Exploring physical education teachers' awareness of observed teaching behaviour within pedagogies of affect

Eishin Teraoka [1] and David Kirk [2,3]

[1] *Institute of Physical Education, Keio University, Yokohama, Japan*

[2] *School of Education, University of Strathclyde, Glasgow, UK*

[3] *School of Human Movement Studies, University of Queensland, Brisbane, Australia*

Corresponding author: Eishin Teraoka

E-mail: eishin.teraoka@keio.jp

This is the accepted manuscript version of the study cited as:

Teraoka, E., & Kirk, D. (in press). Exploring physical education teachers' awareness of observed teaching behaviour within pedagogies of affect. *Physical Education and Sport Pedagogy.*

This paper is not the copy of record and may not exactly replicate the authoritative document to be published in *Physical Education and Sport Pedagogy*. The final published version will be available on the journal website.

Abstract

Background: Affective learning has been recognised increasingly as a significant outcome of physical education. This focus on the affective domain comes at a time when there is increasing concern about health and wellbeing of children and young people and, in particular about the rising prevalence of mental health issues. The literature established that a number of approaches that could produce affective learning outcomes that may offer a positive contribution to children and young people's health and wellbeing. These approaches to physical education could be characterized as pedagogies of affect. One underpinning theory informing pedagogies of affect is Self-Determination Theory (SDT). Pedagogical research grounded in SDT has shown the significance of need-supportive teaching behaviour in physical education as it has a direct impact on pupils' positive affective learning outcomes. However, little has been known about what is happening right before need-supportive teaching behaviour occurs during class.

Purpose: This study aims to address the research questions of how aware are teachers of their own need-supportive teaching behaviour and why do they behave in the ways they do in practising pedagogies of affect.

Methods: Data were generated through filmed videos and self-confrontation interviews. We filmed two indoor lessons which the same teacher delivered to the same classes. Within a month after the observations, the teachers participated in the self-confrontation interviews about their teaching behaviour and concerns that arose during the observed lessons while watching selected recorded video clips. The scenes were selected when teachers were offering meaningful choices of activities, offering feedback including either aspect of need-support or control, and interacting with pupils individually. This paper reported data from five physical education teachers in Scottish secondary schools. Thematic analysis was used to identify themes in relation to teachers' awareness of observed teaching behaviour.

Findings: We highlighted how the teachers responded through the following three themes: (1) recognised benefits of offering meaningful choices; (2) different intentions of offering feedback and individual interactions; (3) the need for supporting pupils with behavioural issues. The first theme indicated teachers' knowledge in terms of being able to explain why offering meaningful choices works effectively in terms of pupils' affective learning. The second theme demonstrated teachers' intentions behind offering feedback and individual interactions. There were teachers' intentions of securing their pupils' confidence, motivation, positive mindset, and wellbeing as prioritised outcomes. In contrast, teachers offering feedback to keep running a lesson might not be effective for pupils' affective learning. The third theme highlighted teachers' expectations of pupils' behaviour to implementing need-supportive teaching, especially for pupils with additional support needs. Meanwhile, we remain alert to the possibility that some of the teachers' interactions with pupils who have additional support needs could be construed in SDT terms as controlling teaching.

Conclusion: We conclude that how well teachers are willing to learn from their pupils and how well teachers know the contextual factors about pupils such as their feelings, needs, and interests could be a fundamental requirement for implementing need-supportive teaching behaviour for pupils' mental health and wellbeing within pedagogies of affect.

Keywords: Self-determination theory, self-confrontation interview, Scotland, mental health, affective domain

Introduction

There has been growing interest among researchers in developing pedagogies of affect as physical education's response to the prevalence of mental health issues among young people (Cale 2021; Kirk 2020). The literature suggested a number of teaching approaches and interventions that could produce affective learning outcomes that related to mental health, including those informed by Self-Determination Theory (SDT: Ryan and Deci 2017) (e.g., Aelterman et al. 2014). SDT-informed teaching and learning could be a means of better understanding the nature of pedagogies of affect since SDT is a broad framework to understand a dynamic link between teaching and pupils' motivation and psychological wellness and thus views representative of mental health (Ryan and Deci 2020). For example, research has shown that teachers' need-supportive teaching behaviour has a direct impact on pupils' basic psychological need satisfaction and self-determined motivation, which in turn enhances emotional wellbeing (Behzadnia et al. 2018) and prevents depressive symptoms (Cecchini et al. 2020). In this respect, we realise that it is important to encourage teachers to behave in a need-supportive way as a proxy of implementing pedagogies of affect. With this assumption, what matters in this study is to explore how aware teachers are when need-supportive teaching behaviour has occurred in their teaching, and why they behave in the ways they do. This attempt is important because it will provide evidence that can be considered as requirements for implementing need-supportive teaching behaviour within pedagogies of affect, and as a basis for further professional learning.

