“I’m a Facilitator of Learning!” Understanding What Teachers and Students Do Within Student-Centered Physical Education Models

Goodyear, Victoria; Dudley, Dean

DOI:
10.1080/00336297.2015.1051236

Document Version
Peer reviewed version

Citation for published version (Harvard):
Goodyear, V & Dudley, D 2015, '“I’m a Facilitator of Learning!” Understanding What Teachers and Students Do Within Student-Centered Physical Education Models', *Quest*, vol. 67, no. 3, pp. 274-289. https://doi.org/10.1080/00336297.2015.1051236

“I’m a facilitator of learning!” Understanding what teachers do and what students do within student-centered physical education

Victoria, A. Goodyear and Dean, A. Dudley,

Abstract

The role of the facilitator has become almost synonymously associated with student-centered approaches. However, how the teacher functions as a facilitator is less well defined. This paper begins to define teacher action in student-centered learning environments. Through an exploration of teacher behavior, teacher-student interactions and, discussions around teacher-as-activators, the paper argues that the teacher must play an active role in the classroom and should be considered much more than the 'guide on the side'. Teachers should use a range of direct and indirect behaviors and dialogical exchanges to support and extend learning. These actions and interactions should be contextually relevant and conducive with the learning aims of the student-centered approach. In suggesting that facilitation provides a narrow perspective on teacher action, the paper calls for further consideration around teacher-as-activators to consider the teacher as someone who activates new learning possibilities.

Keywords: Models-based practice, activation, teacher action, teacher behavior

Introduction

In the past twenty years or more, education has moved in a direction that considers student-centered learning to be most effective (Hattie, 2012, 2009; Le Ha, 2014). A narrative of student-centeredness now has penetrated through educational policies, national curricula, and teacher education where such approaches to learning have been positioned as a 'recipe for development, success, and productive learning' (Le Ha, 2014, p. 1). In physical education and sport pedagogy student-centered models (Jewett, Bain, & Ennis, 1995; Haerens, Kirk, Cardon, & De Bourdeaudhuji, 2011; Kirk, 2013; Metzler, 2011), student-centered forms of inquiry (Enright & O'Sullivan, 2010; Oliver, 2001; Oliver & Kirk, 2014), critical pedagogies (Azzarito, 2010; Macdonald, 2002), and peer-assisted learning approaches (Barker, Quennerstedt, & Annerstedt, 2013; Ward & Lee, 2005) have all been advocated as effective ways of promoting a broad range of educative and health outcomes (O'Sullivan, 2013). Fundamentally, much has been written about the need for teachers to move from direct instruction and adopt, develop, and transform their curriculum programs through student-centered approaches (Dyson, 2014; O'Sullivan, 2013).

While interpretations of student-centeredness vary across disciplines, contexts, settings, and through different conceptions of 'good pedagogy', student-centeredness does not mean that students are simply left alone by teachers. Furthermore, it does not mean simply collaborative or cooperative learning, it does not mean individualized instruction, or that the student's interests, beliefs, and future plans dictate all (as they may need to be changed) (Hattie, 2012; Jones, 2007; Le Ha, 2014). Certainly, these are some of the misinterpretations of student-centered approaches that have

permeated through policies, national curricula, and teacher education programs (Hattie, 2012; Le Ha, 2014). Instead, student-centered approaches entail developing students ability to become their own teachers, and supporting them to know how to evaluate knowledge claims, how to learn, how to collaborate, how to seek help, how to become assessment capable, how to be resilient (particularly in the face of cognitive challenges), and aiding students to know what to do when they do not know what to do (Hattie, 2012; Jones, 2007).

Regardless of the conception of student-centeredness, the notion of 'teacher-as-facilitator' has become almost synonymously associated with student-centered learning (Dyson et al., 2004; Kirk & Kinchin, 2002; Le Ha, 2014). As Morrison (2014, p. 1) suggested, the argument that the teacher should function as a facilitator of learning and move from being the sage on the stage to the guide on the side 'is now a well-worn cliché' of student-centered learning environments. Yet while pedagogical approaches, strategies, methods, or models have provided teachers with 'design specifications' for creating student-centered learning environments (Kirk, 2013, p. 979), how the teacher functions as a facilitator in practice is less well defined (Bähr & Wilbowo, 2012; Wilbowo, Bähr & Groben, 2014). With most research focusing on student learning outcomes or the implementation of specific features of student-centered approaches, little attention has been paid to teacher behavior and teacher discourse in student-centered learning environments (Bähr & Wilbowo, 2012; Casey, 2014; Cohen & Zach, 2012; Griffin, Brooker, & Patton, 2005; Rossi, Fry, McNeill, & Tan, 2007; Wilbowo et al., 2014). Most discussions about the teacher's role have merely suggested that teachers find it difficult to be less directive and more facilitative and that teachers often revert to more didactic teaching methods (Bähr & Wilbowo, 2012; Casey, 2014; Casey & Dyson, 2009; Cohen & Zach, 2012; Dyson,

2002). As a consequence, many questions have remained unanswered about the teacher-as-facilitator. For example, what does acting in more facilitative ways mean? How does the teacher interact with students in paired or group work activity? What does the teacher do to support learning during lessons? What effect does the teacher-as-facilitator have on learning?

If we as an educational community are to legitimately encourage teachers to adopt and develop student-centered approaches that include less direction and interference from teachers, then we need to be far more understanding of the role of the teacher in student-centered learning environments. Especially given that earlier empirical work on minimal teacher guidance models in general education subjects suggests that minimal guidance models are not particularly effective on student achievement outcomes when they are based on constructivist, discovery and inquiry-based teaching methods (Kirschner, Sweller & Cark, 2006). These notions are particularly salient in a physical education teaching context. Without a critical exploration of teacher action in a student-centered approach, there is a danger that the teacher could remove themselves from the teaching and learning process and simply view themselves as a 'guide on the side' to a pitch or court. Alternatively, and as we have seen over a number of decades, teachers may be reluctant to use student-centered approaches due to a limited understanding of how to interact with learners when their role is described as merely a facilitator (Casey, 2014; Gillies, 2008; Gillies & Boyle, 2010).

It is the intent of this paper to begin to define the physical education teacher's role and prompt further debate and discussion about physical education teacher action in student-centered learning environments. Similar to Hastie and Casey's (2014) discussions about the need for research papers to report on how a pedagogical

approach was used, if we are to be confident that a student-centered environment has been created then there is a need to define teacher action when student-centered learning is reported on. Beyond the implementation of the 'design specification' (Kirk, 2013, p. 979), we need to know how the teacher supports learning through their behavior and dialogic exchanges with students. It is only then that we can determine that a teaching and learning process is occurring and the teacher has not just created a task and left the students to work together to learn, a common misinterpretation of student-centered learning (Hattie, 2012; Le Ha, 2014).

