

Prospective Physical Educators' Preferences for Using Sport Education, Teaching Games for Understanding, and Direct Teaching when Instructing Games

Ken R. Lodewyk* & Scott Robertson

Department of Kinesiology, Brock University, Ontario, Canada

Corresponding author: klodewyk@brocku.ca

Abstract Research has noted the constraints to applying constructivist pedagogical models such as Sport Education and Teaching Games for Understanding in practicing and prospective physical education teachers. This study was an investigation of prospective physical educators' preferences for Direct Teaching, Sport Education, and Teaching Games for Understanding in physical education and what they liked and disliked about each model. The sample consisted of 309 undergraduate physical education students who received preliminary training and experience with each instructional approach in an upper-level undergraduate university games course. There was substantial support for each of the three instructional models although students preferred Sport Education and Teaching Games for Understanding over Direct Teaching. These findings provide valuable insight into the relative strength and specificity of prospective physical educators' views about these models and evidence that, in settings where these models are explicitly taught and practiced, prospective physical educators can have progressive knowledge and beliefs about them.

Keywords: instructional model, pedagogy, models-based practice, qualitative, constructivist

1. Introduction

Instructional methods in physical education (PE) tend to be conceptualized as somewhere between the extremes of direct or indirect approaches. Metzler (2017) describes direct teaching as a more traditional teacher-centered method in which the "expert" teacher transmits knowledge to more passive learners through highly structured lessons, high quantities of specific and personalized feedback, and clearly presented content (mainly rules, skills, and techniques) and learning tasks designed to maximize practice trials and physical safety. Learning content also tends to precede game play. While direct teaching can be effective in certain students and settings, it has also been linked to amotivation during games in PE partly due to its lack of emphasis on engaged application, peer interactions, transferable learning, critical thinking, and problem-solving (Azzarito & Ennis, 2003). It has also been criticized as an overly rigid "one-size-fits-all" approach (Kirk, 2013) that favors competitive sport and confident, accomplished, aggressive, and competitive athletes (Ennis, 1996).

Direct (instructor-centered) instruction is the predominate mode of teaching in both practicing and prospective PE teachers (Butler, 2005; Metzler, 2017; Oslin & Mitchell, 2006). Experts have called for physical educators to increase their use of indirect (more constructivist) models of instruction such as Sport Education and Teaching Games for Understanding (TGfU)

(Butler, 2005; Metzler, 2017; Oslin & Mitchell, 2006). These two pedagogical models are less direct as they place more emphasis on facilitating rather than dictating content so that students actively construct and self-regulate their understanding and learning (Harvey et al., 2020; Oslin & Mitchell, 2006). As such, the instructor serves as more of a facilitator than the sole source and transmitter of learning and elevates positive affect by purposely situating the learning relative to each student's context (Rovegno & Dolly, 2006). Applied to the teaching of games, Butler (2005) explains that:

At the heart of the constructivist approach to games education is the belief that it is important for players to make correct decisions ... The child, not the teacher, becomes central. The pedagogical mindset changes from one that focuses on what is wrong with the learner's performance to one that focuses on how the teacher can help learners define and solve the problem being presented (p. 234).

Teaching Games for Understanding

TGfU originated from Bunker and Thorpe's (1982) dissatisfaction with the perceived overemphasis on teaching high school students various game skills through direct (teacher-centered) instruction and drills rather than more interactively and with learning game tactics and the importance of game skills jointly through modified game play. They posited several critical elements for effective implementation of TGfU (for a thorough

explanation of the model, see sources such as Metzler, 2017). The first was to orient the learning primarily in and through small group modified and authentic (meaningful) game play wherein students learn to sample and then problem-solve to modify these activities to meet their objectives. For example, students might begin a territorial games lesson with a modified game to set the stage for them to learn a few game tactics. The teacher would then design ways to enable them to interactively learn these tactics and then guide students to modify or design new activities to help them apply those tactics into another authentic modified game play activity. This cycle could also be repeated for the learning of game skills later in the lesson. In doing this, TGfU strives to help meet the learning needs of each student through enhanced autonomy, interactive learning, game play, cooperation, and situated learning (Richard & Wallian, 2005).