In the present study, we will focus on three specific practices that can be identified as representative of need-supportive teaching behaviour that commonly occur during class. One of the representative teaching practices is offering meaningful choices, which is characterised by the provision of autonomy support. The factor of autonomy support is to adopt pupils' wishes, interests, and preferences and welcome pupils' thoughts, feelings, and behaviour

(Reeve 2009). The pedagogical importance of offering choice has been recognised in the literature (Haerens et al. 2015). For example, Mitchell, Gray, and Inchley (2015) found that offering a choice of activity promoted pupils' feelings of autonomy since the students can choose activities they feel competent in. From the perspective of SDT, allowing pupils to choose from a range of contents and levels (e.g., choices as to the size and type of equipment, choices of lesson content and choices in spending time on a task) can lead to an increase in autonomous motivation and all three basic psychological needs satisfaction (Hastie, Rudisill, and Wadsworth 2013; De Meester et al. 2020). Another focus is the practice of teacher feedback, which is a substantial part of the provision of physical education lesson structure. The factor of structure is necessary to enhance need satisfaction, especially competence need satisfaction. Teachers can implement structure with appropriate guidance and clarify to help learners feel competent to engage in activities (Aelterman et al. 2019). In particular, providing positive feedback combined with corrective feedback, which includes information on what can be done differently to perform better, could impact students' motivational experiences during lessons (De Meester et al. 2020). However, it is important to note that providing feedback can be introduced both in an autonomy-supportive or controlling way (Aelterman et al. 2019). On the one hand, providing informational positive feedback brought clear benefits to students' motivation and interest (Stroet, Opdenakker, and Minnaert 2013). On the other hand, providing feedback with clear expectations, which turns into a one-way communication delivered by teachers only, might pressure students to act and think in certain ways (Aelterman et al. 2019). The third practice is interpersonal involvement and individual interaction involving relatedness-support. The provision of relatedness-support refers to the quality of the interpersonal relationships between teachers and pupils, for example, teachers being understanding, sympathetic, and knowledgeable about pupils (Haerens et al. 2013). Interpersonal involvement and individual interaction could support students' relatedness need

satisfaction through feelings of connection that could lead to affective learning outcomes (Stroet, Opdenakker, and Minnaert 2013).

The present study builds upon to the literature in the field of observation studies on need-supportive teaching behaviour. Observing teaching behaviour has been an important line of research relating to the application of SDT since need-supportive teaching behaviour is the most proximal influences on pupils' affective learning outcomes. Studies have been conducted since Haerens et al. (2013) developed the first version of a need-supportive observation tool for analysing teaching behaviour in physical education contexts (De Meyer et al. 2014; Van den Berghe et al. 2013). Observation studies can gain direct evidence of teachers' actual behaviour to achieve learning outcomes as they have high ecological validity (Haerens et al. 2013). Also, such observational studies can be beneficial to teachers to be aware of discrepancies between their own self-perceptions of their teaching and actual teaching behaviour. Yet, the extent to which teachers can be aware of teaching behaviour is not evident in previous research. Therefore, it should be worth integrating recall interviews into observations (Van den Berghe et al. 2016). This approach can be used to analyse teachers' awareness and effectiveness in the teaching process as it happened in a lesson (Quennerstedt et al. 2014).

To better understand why teachers adopt need-supportive teaching behaviour, we can refer to studies on the antecedents of teacher behaviour. One antecedent could be teachers' autonomous and controlled orientations, which involves teachers' own beliefs, values and dispositions (Reeve 2009). Van den Berghe et al. (2013) showed that teachers who are more control orientated are less engaged in observed need-supportive teaching behaviour. More recently, Reeve, Jang, and Jang (2018) demonstrated that teachers with autonomy causality orientation would likely apply autonomy support, while those with control causality orientation would tend to use a controlling style. Furthermore, emerging evidence suggested

that perceived job pressure, teacher psychological need satisfaction, and teacher motivation predicted the use of need-support (Escriva-Boulley et al., 2021; Carson and Chase, 2009; Taylor, Ntoumanis, and Standage 2008). Nevertheless, research has been limited to the focus of teachers' perceptions and personality-based antecedents, and so far, none of the studies has focused on the antecedents of actual teaching behaviour that naturally occur in real-life contexts.

The purpose of this study is to explore what is happening right before need-supportive teaching behaviour occurs during class. Specifically, this study aims to address the research questions of how aware physical education teachers are to practice need-supportive teaching behaviour within pedagogies of affect, and why they behave in the ways they do. More broadly, this study adds to the body of literature on how physical education might respond to the rising prevalence of health and wellbeing issues among children and young people and what physical education teachers might do to develop and practice pedagogies of affect

Methods

The present study was conducted in four secondary schools in Scotland. Five teachers were involved in lesson observations and self-confrontation interviews. The participating teachers had a stated interest in pedagogies of affect, and recognised the need for learning in the affective domain, namely Personal Qualities in the Scottish national curriculum, which is called Curriculum for Excellence (CfE: Scottish Government 2009).

Context and participants

The context of this study was non-denominational state-funded comprehensive school settings, catering to approximately 96% of school-age children in Scotland. Schools implement the CfE where there are three prioritised cross-curricular areas: Literacy,

Numeracy, and Health and Wellbeing. Physical education plays a significant role in learning for Health and Wellbeing that incorporates mental, emotional, social, and physical wellbeing. In the CfE, the affective domain is one of four Significant Aspects of Learning named Personal Qualities, which includes motivation, confidence and self-esteem, determination and resilience, and respect and tolerance (Education Scotland 2017).

Participants were recruited using purposive sampling (Etikan, Musa, and Alkassim 2016). We used professional contacts to recruit teachers who expressed interest in the affective domain and an explicit commitment to teaching for Personal Qualities. The participating teachers expressed their responsibility for supporting pupils' mental health in and through physical education. Moreover, the teachers pointed out that some pupils may need additional support for lack of motivation and confidence, which were challenging issues in relation to Personal Qualities.