In the next section we discuss teacher behavior. We draw on Muska Mosston's (1966) discussions about teaching styles and critically examine how the teacher-as-facilitator has been defined and perpetuated in physical education and sport pedagogy. Following this, teacher interaction with learners in the role of the facilitator is discussed before an alternative perspective of teacher action is offered through the recent works of Hattie (2012, 2009). While the teacher-as-facilitator has been strongly associated with student centered environments, Hattie has argued that the teacher has a greater effect on student learning when they are an *activator*; that is, when their teaching leads to a very active, direct involvement, and there is a high sense of agency in the teaching and learning process. In concluding this paper we present the implications for physical education surrounding teacher behavior and discourse in student-centered learning environments.

Teacher Behavior and the role of the facilitator

Mosston's text *Teaching in Physical Education* (1966) provided one of the most significant influences in understanding teaching behavior in physical education (Byra, 2006; Metzler, 2011, 1983; Sicilla-Camacho & Brown, 2008). Mosston (1966) proposed that teacher behavior was a result of previously made decisions by the

teacher about the design and sequence of learning activities. In this way, teacher behavior was considered to align with different types of learning outcomes and learning environments. However, Mosston (1966) considered that the ultimate goal for teachers was to promote students having maximum control over their learning. In other words, Mosston (1966) claimed that teachers had the greatest influence on students' learning when they were indirect in their behavior and when a learning environment was orchestrated that afforded students the opportunities to make decisions about their learning.

To aid teachers in moving from direct to indirect teaching, Mosston (1966) presented a hierarchical spectrum of eight teaching styles. The mobility across the spectrum was characterized by a shift in decision making from teacher to learner. For example, when students had minimal control over their learning the teacher would teach by command, making all the decisions about learning in the classroom. At the other end of the spectrum was problem solving. In this problem solving style the teacher would not provide specific guidance and students would be encouraged to think independent of teacher instruction. Specifically, in the problem solving style it was considered that:

> If we say that problem solving behavior is a way of learning by seeking a solution or solutions to a recognized problem then the teaching behavior (Teaching style) which is designed to promote that kind of learning <u>CAN NOT</u> be involved in the solution. In a "pure and perfect" form of a problem-solving situation the teacher <u>NEVER</u> offers a solution. The minute you do so, you have stopped the process of solving which was initiated by the student. The very minute your behavior intervenes with the problem solving behavior of the student another style of teaching and another style of learning emerges.

(Mosston, 1968, p. 4, original emphasis)

While Mosston's (1966) hierarchical argument and the spectrum of teaching styles has been revised in subsequent editions of *Teaching in Physical Education* (Mosston, 1981; Mosston & Ashworth, 1986, 1994, 2002, 2008), his work acted to clarify the dimensions of teaching behavior in relation to direct versus indirect or teacher-centered versus student-centered (Byra, 2006; Metzler, 2011, 1983). Certainly Mosston (1966) emphasized that when students were afforded the opportunity to make decisions about their learning, the teacher would not provide guidance or feedback on subject matter. The main role of the teacher was to select the subject matter and provide the general conditions for learning.

Despite numerous criticisms of teaching styles and questions raised about teaching styles as a valid and reliable means of approaching student learning (Coffield, Moseley, Ecclestone, & Hall, 2004; Holt, Denney, Capps & de Vore, 2005; Metzler, 1983), 'the spectrum has generated a common jargon for us to use when talking about teaching' (Metzler, 1983, p.1 46). Although Mosston (1981, p. viii) later considered that 'no style, by itself, is better or best' and that a range of teaching behaviors should be used to promote learning (Mosston, 1981; Mosston & Ashworth, 1986, 1994, 2002, 2008), the oppositional argument of indirect teaching behavior is somewhat dominant in the descriptions of facilitation. Whilst there may not be direct alignment between teacher behavior in the problem solving style and facilitation, in the descriptions of facilitation indirect teaching is associated with the creation of contexts for students to engage with problem solving. Case in point, Dyson et al. (2004, p. 238) review of the theoretical and pedagogical considerations for Sport Education, Tactical Games, and Cooperative Learning suggest that in a student-

centered learning environment 'the teacher shifts from director (i.e., transmitter) to the facilitator of learning activities'. As the facilitator it was considered that the teacher should help students find solutions to problems but there was nothing to suggest that the teacher should be deliberate in their actions to help students to, for example, learn how to engage in problem solving. Specifically, it was considered that:

> The teacher sets problems or goals, and students are given an opportunity to seek solutions to these problems. Solutions to the problem are identified through a questioning process and these solutions then become the focus of a situated practice. The teacher also facilitates the practice by either simplifying or challenging based on student abilities. In this way, the teacher is working with the students' prior knowledge to develop new knowledge. The teacher guides the instruction and curriculum as a facilitator of learning. (Dyson et al., 2004, p. 235).

The work of Metzler (2011, 2005, 2000) also highlights a strong alignment between facilitation and Mosston's (1966) discussions around indirect teaching behavior. Similar to the spectrum of teaching styles, in the discussions around control profiles for instructional models, Metzler (2011) presented a continuum to determine (a) the types of interactions between teachers and students and, (b) the nature of decision making and teacher/student control during lessons. The control continuum moved from teacher control (sage on the stage), through to interactive (a balance between teacher control and student control), and toward student control (guide on the side). Within the student control profile the teacher's actions were located as being that of a facilitator. Drawing on King (1992), Metzler (2011, p. 32) argued that the teacher would function as a facilitator through being a 'guide on the side'.

> The major functions involve arranging the kind of learning environment that gives students some direction and a task to accomplish, then standing aside to monitor while students go about their task' – thus the "guide on the side" label. (Metzler, 2011, p. 32).

As the 'guide on the side', Metzler (2011, p. 32) explicitly suggested that the teacher should only offer advice and guidance when students "get stuck" or need other assistance. This type of assistance was termed a teaching moment (Metzler, 2011, 2005, 2000). In other words, a moment within a lesson when students reach a barrier in their learning and it is necessary for the teacher to 'teach' something by intervening and providing specific guidance.

Metzler (2011, p. 33) positioned that control, and therefore when the teacher acted as a facilitator, was determined by seven key operations within each model:

(1) Content selection: who determines what is taught in the unit?
(2) Managerial control: who is mostly responsible for classroom management?
(3) Task presentation: how do students receive task information?
(4) Engagement patterns: how are student engagement patterns (involving space, groups, structure) determined?
(5) Instructional interactions: who initiates the communication during learning tasks?
(6) Pacing: who controls the starting and stopping of practice?
(7) Task Progression: who decides when to change the learning tasks?

