150). Éditions du CRP.
- Sympas, I., Digelidis, N., Watt, A., & Vicars, M. (2017). Physical education teachers' experiences and beliefs of production and reproduction teaching approaches. *Teaching and Teacher Education*, 66, 184–194. <https://doi.org/10.1016/j.tate.2017.04.013>
- Tsangaridou, N. (2008). Trainee primary teachers' beliefs and practices about physical education during student teaching. *Physical Education & Sport Pedagogy*, 13(2), 131–152. <https://doi.org/10.1080/17408980701345667>
- Turcotte, S., Berrigan, F., Beaudoin, S., & Gignac, C. (2018). *Revue de littérature sur les facteurs facilitants et les obstacles visant l'intégration de l'activité physique au secondaire (volet 2)* (Rapport de recherche déposé aux membres du comité des offres de services au milieu scolaire de la Table sur le mode de vie physiquement actif).
- Valentini, N. C., Nobre, G. C., de Souza, M. S., & Duncan, M. J. (2020). Are BMI, self-perceptions, motor competence, engagement, and fitness related to physical activity in physical education lessons? *Journal of Physical Activity and Health*, 17(5), 493–500. <https://doi.org/10.1123/jpah.2019-0532>
- Van Doren, N., De Cocker, K., De Clerck, T., Vangilbergen, A., Vanderlinde, R., & Haerens, L. (2021). The relation between physical education teachers' (de-)motivating style, students' motivation, and students' physical activity: A multilevel approach. *International Journal of Environmental Research and Public Health*, 18(14), 1–17. <https://doi.org/10.3390/ijerph18147457>
- Verret, C., Grenier, J., & Bergeron, G. (2017). *Enquête provinciale sur les pratiques inclusives en enseignement de l'éducation physique et à la santé : Rapport provincial primaire et secondaire*. Université de Québec.
- Weeldenburg, G., Borghouts, L. B., Slingerland, M., & Vos, S. (2020). Similar but different: Profiling secondary school students based on their perceived motivational climate and psychological need-based experiences in physical education. *PLoS One*, 15(2), e0228859. <https://doi.org/10.1371/journal.pone.0228859>
- Yardley, L. (2008). Demonstrating validity in qualitative research. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 235–251). SAGE.

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