This paper draws on data from five teachers. The teachers in School 1 were 'Lisa' and 'Steven', in School 2 'Kenny', in School 3 'Amelia', and in School 4 'Simon'. All the teachers' names are pseudonyms. There were three male and two female teachers. The teachers' teaching experience ranged from one to 13 years. Two of the five were Principal Teachers (i.e., Heads of the physical education departments in their schools). School 1 and School 3 were relatively larger schools with enrolment of 1,228 and 1,750, respectively. School 4 was relatively a small school with enrolment of 610. School 2's enrolment was 360, which was the lowest number among the participating schools.

(Insert Table 1 about here)

Data generation

Data were generated through edited video clips and self-confrontation interviews. Regarding the filmed videos, one camera was positioned at the corner of a gym to film

lessons. The teachers were asked to wear a small microphone to record their verbal instruction and communication with pupils. We filmed all the teachers teach two indoor lessons to the same class one week apart. We asked them to do nothing different from their routine class. Within a month after the observed lessons, the teachers were interviewed one-to-one and asked to talk through what was happening during the observed lessons while watching edited recorded video clips, which is called a self-confrontation interview (Amade-Escot 2005). The edited video clips were framed as critical didactical incidents that are determined based on observations that a teacher's course of action (behaviour) appears to be significant for the intended learning (Amade-Escot 2005). In this study, the critical didactical incidents were identified by the first author based on the descriptions of teaching behaviour applied by SDT (Aelterman et al. 2019; Haerens et al. 2013). For the selection of the scenes, the first author was trained on how to observe need-supportive and need-thwarting teaching behaviour under the supervision of researchers who develop a valid and reliable observation tool (Haerens et al. 2013; Van den Berghe et al. 2013). The scenes were selected when the trained observer clearly identified the practice of offering meaningful choices of activities, offering feedback including either aspect of need-support or control, and interacting with pupils individually who had special needs because the selected teaching behaviour could be (un)beneficial for affective learning (Aelterman et al. 2019). From the observation, there were four incidents where meaningful choices of activities were offered, but observed in Amelia's and Simon's classes only. The total number of incidents offering feedback in a need-supportive way was 20 across all the participating teachers. We identified four incidents where Kenny and Steven provided high-directness feedback in a controlling way in their lessons. There were seven incidents where Steven, Kenny, and Simon interacted with pupils individually who had special needs. The range of time for video clips was approximately from 14 minutes to 17 minutes each. As a means of validating the video clips, all the participating teachers were

asked at the end of the interview if the selected videos were a good representation of their teaching. All responded in the affirmative. The interviewer's strategy was to ask the teachers a question such as 'tell me through what was happening here', in order to elicit teachers' awareness of their own teaching behaviour. The interviewer took the initiative to stop the video to give the teachers time to talk. The interviewer sometimes prompted the teachers by asking, for example, 'what was your teaching point here?', 'what was the issue here?', 'what were you thinking at that moment?', 'can you tell me more about this pupil?'. The data collection of the study ran from October 2018 to May 2019. Ethical approval for this project was granted by the University of Strathclyde, School of Education Ethics Committee and informed consent or assent were obtained from participants.

Data analysis

Thematic analysis was used to identify themes in relation to teachers' awareness of observed teaching behaviour, which was guided by Braun and Clarke (2006). The first author transcribed all videos and interviews, and their first supervisor checked a sample for transcription accuracy. The first author and their supervisor undertook initial open coding independently to identify patterns and events across the data. These codes were shared, re-read and refined further to search for potential themes and to explore the relationship of codes and make connections between them. Once a number of themes were identified, the researchers reviewed them to see if the themes offered a good representation of the data. As a means of establishing the trustworthiness of interview data, the researchers held regular meetings over several months to discuss possible interpretations of the data and share further analysis.

Findings

There are three themes in relation to teachers' awareness to be reported from this analysis: (1) recognised benefits of offering meaningful choices; (2) different intentions of offering feedback and individual interactions; (3) the need for supporting pupils with behavioural issues.

Recognised benefits of offering meaningful choices

In practising need-supportive teaching, offering different activities and equipment is a critical moment so that the pupils can choose according to their perceptions of level of difficulty and their needs. We observed this critical incident in Amelia's (School 3) second lesson. She allowed her S2 pupils to decide which group they wanted to work in and what stroke they wanted to work on in a badminton lesson. The selected scene happened in the middle of the lesson. In the lesson shown to Amelia during the interview, the number of pupils in the class was 15 girls. There were three badminton courts. After a warm-up, Amelia suggested to her pupils to use hoops and cones to create their own exercise to practice a stroke. She highlighted this activity gave students some control over what they would do. During the self-confrontation interview, Amelia commented:

> I'm giving them the choice with their group or their partner on what they want to work on, and I've just given them that autonomy, because I know they're quite able and they're motivated, so I was interested to see what they would come up with. And it's quite good because I can sometimes get ideas from them, and use drills that they've created in other classes. (Amelia, self-confrontation interview on the second lesson)

Amelia showed her willingness to learn from what the pupils come up with. She offered choices of tasks because she recognised that this strategy works for the pupils to create an

environment to engage in the lesson. In this sense, she intentionally offered meaningful choices to promote students' autonomy and motivation as intended learning outcomes.