Of the eight models presented, seven of these models (excluding direct instruction) showed that there was a balance between the seven key operations as to what and when the teacher or students controlled aspects of the lesson, with some

operations identified as being within the interactive control profile. For example, in the Peer Teaching model content selection, managerial control, and task progression were placed under the teacher control profile, whereas engagement patterns and pacing were placed under the student control profile. For task presentation and interactional interactions, the time point of the lesson and the tasks students were engaging with determined the control profile of either interactive or teacher control. In this sense, although there is still a relatively oppositional argument between direct and indirect teaching behavior, the Peer Teaching model is an example of how Metzler positioned the teacher as someone who does not always sustain their role as the "guide on the side".

The interactive control profile further identifies the changeable and active role the teacher plays in a student-centered classroom. Specifically, and when defining interactive teaching, Metzler (2011, p.32) considered that:

> The teacher and students have approximately equal responsibility for decisions and share many of the class operations. Interactive teaching also involves frequent two-way communication between the teacher and students. Students are encouraged to ask questions, offer suggestions, and have regular input on the functioning of the lessons. The teacher will ask for, and act upon, students' suggestions and ideas in class (Metzler, 2011, p. 32)

For six of the models presented by Metzler (2011)- Personalized System for Instruction, Cooperative Learning, Peer Teaching, Inquiry Teaching, Tactical Games, and Teaching Personal and Social Responsibility – interactive teaching was identified within the key operation of 'instructional interactions' i.e. who initiates the communication during learning tasks?. In returning to the example of Peer Teaching, Metzler (2011, p. 309) suggested that, 'the teacher's communications with the tutors

should be highly interactive, using questions more often than direct statements to develop the tutors' observation, analysis and communication skills'. Therefore, within these six models Metzler (2011) made attempts to suggest that the teacher plays an active role in the teaching and learning process and should be considered more than the "guide on the side".

Despite Metzler's (2011, p. 32) positioning of interactive teaching within student-centered models, the notion of the "guide on the side" and that the teacher should only offer guidance or advice when students "get stuck" has continued to perpetuate into the discussions about teacher behavior in student-centered models. For example, Bähr and Wilbowo (2012, p. 30) have built on Metzler's discussions around teaching moments to suggest that in a student-centered environment, 'the teacher only becomes active when the students ask for help'. Bähr and Wilbowo (2012) positioned the teacher as a facilitator of learning and suggested that there are two types of teacher interventions (or reasons teachers would interact with students): invasive and responsive. Invasive interventions are when the teacher interferes with group work without being asked to by students. These often occur when students have stopped focusing on the task or when the 'situation gets paralyzed by disputes or by the lack of constructive suggestions' (Bähr & Wilbowo, 2012, p. 31). On the other hand, responsive interventions involve the teacher interacting with students when the teacher has been asked to offer help or assistance. In this way the 'teacher functions as the expert for the respective movement task, but also as a socially competent counselor who ultimately offers 'self-help assistance'' (Bähr & Wilbowo, 2012, p. 30).

The implication of teaching moments, responsive, and invasive interventions are that the teacher should monitor students in their learning (Bähr & Wilbowo, 2012;

Metzler, 2011). The teacher needs to be able to interpret students' learning and then decide if and how they should intervene in the learning process (Bähr & Wilbowo, 2012; Barker et al., 2013). However, Bähr and Wilbowo (2012) suggest that the teacher should only interact with students when a barrier to learning or group work is observed or identified by students. When a barrier is reached the teacher becomes an active participant in the teaching and learning process and works with students to help them understand the barriers, seek alternative solutions, and direct them to new information that would help them surpass the barrier.

Our discussions to this point highlight that descriptions of facilitation show similarity with Mosston's (1966) indirect teaching behaviors and specifically the problem solving style. In the role of the facilitator, the teacher should create a learning environment that promotes problem solving and then act as the "guide on the side", monitoring students and providing assistance when a barrier to learning is reached. While Metzler (2011) has made attempts to suggest that within student-centered models the teacher plays an active and interactive role in the teaching and learning process, an interactive role has been overlooked in favor of associating the teacher with the "guide on the side". Indeed, interactive teaching is positioned as a different type of teaching behavior and has not been associated with actions and interactions of the facilitator.

Although it is acknowledged that limited attention has been paid to defining the role of the facilitator, we argue that the discussions and descriptions of facilitation represent a narrow view of teacher behavior in student-centered environments. Certainly, and somewhat oppositional to the teacher's role in the classroom being based on progressing and advancing learning (Capel & Whitehead, 2010; Le Ha, 2014; Morrison, 2002), there is little indication that in the role of the facilitator the

teacher would interact with students to further or enhance their learning. If an environment has been successfully created that allows students to learn independent of teacher instruction and the students are on task, focused, and engaged, the teacher is not required in the teaching and learning process, i.e. there is not need for teacher-student interaction. The implications of such definitions of teacher behavior are dampening for the teaching profession. If the teacher is only seen as someone who responds to students if and when there is a barrier to learning (and the students sees the same), we might ask, is the teacher needed in the learning environment? Could an unqualified teacher or teaching assistant fulfill this role?

To further consider the role of the facilitator in student-centered environments the following section explores how the teacher interacts with learners in the role of the facilitator. Through our discussions of teacher-student interaction, we show how the teacher-as-facilitator might be considered as more than the 'guide on the side'.

Teacher Interactions with learners in the role of the facilitator

Questions have been positioned as the basic interactional strategy of facilitation (Bähr & Wilbowo, 2012; Casey et al. 2009; Dyson et al., 2004). Indeed, reciprocal communications have been used to frame how teachers interact with students to support their learning in paired or group work activity (Bähr & Wilbowo, 2012; Ward & Lee, 2005). As a consequence, teachers interactions with students are framed by a questioning and answering process whereby the teacher uses both open and closed questions to assist students in completing learning tasks (Bähr & Wilbowo, 2012; Gillies, 2008; Gillies & Haynes, 2011; Gillies & Kahn, 2008). The fundamental aim of questioning is to engage students in critical thinking, prompt students to interact with one another to solve problems, and to develop students' understandings to a point where they can complete the tasks without teacher

assistance (Gillies, 2008; Bähr & Wilbowo, 2012; Gillies & Haynes, 2011; Gillies & Kahn, 2008; Wilbowo et al., 2014).