A second core feature of TGfU is having learners sample a variety of similarly themed or structured games (e.g., territorial, net-wall, striking-fielding, and target) so that students can learn the rules, tactics, and skills within each of these game forms. For example, a territorial games lesson (i.e., objective to propel or run an object into a goal or over an end line) within the objective of having students learn to move the ball quickly to all players while staying spread out might involve students participating in a variety of modified games like korfbal, netball, and basketball. Advanced learning can also have them learn to transfer these rules, skills, and tactics to other territorial games (e.g., rugby) and to other game forms like target, striking-fielding, and net-wall games (Butler & McCahan, 2005). In doing so, the teacher facilitates student learning of how to modify features of each game form such as the rules, playing area, number of players, and/or equipment to transfer the learning of scenarios, tactics, skills, rules within and between each game category. This could, for example, involve modifying the size of the goal, diameter of the shooting circle, and number of seconds or steps a player can take during a team handball game to help them learn ways to control for optimal challenge and to facilitate more cooperation during game play.

Finally, a TGfU lesson generally follows the following six-step progression: (1) a modified game, (2) learning transferable features of the rules and basic elements of that game to others, (3) tactical awareness, (4) applying relevant tactics (i.e., making and demonstrating appropriate decisions), (5) skill execution, and (6) game performance (Bunker & Thorpe, 1982; Mandigo et al., 2008). Some more recent iterations of the model have condensed these steps to three- or four (e.g., Griffin & Patton, 2005; Harvey & Jarrett, 2014) that sandwich the teaching of tactics and skills with modified game play. The general rationale for the progression is to engage students at the start of the lesson through game play that will serve to situate the subsequent learning of transferable rules, tactics, and then skills which are then finally applied into game performance in the latter phase of the lesson. As noted earlier, content learning is applied throughout the lesson via interactive and cooperative modified game play learning activities involving student problem-solving for solutions to game-related challenges and objectives (Holt et al., 2002).

Since the inception of TGfU, a significant amount of research has been conducted to investigate its effectiveness. Effective implementation of TGfU has been associated with a host of availing outcomes such as improved decision-making, skilled

execution, tactical support, enjoyment, perceived competence, and involvement and performance in game play (Barba-Martin et al., 2020). For example, Oslin and Mitchell (2006) reported elevations in skilled performance, intrinsic motivation, and tactical and declarative knowledge resulting from TGfU instruction. Despite these positive outcomes, teachers often report being reluctant to implement TGfU because they perceive it to be too complex (Light & Butler, 2006). A review by Morales-Belando et al. (2021) added to this by noting that the results and quality of TGfU effectiveness studies are often dependent on how many of the critical teaching-learning TGfU implementation features were included. Among these are situating the lessons to each unique context, having at least eight hours of unit instruction, providing adequate teacher training, and ensuring appropriate structure, quantity, difficulty, and timing of modified game play and instructor questioning. One example is Abad et al.'s. (2020, p. 3) discovery that studies "used a heterogeneity of interventions." reported "the low quality of evidence," and that the tactical interventions implemented in the TGfU lessons "achieved significant improvements in decision-making, but they did not find significant improvements in skill execution compared to technique-based approaches."

Sport Education

Originally developed by Siedentop (1994), the sport education instructional model strives to develop enthusiastic, literate, and competent sportspersons by striving to foster the positive and minimizing the negative aspects of sport play (Siedentop, Hastie, and van der Mars 2011. As such, the aim of the model is foster active engagement in game play, inclusive team spirit, positive competition, responsibility, personal autonomy and belonging, responsible and effective performance of designated team roles, socio-emotional character values (e.g., honesty, the pursuit of excellence, and courage) and relevant game tactics, traditions, skills, and knowledge (Kinchin, 2006; Metzler, 2017). Rocamora et al. (2019) explains how applying the essential elements of sport education can help to fulfill these aims. In sport education, for example, students are grouped into small relatively equally skilled teams for several "seasons" (e.g., learning units lasting 18–20 lessons of approximately 45 minutes) of competitive sportsmanlike practice and play that often include a pre-season, season and post-season. During these seasons, festivity (i.e., joyful team spirit/ethos) is encouraged through, for example the use of colorful team insignia and cheers and students work cooperatively by performing various roles (e.g., coach, captain, referee, scorer, manager...) to successfully implement and participate in the sports seasons. Records and standings are maintained of "individual and group performances (i.e., wins, points scored, fair play attitudes, equipment, teamwork ...)" (p. 88). Finally, each sport unit/season (e.g., field lacrosse) ends with a culminating match(es) to determine each teams' final standings. Kinchin (2006) adds that sport education also aims to help students celebrate and enact the culture of various sports while including both teacher-centered and student-centered initiatives depending on the phase of the sport season. One example is when teachers provide detailed descriptions of possible activities that students can choose to perform during their designated practice time along with clear accounts of individual roles to students, so they are aware of what and how to fulfill these on their teams.