Likewise, Simon (School 4) gave his pupils choices on what tasks they wanted to participate in. The video clip for his self-confrontation interview was from his second observed Badminton lesson for S3 pupils. The number of the class was seven boys and two girls in the lesson. At the beginning of the lesson, he explained the aim of the lesson was to improve either decision-making, tactics or concentration. He had prepared task cards that look at smash, overhead clear, net shot, and serve. He let his pupils decide which task they needed to work on and encouraged them to think how and why the tasks help to achieve the aim of the lesson. When the pupils began to set up for the tasks, a boy came in five minutes late for the lesson. As soon as Simon noticed this pupil, he talked to him individually and asked him the question, 'what shot do you think you need to do a bit more work on in terms of your tactical play?' (Simon, second lesson). The boy chose a task of smashing, then Simon decided to work together on the chosen task. In his self-confrontation interview, Simon remarked that his intention in this scene was to allow an opportunity to get the pupil involved in the lesson immediately by pairing up with him himself and explaining the task. Simon added his thought on the effectiveness of offering choices in this situation.

> He comes in the lesson, and everyone's already paired up, but they had a choice of what shot they wanted to work on within the game of badminton. And clearly that's really linked back to their decision-making and their tactical play. Also, it just lets them take a bit more ownership of what they're doing. (Simon, self-confrontation interview on the second lesson)

Simon thought giving choices allowed this pupil to be engaged in the lesson and 'take ownership' of his learning. Also, he explained that the reason for offering choices was to make all of the pupils' experience more enjoyable. He focused on the latecomer's engagement in the lesson. He was aware that offering choices is a resourceful strategy for this disengaged pupil.

Offering choices of tasks and difficulty levels was an example of autonomy-supportive teaching. A common notion among the two teachers was to recognise that their teaching strategy takes into account the pupils' input and the achievement level of the class. They intentionally provided choices for pupils because they had knowledge that this could facilitate pupils' autonomy and ownership. There was evidence to show the teachers practised pedagogies of affect as naturally occurring though the observed teaching behaviour in this theme involved some teacher-led instruction of activities. Following this moment, teachers needed to think about how they could support their pupils during the activity. In particular, offering feedback and individual interactions were examples of such support exemplified in the critical moments during the activity.

Different intentions of offering feedback and individual interactions

There was evidence of teachers' intentions of strategies for offering feedback and interacting individually. Lisa (School 1) was teaching a basketball lesson for S1 girls. It was a class of 27 pupils. Lisa gave instructions for a lay-up shot as a focus in the lesson. Afterwards, she asked her pupils to practise it. There were ten basketball goals in the gym so that two or three pupils used one basketball goal to practise. She offered positive corrective feedback on a lay-up shot to the girls individually in the lesson. In the self-confrontation interview, she reflected:

> I try to give a target to everybody in the lesson. I try to give feedback to every child in the lesson (…) What I am doing though, in terms of feedback and telling them what they are doing instead of what they should be doing, which I would correct. So I'm saying you're doing this but you should be doing this. And I should just leave out that you're doing this and actually just say, "You need to do this now." This is what you should do. (Lisa, self-confrontation interview on the first lesson)

This comment shows Lisa tried to know how every pupil engaged in the task individually. Furthermore, Lisa elaborated how important individual feedback is to build pupils' confidence. She remarked that 'I want to build pupils' confidence at all times to enable them to access all of their parts of learning'. Subsequently, she reflected again the incident above as an example of her teaching to produce a positive mindset and confidence.

> I tried to get around to every pupil once to give them a bit of feedback to allow them to progress and again it's difficult to get around in time. Trying to pay attention to them as individuals. You're finding it hard just now, instead saying more positive feedback, would be better to start, "This is what you're doing well, but let's see if you can add this in." I like to think that the way I approach the pupils is in a positive manner that keeps them engaged and happy to want to be there. (Lisa, self-confrontation interview on the first lesson)

Lisa's intentions of offering individual feedback were to more fully engage her pupils and to feel 'happy to want to be' in the lesson.

Another teacher Kenny (School 2) seemed had a different intention of offering individual feedback from Lisa's. The interviewer observed that two pupils named Sara and

Nick (anonymous) seemed to be unwilling to take part in a game. In the video clip for the self-confrontation interview with Kenny, they played an indoor ball game like handball. Sara and Nick were in the same team. Sara was just standing beside the goal during a game. Nick was just moving randomly in the court and would not touch the ball. Only two boys in this team passed the ball to each other and were involved in the play. Kenny tried to encourage Sara and Nick to get involved in the game, but their behaviour did not change. Kenny explained in the self-confrontation interview:

> They just need a bit more time and reassurance than the rest of the kids. So, I am just trying to show him where the space is, so it becomes really clear that they need to move forward or stand here or get in a good space. Otherwise, they're just gonna stand and not become as involved as they could have been. (Kenny, self-confrontation interview on the first lesson)

According to Kenny, the teaching points were 'developing their skills as in passing, movement, working in teams' in this lesson (Kenny, self-confrontation interview on the first lesson). However, the game might be too difficult for some of the pupils so that they did not understand how they get involved in the play. In fact, at the beginning of the lesson, Sara told Kenny that she did not know the rules. Kenny explained the rules to her individually, but she was still unwilling to participate in the play. Kenny mentioned his strategy to involve pupils who are not engaged: 'giving them as much praise as possible and showing their impact in the game, at least I suppose they feel part of the team' (Kenny, self-confrontation interview on the first lesson). Although his strategy could be appropriate to motivate most pupils, his involvements did not seem to be autonomy-supportive because there was no evidence of pupils' choices and preferences. The teacher's behaviour might have been guided more

explicitly by these pupils' needs, interests, and challenges. If pupil autonomy is a goal, then it might be necessary, for example, to modify the complexity of the game to promote learning for some of the pupils. Otherwise, the teacher might need to prepare other activities to fit with the pupils, rather than encouraging them to participate in the game. While this encouragement might appear to be focused on the individual, it may not be effective in terms of pupil learning in the affective domain.