In their work exploring teacher action, Bähr and Wilbowo (2012) positioned the reciprocal communications between teachers and students as a Socratic conversation. Drawing on the work of Heckmann (1993), a Socratic conversation involves the teacher asking a series of questions to steer a conversation with regard to a learning problem. Central to the Socratic conversation is that instead of providing answers to students' questions, the teacher 'keeps returning questions by the students to them, but in a different form' (Bähr & Wilbowo, 2012, p. 37). In this way, the questions the teacher asks of students are based on students' emerging understandings of the subject matter where the teacher re-phrases the students' questions to help students find a solution to the problem.

In their later work exploring teacher-student interactions, Wilbowo et al. (2014) identified two processes that guide the types of interactions teachers can have with learners: diagnosis and intervention. Diagnosis involves the teacher making judgments about students learning with the intent of then providing appropriate interventions. In contrast to Bähr and Wilbowo (2012) and Metzler's (2011, 2005, 2000) arguments that the teacher only interacts with learners when a barrier to learning is identified, Wilbowo et al. (2014) suggest that to be able to make judgments about if, how, and when to intervene the teacher needs to interact with students. Consequently, diagnosis involves the teacher asking questions to students to verify his/her interpretations of learning. For example, 'is it correct that you assume (….)' (Wilbowo et al., 2014, p. 17). In addition to questioning, the teacher may explain the learning task to students, describe his/her interpretation of how the students are completing the task, and ask students to complete a different form of the

initial task. These diagnostic interactions, Wilbowo et al. (2014) claimed, enable the teacher to understand students' learning and determine if they need to intervene in the learning process.

The second process identified by Wilbowo et al. (2014), intervention, is guided by three intervention principles. The first principle is strongly linked to the diagnostic process and emphasizes that any teacher intervention should be contingent with students' current knowledge, skills, and understandings of the task or subject matter. The second principle involves fading, a consideration of how and when the teacher takes control and then transfers responsibility back to the students. Wilbowo et al. (2014) report that an intervention can include a range of teacher actions and behaviors that move from teacher control to student control. For example, the teacher may pause the learning activities and ask students to demonstrate movements, ask students to explain their understandings, or ask students to analyze each other's performances. The teacher may also verify students' understandings by offering feedback, praising students' efforts, providing specific guidance, and re-emphasizing key aspects of the task. The third intervention principle involves checking students' understandings. In this phase the teacher doesn't simply ask students if they understand, where the response would most likely be yes. Instead 'the teacher should ask questions that elicit answers which show the understandings of the issue' (Wilbowo et al., 2014, p. 18). For example, students can be asked to identify or demonstrate key points related to the learning task. If students understand and are able to complete the task, the students can then regain full control of their learning and the teacher may leave the pair or group to continue completing the task independent of teacher assistance. However, if a barrier to learning still exists the teacher may continue to intervene in the learning process.

While questioning has been considered as the main interactional process (Bähr & Wilbowo, 2012; Casey et al. 2009; Dyson et al., 2004), it is clear from Wilbowo et al. (2014) that the teacher interacts with learners in a variety of ways to support learning. In the role of the facilitator, the teacher engages in a series of dialogical exchanges that include questions, explanations, feedback, praise, and the presentation of different tasks to students. The aim of teacher-student interaction is to assist students' learning, support group work, and to eventually enable students to have control over their learning. Thus, Wilbowo et al. (2014) suggested, the dialogical exchanges need to involve a range of interactions and behaviors that are underpinned by both student control and teacher control.

In general educational subjects, a teacher's interactions with students in the role of the facilitator are also considered to involve much more than questioning (Gillies, 2008; Gillies & Haynes, 2011; Gillies & Kahn, 2008). Drawing on Hertz-Lazarowitz and Shachar (1990), Gillies (2008) argued that teacher discourse can be categorized as, (a) encouraging students' initiatives, (b) helping students with their learning, (c) facilitating communication among students, (d) providing feedback on task performance, and (e) praising individual student efforts. Fundamentally, while the centrality of the teacher is reduced, Gillies (2008) argued that teachers should interact with learners in a variety of ways and use more pro-social and positive verbal behaviors to support learning.

Building on these understandings of teacher-student interaction, in their empirical examination of teacher discourse, Gillies (2008, 2006), Gillies and Haynes (2011), and Gillies and Khan (2011) have all separately reported that in the role of the facilitator teachers use open and closed questions and more mediated behaviors. Mediated behaviors were defined as a type of interaction that provided a scaffold for

students' learning (Gillies, 2006, 2008; Gillies & Haynes, 2011; Gillies & Khan, 2011). These mediated behaviors could include prompts, specific guidance, tentative suggestions, the validation of efforts, the refocusing students attention on the task, and the encouragement of students to listen each other's suggestions (Gillies, 2006, 2008; Gillies & Haynes, 2011; Gillies & Khan, 2011). Although the specific student learning outcomes that resulted from student-teacher interaction were not reported on, it was considered that teachers' questions and mediated behaviors prompted students to mirror these types of interactions when they communicated with their peers (Gillies, 2006, 2008; Gillies & Haynes, 2011; Gillies & Khan, 2011). Consequently, teacher-student interaction was considered as a strategy to scaffold learning by providing assistance and through the teacher modeling appropriate interactional behaviors that students could then use with their peers to support their learning (Gillies, 2006, 2008; Gillies & Haynes, 2011; Gillies & Khan, 2011).

This section has shown that when the teacher functions in the role of the facilitator their role is much more than the 'guide on the side'. Certainly the teacher plays an active as well as inactive role in the teaching and learning process, engaging in numerous dialogical exchanges with students to scaffold, extend, and enhance their learning. Fundamentally, although indirect behaviors have been associated with facilitation the teacher uses a range of indirect and direct teaching behaviors. Moreover, the dialogical exchanges between teachers and students involve much more than questioning. Feedback, guidance, praise, and summarizing students learning are all examples of teacher-student discourse when the teacher functions as a facilitator of learning. Thus, with an emerging understanding that the teacher plays an active role in the teaching and learning process, our discussions now focus on the

need to consider what students *do* in their learning and, subsequently, Hattie's (2012, 2009) discussions on the teacher as an activator of learning.