There is a large body of research supporting the overall effectiveness of sport education when appropriately implemented. Among these positive outcomes are student autonomy, basic psychological needs, intrinsic motivation, enthusiastic engagement, strategic thinking and planning, personal and social development, life skills such as cooperation and social responsibility), positive peer interactions, game play performance, physical activity, and the learning of rules, strategies, skills, and diverse sporting roles (Byrne & Spittle, 2009; Curtner-Smith & Stran, 2009; Pritchard et al., 2014; Farias et al., 2019). Particular aspects of sport education such as team autonomy, affiliation, and problem-solving opportunities on smaller teams appear to be most vital in facilitating students' physical activity levels, cooperation, and engagement especially those who are typically participate less in traditional team sport units (Smither & Zhu, 2011). This supports other research (e.g., Perlman, 2012) revealing links between sport education and similar positive outcomes in less motivated students in PE.

It is important to note that availing learning outcomes in sport education depend in part on the unit of instruction and on how well teachers implement the model. For example, the positive outcomes associated with sport education can be compromised when performance (e.g., winning, attaining points for grades) is over-emphasized, the climate too closely resembles institutionalized sport, and when students neglect or improperly fulfill their roles (Kinchin, 2006). Game involvement, engagement, and performance development has been shown to vary between game forms (e.g., net versus invasion games) (Pritchard et al., 2008) and within game forms as between two invasion games. Further, developments in one outcome such as decision-making or game play performance are not necessarily linked to another desired outcome such students' game involvement (Farias et al., 2019).

Rationale and Objectives

Calls have also been made for reliable study evidence as to the effects of longer-term instructional interventions and how practicing and prospective teachers view and experience alternative game-based instructional models such as TGfU and sport education differently from direct teaching (Barba-Martín et al. 2020; Hastie & Wallhead, 2016; Morales-Belando et al., 2021). The aim of this study was to address this gap in the research literature by, first, studying prospective physical educators' preferences for direct teaching, sport education, and TGfU after receiving training and experience with each in an upper-level undergraduate university games course in Ontario, Canada. For example, as typically in practicing and prospective PE teachers (Butler, 2005; Metzler, 2017; Oslin & Mitchell, 2006), will this sample's preferred instructional model be direct teaching; or will they report what experts advocate, namely, increased intention to use more constructivist models of instruction such as sport education and TGfU (Butler, 2005; Metzler, 2017; Oslin & Mitchell, 2006).

A second objective for this study is in response to calls for more specific information about prospective physical educators likes and dislikes about direct teaching, sport education, and TGfU; and how these views align with previous research (Barba-Martín et al. 2020; Hastie & Wallhead, 2016; Morales-Belando et al., 2021). To illustrate, will participants in this study acknowledge

the merits of direct teaching for learning of rules and skills through structure, feedback, maximizing practice trials, and when physical safety is more uncertain (Metzler, 2017). On the other hand, will they experience direct teaching as more of a rigid "one-size-fits-all" approach (Kirk, 2013) that lack opportunities for engaged application, collaborative learning, and problem-solving (Azzarito & Ennis, 2003)? To what extent will they recognize these and other availing outcomes (improved decision-making, skill execution, enjoyment, autonomy, perceived competence, social responsibility, and involvement and performance in game play) through use of more constructivist pedagogical models like sport education and TGfU? Alternatively, will they also perceive the models to be too complex to successfully implement (Light & Butler, 2006) and/or affirm some of the acknowledged constraints of these models in practicing (Pill et al., 2018) and prospective physical educators (Baker & Fletcher, 2017) reported earlier, particularly when these models are implemented inappropriately (Kinchin, 2006).