The main finding of this theme was that the teachers acknowledged the pedagogical significance of individual interactions and offering substantive feedback for the desired learning. There were different intentions of this teaching behaviour. On the one hand, one teacher intended to interact individually with pupils because they needed to get to know pupils and build a positive relationship that consequently led to promote pupils' confidence, motivation, a positive mindset, and wellbeing. On the other hand, another teacher tried to encourage pupils by offering individual feedback to keep running a lesson without any changes. The following theme is another situated context of individual interactions for a specific target group of pupils.

The need for supporting pupils with behavioural issues

Some teachers recognised that they needed to attend explicitly to some pupils who have additional support needs, such as ADHD and Asperger's syndrome. For example, there was a scene where Simon (School 4) was involved in working individually with a boy named Paul (anonymous). At the beginning of the lesson, Simon gave instructions that they will work on a combination rally in Badminton. Then he asked the pupils to work on the tasks with peers, but Paul did not have a partner. Simon said to Paul that they could work together. They had a conversation about the task at the side of a court to clarify what they are going to do. This

scene also involved providing positive corrective feedback. Commenting on this video clip in the self-confrontation interview, Simon remarked:

> Paul has a variety of learning needs. And the dynamic it is also particularly strange, which means that on occasion Paul can find himself a little bit isolated from the rest of the group. (…) He struggles to interpret the complexity of a lot of these tasks and break it down and remain focused. So, I saw that as an opportunity to go in there, but he was a little bit left on his own, and actually really support him in understanding what the task was, by working with him, to at least get an understanding of what it was he was trying to do. (Simon, self-confrontation interview on the first lesson)

The interviewer learned that Paul had ADHD. Simon's thought in this situation was to prevent Paul from feeling lonely and help him understand what the task was. During the interview, Simon commented that 'knowing what the learners are coming through the door with is really important. Knowing who does have issues in terms of their behavioural issues or additional support needs' (Simon, self-confrontation interview on the first lesson). He understood that individuals face different difficulties and challenges and then teachers' responsibility is trying to respond to these pupils' needs. He also mentioned the importance of preparing some strategies that might help to get know pupils on an informal basis.

In the case of Steven's (School 1) class in a badminton lesson, there was a scene from the self-confrontation interview video clip where Steven interacted with a boy named Jack (anonymous) who, as Steven explained to the interviewer, has additional support needs. Steven had 13 years of teaching experience. The scene was the first half of the lesson. There were four groups, and the pupils played a league game within a group. When Steven walked

around the gym and checked what was going on, he approached Jack and listened to what he was saying as he hotly disputed a point.

Jack: If I hit it, and on her court, it lands, like, here ...

Steven: Was it service, was it the first shot?

Jack: It touched her.

Steven: Okay, let me explain. When you serve, it must go behind the white line and land in the box. If nobody's touched it, if your opponent doesn't touch it and it lands straight on the ground, then ...

Jack: She did touch it, so ...

Steven: Let me explain, right? If she hasn't touched it and it lands short of the line, then it's a point. If she swings her racket to try and hit it, and makes contact with the shuttle, then it would be your shot, unless it came over the net, then we play on. (Steven, first lesson)

Jack seemed to wonder if he won a point or not. Steven tried to stop Jack talking by saying 'let me explain' and told him about the rules of the game. Steven commented in the self-confrontation interview:

Jack has got additional support needs, he's got Asperger's. So of course, if he asks a question, in that case he'll keep talking and he keeps talking so I say, "Jack, you need to stop so I can tell you what you want to hear." That's what the background to that is there. That's why it's such a detailed description. (Steven, self-confrontation interview on the first lesson)

Steven's action was based on his awareness that Jack had additional support needs. Even though the teacher intended to offer detailed information on what the pupil wanted to hear, this behaviour might be recognised as controlling teaching because the teacher seemed to interrupt what the pupil wanted to say.

The teachers had expectations of this pupils' behaviour and had thoughts to cope with these behavioural issues, for example, by working together and giving explicit instruction individually. The teachers remarked that it is essential to prepare several strategies to support additional support needs pupils since individuals have different challenges. However, the teachers' notions may raise the issue of labelling pupils with ADHD or Asperger's syndrome without fully understanding its complexity, which would be far from supporting pupils with additional support needs for affective learning.

Discussion

This paper sought to understand physical education teachers' awareness behind their observed teaching behaviour using self-confrontation interviews. The video clips for self-confrontation interviews were selected when teachers were offering meaningful choices of activities, offering feedback including either aspect of need-support or control, and interacting with pupils individually who had special needs. The first theme indicated teachers' knowledge in terms of being able to explain why offering meaningful choices works effectively. The second theme demonstrated that teachers' different intentions of strategies for offering feedback and individual interactions. In the meanwhile, there are critical discussions on the aspects of controlling teaching. The third theme highlighted teachers' expectations of pupils' behaviour in order to implement need-supportive teaching, especially for pupils with additional support needs. Overall, the results showed that teachers' awareness of their pupils' contextual factors