Teacher as Activator

The early research of Mosston (1966) considered that the ultimate goal for teachers was simply to promote students having maximum control over their learning. This and student-centeredness, from purely 'constructivist' notions of education, led to the current permeations of teacher-as-facilitator in physical education practice (Barker et al., 2013; Dyson et al., 2004). In others words, it is what students *control* that matters. Unfortunately, the amount of control that students exercise over their own learning is not particularly effective as a means in its own right. Whilst student control over learning has been reported to heighten students' motivation for learning, these are usually instructionally irrelevant and any improvements in motivation do not necessarily materialize into learning gains (Patall, Cooper, & Robinson, 2008). Therefore, the message pertaining to being a teacher-as-facilitator should no longer be solely based on what student's *control*. The major message is what teachers and students *do* matters. Focusing on what teachers and students *do* rather than what they can control was argued by Biggs as early as 1979 (Biggs, 1979), but has been synthesized recently in Biggs (2012). He contends that the most effective approaches to education are concerned with what teachers *do,* followed by the more important outcome variable of what students *do.*

Biggs's (2012, 1979) argument that we need to focus on what teachers *do* is consistent with Hattie's (2009) recent suggestions that the greatest sources of variance in educational outcomes are attributed to students where schools can exercise greater accountability to the second highest source of variance which is attributed to teachers. In other words, teachers' actions and their interactions with students have the greatest

influence over learning in the school environment. For this reason, the notion of a teacher operating in a guiding only capacity is inherently flawed. From Hattie's (2009) perspective, any approach that promotes student-centeredness and learning must recognize such variance and exercise some significant agency over the teacher's capacity to enhance, strengthen, and develop students' learning.

Hattie (2012) developed this point to further suggest that teachers who had the greatest impact on their students learning were those who could organize and use content effectively. While knowledge and content is inevitably influenced by context and therefore beliefs and regulations (Armour, 2011), when teachers integrate new knowledge with students' prior knowledge and their own teaching goals, teaching had the greatest levels of effect on student achievement. In this sense, content is presented to and organized around an understanding of their students' needs, with the teacher holding a degree of agency over what and how to teach. In contrast, teachers who are least effective were described as being 'anchored in the details of the classroom' (Hattie, 2012, p. 29). These teachers consider content, organization, management, and their behavior first and without interrelating these to their students needs. Thus, in Hattie's (2012) view, teachers who have the greatest influence on their students' learning are able to draw understandings about what to *do* and how to introduce new content from an evidence-informed position about what their students know and can *do*.

In a further empirical quest for explanation about teacher action, Hattie (2009) argued that the traditional notions of teacher-as-facilitator need to change because the greatest effects on student learning that we have some control occurs when teachers become learners about the impact of their own teaching and when students become their own teachers. This shift makes the widely held clichés 'guide on the side' and

the 'sage on the stage' both false dichotomies in terms of envisaging an effective teaching and learning approach (in any discipline). It forces a reconceptualization of student-centered physical education models to ensure that 'teaching moments' described by Metzler (2011) and Bähr and Wilbowo (2012) occur through a process of diagnosis, intervention, and evaluation of teacher impact.

The process of diagnosis, intervention and evaluation of what students *do* has been discussed in the literature as clinical teaching (Dinham, 2013). This model of teaching is still very much student centered but it also recognizes that the primary agent of change in a student's learning is their teacher (Dinham, 2013). Hattie (2009) refers to these teachers who adopt more clinical approaches to teaching as being activators of learning. Models of teaching that described the teacher-as-activator have larger effects on learning because these teachers utilize active and guided instruction. In the role of the activator, teacher action involves reciprocal teaching, feedback, mastery learning, teaching students self-verbalization, meta-cognition strategies, direct instruction, goal setting, and behavioral organizers. As shown by Hattie (2009), in his meta-analysis of over 800 studies, activation is much more effective than typical facilitative instruction that requires less teacher activity and is more unguided in practice. However, it is important to acknowledge that that facilitation was viewed as involving inquiry based teaching, individualized instruction, problem-based learning, and inductive teaching. The claims made that activation was more effective were made against this interpretation of facilitation.

In contrast to the traditional descriptions of teacher action through the notion of facilitation, Hattie's (2012, 2009) discussions around the teacher-as-activators acknowledges the active role of the teacher in the teaching and learning process. Activation certainly suggests that the teacher should consider their role as, not being

on the side, but of one that activates new learning possibilities and the achievement of new learning outcomes. Yet in order to do this, and extending the views offered by Wilbowo et al. (2014), the teacher needs to continually evaluate the impact of their behavior and their dialogical exchanges with students. In a physical education context, Dudley (In Press) calls what students *do* the 'legitimate and observable manifestations of learning'. In other words, what are the behaviors a student is likely to enact once learning has occurred that a teacher can respond to with a legitimate teaching intervention to progress learning further. In this way, student-centeredness and teacher action moves beyond determining what students and teacher control in their lesson toward a consideration of what students *do* and how the teacher is responsive to their students' manifestations of learning.

Discussion

In recognizing that there has been limited debate and discussion around defining the role of the teacher-as-facilitator in physical education, one of our aims of this paper was to begin to define teacher action and behavior in student-centered learning environments. Our discussions have identified the strides made to inform teacher behavior within student-centered models. However, and as we identified at the beginning of this paper, without a further and critical examination of teacher behavior there is a danger that the teacher could remove themselves from the teaching and learning process and simply view themselves as a 'guide on the side' to a pitch or court. Moreover, and similar to Hastie and Casey's (2014) discussions around fidelity, if we are to be confident that a student-centered approach has been used there is a need to describe teacher action and how learning has been supported.

While we acknowledge that any definition cannot be legitimized until it has been examined 'in-action' or through a critical exploration of the behaviors and

dialogical exchanges that have been reported on, we offer a tentative definition that serves to guide teacher action in student-centered learning environments. Such definition has been drawn from the discussions inherent within this paper that highlight the interdependency between the teacher and the student in the student-centered classroom. It also acknowledges the emergent and evidence-informed discussions of Hattie (2009) and the teacher-as-activator, beginning to argue that the teacher is much more than the 'guide on the side'.

Teacher Action in student-centered classrooms: Teachers play an active role in the teaching and learning process. They create a learning environment that promotes students' learning with their peers. During learning tasks teachers interact with students, not only when students reach a barrier in their learning, but to interpret, understand, support, and develop the learning that is taking place. As a consequence, teachers need to constantly diagnose what is occurring, have multiple interactional strategies (that include direct and indirect behaviors), and evaluate the impact of these actions on student learning.

From this definition we argue that teachers need to take into account several pedagogical considerations surrounding their actions within student-centered approaches. These include: (a) *diagnosing*, (b), *responding* and, (c) *evaluation*.

(a) *Diagnosing*: In order to determine the content, how content should be presented/organized, and to understand the degree of interaction required by the teacher, there needs to be a process of observation, and active interaction with students. The teacher can question students to validate their interpretations of student learning and then make a judgment if they

will interact with students to support, or challenge their current phase of learning. *Diagnosing* is underpinned by a focus on what students *do*.