2. Method

2.1. Participants and Procedure

The study sample consisted of 309 undergraduate students ($n = 172$ females and 137 males) enrolled in a large (19,000 student) public university in south-central Canada. These students were juniors and seniors majoring in either PE ($n = 243$; 78.6%), kinesiology ($n = 48$; 15.5%), or another ($n = 18$; 5.8%) such as sport management or recreation and leisure. After consent was attained from the university ethics research board and each participant, the first author (K. Lodewyk) administered a short (10 minute) survey to students during part of one class near the conclusion of an elective undergraduate course in formal individual-dual games/sports (third year; $n = 142$ study participants) or formal team games/sports (fourth year; $n = 169$ study participants). Data was collected across six semesters.

The two courses from which data was collected for this study had similar objectives (i.e., learning similarities and differences in skills, rules, and strategies across various formal games/sports), structure (i.e., one 50-minute lecture/week and one 100 minute active laboratory/week in the gymnasium or other relevant venue), and assessments (i.e., two exams worth 40% of their mark, weekly lab assignments worth 35%, and a 60–75 minute small-group lesson presentation worth 25%). The content of each course differed as the focus of one was on formal team games/sports (e.g., softball, rugby, tchoukball [Scandinavian ball sport], netball) whereas the other addressed formal individual/dual games/sports (e.g., badminton, track and field, golf, tennis, squash). In each course, students were provided 20–30 minutes of lecture theory and one assigned reading for each of the three instructional models in this study (direct teaching, sport education, and TGfU). Each model was also demonstrated by trained lab instructors as students physically participated in one 60–75-minute active lesson for each model during lab. During the remaining course labs, small ($n = 2–3$) groups of students designed and received instructor feedback on a 60–75-minute lesson applying one of the models that they then revised and taught to their classmates during lab. Hence, each student

experienced four active lessons using each of the three instructional models in this study. Finally, students submitted written reflections on each lesson as part of their weekly lab assignments. The same professor taught each of the courses although the teacher assistants instructing each lab generally differed across courses. For more information about the PE curricula, teacher certification policies, and pre-service education programs in Ontario see Lu and Lodewyk (2012) and the Ontario Ministry of Education website at: <https://www.dcp.edu.gov.on.ca/en/>

2.2. Study Design, Measures and Data Analysis

The pragmatist theoretical framework undergirded this study. It favors adopting a practical approach rather than adhering to any sole philosophical position or research position, linking theory and practice, using a natural context, and focusing on understanding people and situations rather than measuring observably defined facts (Savin-Baden & Major, 2013). Reflective of this framework, the study utilized a basic qualitative methodology that aims to increase understanding of how individuals interpret their lives and their experiences and what meaning they attribute to those experiences (Merriam, 2009). As it has a predominately exploratory purpose, this method is also not guided by an explicit or established set of philosophical assumptions like phenomenology, ethnography, or grounded theory (Kahlke, 2014).

The survey consisted of a few demographic items (e.g., undergraduate major), a rating of their preferred instructional model (direct, sport education, or TGfU). This item was “Assign each of the following teaching models a % based on how much you prefer it for use when teaching games (please note that the total of all three % should equal 100%): Direct (Traditional), Sport Education, TGfU.” Student were then asked to provide a written response to the question “Briefly explain why you have these preferences (i.e., what is it about each that you like or dislike?).” This item has been used previously to assess preferences and their reasons in university games courses (e.g., Lodewyk, 2015).

Creswell’s (2013) protocol for analyzing qualitative data was used to discover themes from the open-ended item wherein students expounded on reasons for their preferences to the three instructional models in this study. This process involved multiple steps of increasing the specificity with which the data was grouped. Inductive content analysis was used wherein data was read through as an entire set to attain an understanding of what has been communicated by the entire sample. Data was analyzed separately for the likes and dislikes of each instructional model. Each of the statements in the data were then read again and major codes (i.e., ideas) were considered based upon how each statement reflected a code. Some statements from students were placed into more than one code depending on their relevance to each code. Codes were constantly revised if new codes surfaced. Finally, some codes were grouped together into themes based on similarities.