471 such as their feelings, needs, and interests is fundamental requirements for implementing
472 need-supportive teaching behaviour for affective learning outcomes.
473 The first theme was how aware were the teachers about offering choices. In this study,
474 Amelia and Simon were able to explain why offering choices works effectively and were
475 aware clearly that it was a teaching strategy to motivate their pupils and take ownership of
476 their learning. Previous research showed that offering choices of activities was a teaching
477 strategy for increasing motivation and affective learning in a girls-only class (Lamb, Oliver,
478 and Kirk 2018) and a co-educational class (Guadalupe and Curtner-Smith 2019). Importantly,
479 the data supporting this theme emerged from the micro-level contexts within a lesson. For
480 instance, teachers offered pupils opportunities to create or choose a task according to their
481 own perceptions of level of difficulty. Another significant finding was that teachers'
482 willingness to learn from pupils was essential to offering choices. Teachers' willingness to
483 respond to pupils' feelings and needs are consistent with the Building the Foundation of
484 student-centred inquiry within activist approaches to physical education (Oliver and
485 Oesterreich 2013), which Kirk (2020) has argued is an example of a pedagogy of affect. In
486 another context where a pupil came late to the lesson, the teacher prioritised the pupil's
487 engagement, motivation, and ownership by providing choices of tasks. The teacher did not
488 ask for any explanations of why the pupil was late because he knew that it was usual, and the
489 pupil was usually disengaged in school. The teacher asked the pupil immediately what tasks
490 he wanted to work on. This teacher's action could have a significant influence on positive
491 affective learning. This result implies that if teachers focus on Personal Qualities in the
492 Scottish context, then they may need to act patiently to achieve the goal, which can be a basis
493 for pedagogies of affect.
494 The second theme articulated that teachers' intentions of strategies for offering
495 feedback and individual interactions that support affective learning. Behind the behaviour of

offering individual feedback, there were teachers' intentions of securing their pupils' confidence in them, motivation, positive mindset, and wellbeing. In contrast, a teacher offered individual feedback with the intention of encouraging a disengaged pupil to participate in a game. Still, this teacher struggled to find out the reason why the pupil was not willing to take part in the game, nor did our findings confirm the reason. However, this teacher might need to respond flexibly to pupils' needs and problems and reflect whether teaching contents are needed to change through individual interactions, instead of prioritising teachers' own agenda to keep running a lesson which could represent the act of controlling teaching. This suggestion offered based on prior research proposing that a need-supportive teacher is willing to listen to pupils' expressions of negative affect and try to figure out why pupils express negative feelings (Aelterman et al. 2019; Reeve 2009). Also, this may be an avenue for future research on why and how feedback does or does not impact students' affective learning. Our findings could suggest that it matters what teachers prioritise in their lessons. The extent to which teachers prioritise pupils' feelings and needs might impact the effectiveness of feedback in promoting pupils' positive affective learning.

With regard to the third theme, the term 'additional support needs' is defined legally by the Scottish Government (2017). The category of additional support needs includes pupils with learning difficulties, disabilities, and disadvantaged social circumstances (Riddell and Weedon 2016). There was a significant increase in the total number of secondary school pupils in Scotland with additional support needs from around 10,000 in 2005 to approximately 55,000 in 2013 (Riddell and Weedon 2016). The teachers in the study clearly recognised some pupils who need additional support for learning and who exhibit behavioural issues. Bruggink et al. (2014) identified teachers' perceptions of additional learning support in terms of the need for instructional support, on-task behavioural support, emotional support, and peer support. In the findings of this study, the teachers had perceptions of the need for

521 instructional support and on-task behavioural support. In other words, the teachers knew
522 about their pupils' expected behaviour in the class. Some teachers seem to be reasonably
523 well-equipped to support pupils with learning and behavioural issues. Nevertheless, it is worth
524 noting that, in the field of special education, there was the issue of labelling children with
525 ADHD because it could simplify categories of disability and difficulties rather than
526 understand its complexity (McMahon 2012). Since the labelling perspective was prevalent
527 among the teachers, it should be a significant challenge to consider how teachers inform their
528 pedagogies of affect for pupils with additional support needs. A critical interpretation of the
529 data was that controlling teaching with teachers' directness was likely to occur when teachers
530 were interacting with additional support needs pupils. According to SDT, controlling teachers
531 may adopt their own perspective and let their pupils behave in a specific way (Reeve 2009).
532 Nevertheless, the finding in this theme revealed that the teachers intended to support
533 additional support needs pupils to promote their understanding of the tasks that had been set
534 by the teacher and create a safe learning environment, which could be a basic element of
535 pedagogies of affect. Therefore, there seems to be a dilemma about the extent to which
536 teachers minimise controlling teaching because teachers arguably need to direct pupils'
537 behaviour to some extent in order to produce affective learning that is targeted at pupils with
538 additional support needs.
539 The overall findings across the data may have some practical implications for
540 pedagogies of affect in physical education. In terms of teachers' antecedents, how well
541 teachers are aware of their individual pupils' feelings, needs, and interests may influence their
542 provision of meaningful choices, effective feedback, and supportive individual interactions. In
543 this sense, if teachers know well the contextual factors about the pupils at the individual level,
544 then teaching effectiveness could be increased for affective learning. Also, the findings
545 suggested that teachers' willingness to change the lesson contents according to the situation is

important to behave in a need-supportive way. In contrast, if pupils' affective learning is a goal, teachers should not prioritise their own agenda to run a lesson as planned, nor simplify pupils' behavioural issues.