(b) *Responding*: Responding involves supporting students or groups in a way that allows them to progress in their learning. The actions of the teacher can be direct or indirect and can include questions (open and closed), explanations, feedback, praise, demonstrations, presentations of the task in a different form, the encouragement of student initiatives, the promotion of communication between students, or no interactional behavior at all (for example, when further attempts at the task independent of teacher input are perceived by the teacher to support and extend learning). The type of interaction is based upon teachers' knowledge of the students, their understanding of the situation, and how students are progressing in their learning. In this way, teacher action and interaction behaviors cannot be pre-defined and may vary from student-to-student or group-to-group. However, the type of response should be both contextually relevant and conducive to the overarching aims of student-centered learning, i.e. developing students ability to become their own teachers, supporting them to know how to evaluate knowledge claims, how to learn, how to collaborate, how to seek help, how to become assessment capable, how to be resilient (particularly in the face of cognitive challenges), and aiding students to know what to do when they do not know what to do (Hattie, 2009; Le Ha, 2014).

(c) *Evaluation*: Teachers should know the impact of their interaction with students as a means to determine if students' learning has progressed, has the capacity to progress further without teacher-student interaction, or if

students require support in their learning. In order for this to achieve the teacher may, (a) question students on their understanding or performance in the task or, (b) observe students' performance of the task. Subsequently, the teacher may return to the actions and interactional behaviors within *responding*, or allow students to move onto a different task, or 'activate' a more challenging task.

While these pedagogical recommendations are not too dissimilar to what might be conceived as 'good pedagogy', these teacher actions and student-teacher interactions have been somewhat lost within the interpretations of facilitation in student-centered learning approaches. Through the notion of the 'guide on the side', the active role of the teacher in the teaching and learning process has been replaced by an understanding that the teacher will be 'standing aside to monitor' (Metzler, 2011, p. 32). Certainly, the false dichotomy of 'sage on the stage' vs 'guide on the side' has perpetuated within general education and physical education.

While we have offered a definition of teacher action and we have sought to provide pedagogical recommendations for interaction and behavior, in order to legitimately understand the teacher's role in the student-centered classroom we now need to critically examine teacher behavior and teacher interactions with learners in student-centered approaches. Such an investigation would entail a critical exploration of student-centered models (Jewett et al., 1995; Haerens et al., 2011; Kirk, 2013; Metzler, 2011, 2005, 2000), student-centered forms of inquiry (Enright & O'Sullivan, 2010; Oliver, 2001; Oliver & Kirk, 2014), critical pedagogies (Azzarito, 2010; Macdonald, 2002), and peer-assisted learning approaches (Barker et al., 2013; Ward & Lee, 2005). Importantly, this would allow our definition to be contextualized with

what students and teachers *do,* and perhaps, allow for an understanding as to how the teacher impacts learning in student-centered approaches.

Conclusion

The wealth of advocacy for student-centered learning highlights that education is being pushed in a direction that considers student-centered learning to be most effective. However, despite the explicit and extensive moves toward student-centeredness and the development of pedagogical 'design specifications' in physical education (Kirk, 2013, p. 979) that support the implementation of student-centered approaches, little discussion has emerged about the role of the teacher in student-centered approaches. Instead there seems to be a semantic confusion about teacher action and how the teacher functions in a student-centered classroom. With most research merely stating that the teacher should facilitate learning and with the 'guide on the side' used as a way of explaining facilitation, this paper begins to move research and practice forward by defining teacher action in student-centered classrooms. Certainly this paper has argued that the 'guide on the side' provides a narrow interpretation of teacher action and actually obstructs what the teacher can *do* and the impact they can have on students learning. Indeed, there is a need to think much more openly about what the teacher can *do* and what students can *do* in the student-centered classroom, a perspective that moves beyond a consideration as to what is controlled.

In order to promote learning, whilst supporting and extending students' abilities to complete learning tasks, we argue that the teachers need to play an active role in the learning process. The false dichotomies of 'guide on the side' and 'sage on the stage' are not helpful in defining optimal teaching practice. Drawing on Hattie's (2012, 2009) term, we argue that the teacher might be best placed as an activator.

Through this lens, the teacher activates new learning possibilities by using a range of direct and indirect instructional behaviors to support and enhance students' learning. However, a further consideration of activation is required in physical education before a judgment is made as to whether the teacher functioning as an activator is more effective.

Authors Note and Acknowledgements

Position of authorship was determined by mutual agreement that the author who had the most followers on social media site Twitter at the time of submission would be determined to be the lead and corresponding author. Whilst there is no empirical precedent for this decision, it adds to the methodology considerations for collegial authorship.

References

Armour, K. (2011). *Sport Pedagogy: An introduction for teaching and coaching*. London: Prentice Hall.

Azzarito, L. (2010). Future Girls, transcendent femininities and new pedagogies toward girls' hybrid bodies. *Sport, Education, and Society*, 15, 261-275.

Bähr, I., & Wibowo, J. (2012). Teacher action in the Cooperative Learning model in the physical education classroom. In B. Dyson & A. Casey (Eds.), *Cooperative Learning in physical education: A research-based approach* (pp. 27-41). London: Routledge.

Barker, D., Quennerstedt, M., & Annerstedt, C. (2013). Inter-student interactions and student learning in health and physical education: a post-Vygotskian analysis. *Physical Education and Sport Pedagogy*, I First Article.

Biggs, J.B. (1979). Individual differences in study processes and the quality of learning outcomes. *Higher Education, 8*, 381–394.

Biggs, J. (2012). What the student does: teaching for enhanced learning. *Higher Education Research and Development, 31(1)*, 39-55.

Byra, M. (2006). Teaching styles and inclusive pedagogies. In D. Kirk, D. Macdonald, S. O'Sullivan, M. (Eds.), *The handbook of physical education* (pp. 449-466). London: Sage.

Casey, A. (2014). Models-based practice: great white hope or white elephant?. *Physical Education and Sport Pedagogy*, 19*(1)*, 18-34.