There are some limitations that need to be considered. First, some of the teachers may struggle to recall what they were thinking on a particular occasion where happened a few weeks ago. Ideally, we should have organised self-confrontation interviews within a week after the observations. Even though we made our best effort to conduct self-confrontation interviews with the teachers as soon as possible after the observations, it was not easy to arrange an ideal timeline because of their busy schedules. Second, it might be better to ask pupils to reflect on the observed lessons using a self-confrontation interview. Data could be interesting because pupils' voice could embed their perceptions on teaching accurately. Third, teachers' critical reflection is a challenging issue for teacher professional learning (Tsangaridou 2005). Conducting self-confrontation interviews with peers and colleagues would be another way to gain additional awareness of observed teaching behaviour since receiving feedback from peers and colleagues at school could facilitate a teachers' reflection (Eather et al., 2019).

Conclusion

The study identified physical education teachers' awareness of observed teaching behaviour as it happened in class. The findings showed that observed teaching behaviour was ascribed to teachers' knowledge, intentions, and expectations. First, need-supportive teachers are able to explain why offering choices works effectively. Teachers' knowledge of autonomy-supportive teaching effectiveness could have a significant influence on positive affective learning. Second, behind offering feedback and individual interactions, there were teachers' intentions of securing their pupils' confidence, motivation, positive mindset, and wellbeing as

prioritised outcomes. In contract, teachers' offering feedback to keep running a lesson might not be effective for pupils' affective learning. Third, teachers' expectations of pupils' behaviour were highlighted as important for need-supportive teaching, especially for pupils with additional support needs. At the same time, we remain alert to the possibility that some of the teachers' interactions with pupils who have additional support needs could be construed in SDT terms as control teaching, since they sometimes did not provide these pupils with opportunities to explain their concerns and feelings. Finally, we conclude that how well teachers are willing to learn from their pupils and how well teachers know the contextual factors about pupils such as their feelings, needs, and interests could be a fundamental requirement for implementing pedagogies of affect as naturally occurring in physical education that could support pupils' mental health and wellbeing.

References

Aelterman, N., Vansteenkiste, M., Haerens, L., Soenens, B., Fontaine, J. R., and Reeve, J. 2019. "Toward an integrative and fine-grained insight in motivating and demotivating teaching styles: The merits of a circumplex approach." *Journal of Educational Psychology* 111 (3): 497–521.

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.

Amade-Escot, C. 2005. "Using the critical didactic incidents method to analyze the content taught." *Journal of Teaching in Physical Education* 24 (2): 127–148.

Behzadnia, B., Adachi, P. J., Deci, E. L., and Mohammadzadeh, H. 2018. "Associations

between students' perceptions of physical education teachers' interpersonal styles and students' wellness, knowledge, performance, and intentions to persist at physical activity: A self-determination theory approach." *Psychology of Sport and Exercise* 39: 10–19.

Braun, V., & Clarke, V. 2006. "Using thematic analysis in psychology." *Qualitative research in psychology*, 3(2): 77-101.

Bruggink, M., Meijer, W., Goei, S. L., and Koot, H. M. 2014. "Teachers' perceptions of additional support needs of students in mainstream primary education." *Learning and Individual Differences* 30: 163–169.

Cale, L. (2021). "Physical education's journey on the road to health." *Sport, Education and Society* 26(5): 486-499.

Carson, R. L., and Chase, M. A. 2009. "An examination of physical education teacher motivation from a self-determination theoretical framework." *Physical Education and Sport Pedagogy* 14(4): 335-353.

Cecchini, J. A., Fernandez-Rio, J., Mendez-Gimenez, A., and Sanchez-Martinez, B. 2020. "Connections among physical activity, motivation, and depressive symptoms in adolescent girls." *European Physical Education Review* 26(3): 682-694.

Escriva-Boulley, G., Haerens, L., Tessier, D., and Sarrazin, P. 2021. "Antecedents of primary school teachers' need-supportive and need-thwarting styles in physical education." *European Physical Education Review*, Epub ahead of print 19 April 2021. DOI: 10.1177/1356336X211004627

De Meester, A., Van Duyse, F., Aelterman, N., De Muynck, G. J., and 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.

620 De Meyer, J., Tallir, I. B., Soenens, B., Vansteenkiste, M., Aelterman, N., Van den Berghe,
621 L., Speleers, L., and Haerens, L. 2014. "Does observed controlling teaching behavior
622 relate to students' motivation in physical education?." *Journal of Educational*
623 *Psychology* 106 (2): 541–554.
624 Eather, N., Riley, N., Miller, D., and Imig, S. 2019. "Evaluating the Impact of Two Dialogical
625 Feedback Methods for Improving Pre-Service Teacher's Perceived Confidence and
626 Competence to Teach Physical Education within Authentic Learning
627 Environments." *Journal of Education and Training Studies*, 7(8): 32-46.
628 Education Scotland. 2017. Benchmarks Physical Education. March 2017. Retrieved from :
629 https://education.gov.scot/improvement/Documents/HWBPhysicalEducationBenchma
630 rksPDF.pdf
631 Etikan, I., Musa, S. A., & Alkassim, R. S. 2016. Comparison of convenience sampling and
632 purposive sampling. *American journal of theoretical and applied statistics* 5(1), 1-4.
633 Guadalupe, T., and Curtner-Smith, M. D. 2020. "'It's nice to have choices:' influence of
634 purposefully negotiating the curriculum on the students in one mixed-gender middle
635 school class and their teacher." *Sport, Education and Society* 25 (8): 904–916.
636 Haerens, L., Aelterman, N., Van den Berghe, L., De Meyer, J., Soenens, B., and
637 Vansteenkiste, M. 2013. "Observing physical education teachers' need-supportive
638 interactions in classroom settings." *Journal of Sport and Exercise Psychology* 35: 3–
639 17.
640 Haerens, L., Aelterman, N., Vansteenkiste, M., Soenens, B., and Van Petegem, S. 2015. "Do
641 perceived autonomy-supportive and controlling teaching relate to physical education
642 students' motivational experiences through unique pathways? Distinguishing between
643 the bright and dark side of motivation." *Psychology of Sport and Exercise* 16: 26–36.
644 Hastie, P. A., Rudisill, M. E., and Wadsworth, D. D. 2013. "Providing students with voice