667 Casey, A., Dyson, B., & Campbell, A. (2009). Action research in physical education:
668 Focusing beyond myself through cooperative learning. *Educational Action*
669 *Research,* 17 *(3),* 407-423.
670 Coffield, F., Moseley, D.V.M., Ecclestone, K., & Hall, E. (2004). *Learning styles and*
671 *pedagogy: A systematic and critical review*. London: Learning and Skills
672 Research Council.
673 Cohen, R., & Zach, S. (2012). Building pre-service teaching efficacy: a comparison of
674 instructional models. *Physical Education and Sport Pedagogy*, I First Article.
675 Dinham, S. (2013). Connecting clinical teaching practice with instructional
676 leadership. *Australian Journal of Education, 57(3),* 225-236.
677 Dudley, D.A. (*In Press*). An observable model of physical literacy. *The Physical*
678 *Educator*, 73(1).
679 Dyson, B. (2014). Quality physical education: a commentary of effective physical
680 education teaching. *Research Quarterly for Exercise and Sport*, 85, 144-152.
681 Dyson, B. (2002). The implementation of cooperative learning in an elementary
682 physical education program. *Journal of Teaching in Physical Education,* 22*(1),*
683 69-85.
684 Dyson, B., Griffin, L.L., & Hastie, P. (2004). Sport education, tactical games, and
685 cooperative learning: Theoretical and pedagogical considerations. *Quest,* 56*(2),*
686 226-240.
687 Enright, E., & O'Sullivan, M. (2010). 'Can I do it in my pyjamas?' Negotiating a
688 physical education curriculum with teenage girls. *European Physical Education*
689 *Review*, 16, 203-222.
690 Gillies, R.M. (2008). Teachers' and students' verbal behaviors during cooperative
691 learning. In R.M. Gillies, A.F. Ashman, & J. Terwel (Eds.), *The teachers role in*
692 *implementing cooperative learning in the classroom* (pp. 238-257). Brisbane:
693 Springer.
694 Gillies, R.M., & Boyle, M. (2010). Teachers' reflections on cooperative learning:
695 issues of implementation. *Teaching and Teacher Education*, 26, 933-940.
696 Gillies, R.M., & Haynes, M. (2011). Increasing explanatory behavior, problem-
697 solving and reasoning within classes using cooperative group work. *Instra Sci,*
698 39, 349-366
699 Gillies, R.M., & Khan, A. (2008). The effects of teacher discourse on students'
700 discourse, problem-solving and reasoning during cooperative learning.
701 *International Journal of Educational Research*, 47, 323-340.
702 Griffin, L.L., Brooker, R., & Patton, K. (2005). Working towards legitimacy: two
703 decades of teaching games for understanding. *Physical Education and Sport*
704 *Pedagogy, 10*(3), 213-223.
705 Haerens, L., Kirk, D., Cardon, G., & De Bourdeaudhuij, I. (2011). Toward the
706 development of a pedagogical model for health-based physical education. *Quest,*
707 63*(3),* 321-338.

Hastie, P.A., & Casey, A. (2014). Fidelity in models-based practice research in sport pedagogy: a guide for future investigators. *Journal of Teaching in Physical Education*, 33(3), 422-431.

Hattie, J. (2012). *Visible Learning for Teachers: Maximizing impact on learning*. London: Routledge.

Hattie, J. (2009). *Visible learning: a synthesis of over 800 meta-analyses relating to achievement*. Oxon: Routledge.

Hertz-Lazarowitz, R., & Shachar, H. (1990). Teachers' verbal behavior in cooperative and whole class instruction. In S. Sharan (Ed.), *Cooperative learning: theory and research* (pp. 77-94). New York: Praeger.

Holt, C., Denney, G., Capps, M., & de Vore, J. (2005). Teachers' ability to perceive student learning preferences: "I'm sorry, but I don't teach like that." *The Teachers College Record.* ID Number: 11767.

Jewett, A. E., & Bain, L.L. (1985). *The curriculum process in Physical Education.* Dubeque, Iowa: Wm. C. Brown.

Jones, L. (2007). *The student-centered classroom. Cambridge*: Cambridge University Press.

King, A. (1992). From sage on the stage to guide on the side. *College Teaching*, 41*(1),* 30-35.

Kirk, D. (2013). Educational Value and Models-Based Practice in Physical Education. *Educational Theory and Philosophy*, 45*(9)*, 973-986.

Kirk, D., & Kinchin, G. (2003). Situated learning as a theoretical framework for sport education. *European Physical Education Review*, 9(3), 221-235.

Kirschner, P.A., Sweller, J., & Clark, R.E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist, 41(2),* 75-86.

Le Ha, P. (2014). The politics of naming: critiquing "learner-centered" and "teacher as facilitator" in English language and humanities classrooms. *Asia-Pacific Journal of Teacher Education*, 42(*4),* 392-405.

Macdonald, D. (2003). Critical pedagogy: what might it look like and why does it matter?. In A. Laker (Ed.), The sociology of sport and physical education: an introductory reader (pp. 167-189). London: Routledge/Farmer.

Metzler, M. (2011). *Instructional models for physical education* (3rd Edn). Arizona: Holcomb Hathway.

Metzler, M. (2005). *Instructional models for physical education* (2nd Edn). Arizona: Holcomb Hathway.

Metzler, M. (2000). *Instructional models for physical education.*

Metzler, M. (1983). On Styles. *Quest*, 35, 145-154.

Morrison, C.D. (2014). From 'Sage on the Stage' to 'Guide on the side': a good start. *International Journal for Scholarship of Teaching and Learning*, 8(1), 1-15.

Mosston, M. (1994). *Teaching in physical education* (4th Edn). New York: Macmillan.

Mosston, M. (1986). *Teaching in physical education* (3rd Edn). Columbus, Ohio: Merrill.

Mosston, M. (1968). Problem solving – a problem for physical education. Paper presented at the Annual Meeting of New York City Association of Physical Education Teachers.

Mosston, M. (1966). *Teaching in physical education*. Columbus, Ohio: Merrill.

Mosston, M., & Ashworth, S. (2002). *Teaching in physical education* (5th Edn). London: Benjamin Cummings.

Mosston, M., & Ashworth, S. (2008). *Teaching in physical education* (6th Edn). …

Oliver, K. (2001). Images of the body from popular culture: engaging adolescent girls in critical inquiry. *Sport, Education and Society*, 6(2), 143-164.

Oliver, K., & Kirk, D. (2014). Towards an activist approach to research and advocacy for girls and physical education. *Physical Education and Sport Pedagogy*, IFirst article.

O'Sullivan, M. (2013). New directions, new questions: Relationships between curriculum, pedagogy, and assessment in physical education. *Sport, Education & Society*, 18*(1),* 1-5.

Patall, E.A., Cooper, H.M., & Robinson, J.C. (2008). The effects of choice on intrinsic motivation and related outcomes: A meta-analysis of research findings. *Psychological Bulletin, 134(2),* 270-300.

Rossi, T., Fry, J.M., McNeill, M., & Tan, C.W.K. (2007). The Games Concept Approach (GCA) as a mandated practice: views of Singaporean teachers. *Sport, Education and Society*, 12(1), 93-111.

Sicilia-Camacho, A., & Brown, D. (2008). Revisiting the paradigm shift from the versus to the non-versus of Mosston's spectrum of teaching styles in physical education pedagogy: a critical pedagogical perspective. *Physical Education and Sport Pedagogy*, 13(1), 85-108.

Ward, P., & Lee, M. (2005). Peer-assisted learning in physical education: A review of theory and research. *Journal of Teaching in Physical Education,* 24*(3),* 205- 225.

Wilbowo, J., Bähr, I., & Groben, B. (2014). Scaffolding as an instructional model for the Cooperative Learning model in physical education. *Australian Council for Health, Physical Education, and Recreation Magazine*, 21(2/3), 15-18.

We would like to thank the reviewer for the helpful comments in refining this paper. In the table below we have identified how we have responded to each of the comments and within the text we have identified any changes with red text.

Review Comment	**Response**
The purpose of this manuscript with to discuss current conceptualizations of teacher facilitation within student-centered models of instruction and how these may be implemented differently. The basic thesis of the paper is valid in that it moves discussion forward regarding the role of the teacher within student-centered instruction. Little empirical evidence exists on effective facilitative teaching strategies within these models and the author(s) bring some good insights from general education to potentially reframe these strategies. The paper is generally well evidenced and provides a logical journey through current conceptualizations of practice, to move to a new thesis of action based upon the premise of teacher-as-activator within these models of instruction. That stated, some of the arguments made are overzealous in making casing points for more expansive pedagogies within student-centered models of instruction. This is particularly true for the symbolic representation of current pedagogies in this approach as being in the far extreme of Mosston's problem solving style. The author(s) also pay superficial attention to current conceptualizations of interactive teaching approaches and the body of knowledge	Thank you for the positive comments regarding the paper. In addressing the specific comments below we have endeavoured to address each of these. However, throughout the paper we have attempted to 'tone down' our arguments and pay attention to the broader literature and author's perspectives in which this paper is concerned with.

that currently exists which has examined the triadic relationship between teacher, student and content within student-centered models of instruction. That stated, the manuscript seems to provide a valuable addition to contemporary discourse related to instruction within these types of models. The following comments hopefully serve to provoke thoughts on revisions but are not necessarily to be viewed as critiques that diminish the quality of the paper.	
Title: I am struggling to connect this title with the journey of the paper…what evidence-based practice is presented in the paper? Although cryptic titles are somewhat vogue I suggest a simpler statement to relate to the idea of the development of more effective teaching pedagogies within student-centered models of instruction	The title has been changed to: "I am a facilitator of learning" Understanding what teachers do and students to within student-centred physical education models
P 3 What is meant by task teaching, please elaborate on this phrase.	In acknowledging that task teaching may have been misleading this statement has been changed to direct instruction – page 3 line 54
P5 Insert "are" after "when"	This has been changed on page 5

P8 I am not convinced of this argument. Shifting towards facilitation during models based-instruction does not infer that the teacher behavior was highly aligned with Mosston's "problem solving" style. The quote highlights questioning and task intervention which would not be apparent within style H.	We have acknowledged this point by including a statement on page 8 lines Whilst there may not be direct alignment between teacher behavior in the problem solving style and facilitation, in the descriptions of facilitation indirect teaching is associated with the creation of contexts for students to engage with problem solving Preceding this statement is an additional comment to highlight how Mosston's styles have created a common way of talking about teaching behaviour: Page 8 …'the spectrum has generated a common jargon for us to use when talking about teaching' (Metzler, 1983, p.1 46).
The author(s) need to be more cautious as Metzler also frames indirect teaching within student-centered models as sometimes interactive. This seems an overzealous characterization that oversimplifies current narratives on teaching behavior within these types of models of instruction. That is not to say that the general argument of the paper is not true, rather that the authors need to be more cautionary in their classification of current teacher practice as being one of just a questioner on the side of student learning. This overzealous characterization again manifests on p12 where we are privy to the author(s) extrapolation of the roll out the ball teacher during student-centered models of instruction. These statements marginalize strides made within teaching practice within these models and in my opinion, should be deleted.	We have sought to expand on the discussions around direct, indirect and interactive teaching by Metzler. Pages 10-12 provides additional discussions about the nature of interactive teaching and how teaching behaviour or what teachers/students control is defined. Indeed, we have made an explicit attempt to highlight how Metzler, while his work may have been interpreted as the guide on the side, has made attempts to position the teacher as interactive within student centred models. In concluding this section to the paper we have also re-emphasised Metzler's notion of interactive teaching and the attempts made to position the teacher as more than the guide on the side (Page 13). We have also removed the references to the roll out the ball approach within the paper

P15 I like this point on dialogic exchanges as being critical to teacher actions in this role.	Thank you
P19 This latter point of what students do could be embellished further. What are the author(s) interpretation of student control vs what students do? The author(s) also fail to acknowledge the other critical variable within the triadic representation of learning within these contextualized practices…and that is the content embedded in the learning tasks. Didactics would suggest that this is the most salient variable and the driving force behind these activation pedagogies. Some acknowledgement of this variable within contextualized learning is required. Some acknowledgement is also required of the work that has already been conducted using this lens of inquiry which has begun to shed light on the teaching pedagogies required within student-centered models of instruction to facilitate student learning.	We have attempted to further clarify these points about what students control and do. This is firstly in the additional paragraph on page 20 and then we make explicit statements on page 22: In a physical education context, Dudley (In Press) calls what students *do* the 'legitimate and observable manifestations of learning'. In other words, what are the behaviors a student is likely to enact once learning has occurred that a teacher can respond to with a legitimate teaching intervention to progress learning further. In this way, student-centeredness and teacher action moves beyond determining what students and teacher control in their lesson toward a consideration of what students *do* and how the teacher is responsive to their students' manifestations of learning. Moreover, we have now acknowledged content within our discussions of the pedagogical considerations for teacher actions. On page 23 we have included this into diagnosing: *Diagnosing*: In order to determine the content, how content should be presented/organized, and to understand the degree of interaction required….. In reference to acknowledging content the additional paragraph on page 20 has sought to acknowledge this variable and consider it from Hattie's perceptive Hattie (2012) developed this point to further suggest that teachers who had the greatest impact on their students learning were those who could organize and use content effectively. While knowledge and content is inevitably influenced by

	context and therefore beliefs and regulations (Armour, 2011), when teachers integrate new knowledge with students' prior knowledge and their own teaching goals, teaching had the greatest levels of effect on student achievement. In this sense, content is presented to and organized around an understanding of their students' needs, with the teacher holding a degree of agency over what and how to teach. In contrast, teachers who are least effective were described as being 'anchored in the details of the classroom' (Hattie, 2012, p. 29). These teachers consider content, organization, management, and their behavior first and without interrelating these to their students needs. Thus, in Hattie's (2012) view, teachers who have the greatest influence on their students' learning are able to draw understandings about what to *do* and how to introduce new content from an evidence-informed position about what their students know and can *do*.

805