645 and choice: lessons from intervention research on autonomy-supportive climates in
646 physical education." *Sport, Education and Society* 18 (1): 38–56.
647 Kirk, D. (2020). *Precarity, Critical Pedagogy and Physical Education.* London: Routledge.
648 Lamb, C. A., Oliver, K. L., and Kirk, D. 2018. "'Go for it Girl'adolescent girls' responses to
649 the implementation of an activist approach in a core physical education
650 programme." *Sport, Education and Society* 23 (8): 799–811.
651 McMahon, S. E. 2012. "Doctors diagnose, teachers label: The unexpected in pre-service
652 teachers' talk about labelling children with ADHD." *International Journal of Inclusive*
653 *Education* 16 (3): 249–264.
654 Mitchell, F., Gray, S., and Inchley, J. 2015. "'This choice thing really works…' Changes in
655 experiences and engagement of adolescent girls in physical education classes, during a
656 school-based physical activity programme." *Physical Education and Sport Pedagogy*
657 20 (6): 593–611.
658 Oliver, K. L., and Oesterreich, H. A. 2013. "Student-centred inquiry as curriculum as a model
659 for field-based teacher education." *Journal of Curriculum Studies* 45 (3): 394–417.
660 Quennerstedt, M., Annerstedt, C., Barker, D., Karlefors, I., Larsson, H., Redelius, K., and
661 Öhman, M. 2014. "What did they learn in school today? A method for exploring
662 aspects of learning in physical education." *European Physical Education Review* 20
663 (2): 282–302.
664 Reeve, J. 2009. "Why teachers adopt a controlling motivating style toward students and how
665 they can become more autonomy supportive." *Educational Psychologist* 44 (3): 159–
666 175.
667 Reeve, J., Jang, H. R., and Jang, H. 2018. "Personality-based antecedents of teachers'
668 autonomy-supportive and controlling motivating styles." *Learning and Individual*
669 *Differences 62*: 12-22.

670 Riddell, S., and Weedon, E. 2016. "Additional support needs policy in Scotland: challenging
671 or reinforcing social inequality?." *Discourse: Studies in the Cultural Politics of*
672 *Education* 37 (4): 496–512.
673 Ryan, R. M., and Deci, E. L. 2017. *Self-determination theory: basic psychological needs in*
674 *motivation, development, and wellness*. Guildford Press.
675 Ryan, R. M., and Deci, E. L. 2020. Intrinsic and extrinsic motivation from a self-
676 determination theory perspective: Definitions, theory, practices, and future
677 directions. *Contemporary Educational Psychology 61*, 101860.
678 Scottish Government. 2009. Curriculum for excellence: Building the curriculum 4: skills for
679 learning, skills for life and skills for work. Retrieved from:
680 https://www2.gov.scot/resource/doc/288517/0088239.pdf
681 Scottish Government. 2017. Supporting Children's Learning: Statutory Guidance on the
682 Education (Additional Support for Learning) Scotland Act 2004 (as amended). Code
683 of Practice (Third Edition).
684 Stroet, K., Opdenakker, M. C., and Minnaert, A. 2013. "Effects of need supportive teaching
685 on early adolescents' motivation and engagement: A review of the
686 literature." *Educational Research Review* 9: 65–87.
687 Taylor, I. M., Ntoumanis, N., and Standage, M. 2008. "A self-determination theory approach
688 to understanding the antecedents of teachers' motivational strategies in physical
689 education." *Journal of sport and exercise psychology* 30 (1): 75-94.
690 Tsangaridou, N. 2005. "Classroom teachers' reflections on teaching physical
691 education." *Journal of Teaching in Physical Education* 24 (1): 24–50.
692 Van den Berghe, L., Cardon, G., Tallir, I., Kirk, D., and Haerens, L. 2016. "Dynamics of

need-supportive and need-thwarting teaching behavior: The bidirectional relationship with student engagement and disengagement in the beginning of a lesson." *Physical Education and Sport Pedagogy* 21 (6): 653–670.

Van den Berghe, L., Soenens, B., Vansteenkiste, M., Aelterman, N., Cardon, G., Tallir, I. B., and Haerens, L. 2013. "Observed need-supportive and need-thwarting teaching behavior in physical education: Do teachers' motivational orientations matter?." *Psychology of Sport and Exercise* 14 (5): 650–661.

Van den Berghe, L., Vansteenkiste, M., Cardon, G., Kirk, D., and Haerens, L. 2014. "Research on self-determination in physical education: Key findings and proposals for future research." *Physical Education and Sport Pedagogy* 19 (1): 97–121.

Table 1 List of participants

Name	Sex	Teaching experience	Role	Pupils' grade	School
Lisa	Female	11	PT	S1	School 1
Steven	Male	13	-	S3	School 1
Kenny	Male	5	-	S1	School 2
Amelia	Female	1	-	S2	School 3
Simon	Male	13	PT	S3	School 4

PT: Principal Teacher