The data analysis was performed by the primary investigator who was a certified PE teacher and a graduate student completing a master’s degree in PE. This individual had many positive previous experiences with PE in university and as an elementary and secondary school student which significantly influenced his

choice of career and post-secondary education degrees. The researcher also previously served as a teacher’s assistant for the experiential labs in each of the two courses from which data was collected for this study. Due to the inherent risk of bias due to this researcher’s positionality, all statements were written and coded verbatim to remove as much researcher interpretation as possible from the meaning of students’ statements (Creswell, 2013). Potential bias in the rater reliability for coding participants’ data statements was tested through the inter-coder agreement protocol recommended by Creswell (2013). This involved having an additional qualified researcher (graduate student) from the same university and of a similar educational path (undergraduate and master’s degrees in PE) that was not involved in the study code a small, randomly selected sample of the raw data (10% of the responses) based upon the original coding scale. After coding, codes were compared to identify similarities and differences. An inter-rater reliability of 93% was found which represented a highly consistent pattern of agreement (80% or higher; Creswell, 2013) and coding continued by the researcher as performed. The few ($n = 8$) instances in the data where there was some discrepancy was noted and discussed by the data analysts to agree on or blend their classification.

3. Results

The descriptive statistics for the instructional model preferences along with their correlations are shown in Table 1. Results revealed that the bivariate correlations revealed significantly ($p < .05$) negative associations between each instructional model ($r = -.40$ to $-.61$) suggesting suitable variance between the models. The preferred instructional model was TGfU (37.06%) followed by sport education (33.69%) and direct teaching (29.44%). Hence, students generally preferred the more indirect or constructivist instructional methods (i.e., sport education and TGfU) compared to the more direct or teacher-centered style.

Table 1. Descriptive Statistics and Pearson Bivariate Correlations

Construct	<i>M</i> (<i>SD</i>)	Direct	Sport Education	TGfU
1. Direct (%)	29.44 (13.22)	-		
2. Sport Education (%)	33.69 (14.67)	-.40*	-	
3. TGfU (%)	37.06 (15.25)	-.47*	-.61*	-

Notes. * $p < .01$; TGfU = Teaching Games for Understanding.

Qualitative analysis of the open-ended item in which students reported what they liked and disliked about each model revealed that participants had substantially more positive (977) than negative (224) statements about each model. To illustrate, the proportion of statements distributed across the three instructional models were: positive (242) and negative (84) about direct teaching, positive (361) and negative (88) about sport education, and positive (374) and negative (52) about TGfU. There was a

notable quantity of participants reported positive aspects for all three instructional models which is illustrated in the following statement: *"I think all should be used. There are times when one model may be more important or beneficial for a specific activity, but it is important to have variety. All students learn differently even when teaching games. Each model has its own strengths and weaknesses, but I do not think that one should be used over the other at all times or one be ignored."*

Direct Teaching

By far the most frequently stated reason for preferring direct teaching ($n = 77$) was how useful it was for teaching the technical aspects of some sports (e.g., track and field, swimming, golf, and tennis) that require a variety of complex skills and/or rules. For example, one student stated: *"Direct is good when teaching a sport where technique is the main outcome to be successful such as swimming and track and field."* Some students ($n = 24$ statements) noted the value of direct teaching being quick, to the point, clear, and transparent. Sample statements included: *"Direct is to the point, commands listening and taking direction"* and, *"Direct – straight to the point, no fluff."* Fewer yet still a noteworthy proportion of statements ($n = 10$ – 15 for each) highlighted how direct teaching maintains safety and prevents injury, helps to ensure that students understand key content including tactics, and is good for teaching novel sports, skills, and concepts prior to students exploring it further for themselves. Examples include: *"Direct teaching is extremely important for teaching proper skills and avoiding risk/injury (golf),"* and *"I prefer the direct/traditional method because I would like to give students the baseline movements before getting them to explore."*

Some ($n = 5$ – 7 statements) asserted that direct teaching was best for enabling teachers to give students the necessary skill practice time, inform students exactly what to do (i.e., practice) to improve on those skills, and ensure that students mastered the important content and skills early in the instructional lesson so they would perform them more properly later. One student stated, *"I believe that being taught the skills to the sports learned in PE class should have a more direct approach. This will ensure a time for drills and practices for individual skills before moving onto a game."* Several statements ($n = 3$ – 5) noted that direct teaching should not be overused but that it was necessary sometimes especially in early elementary school and in high school for students desirous of more expertise. These students also noted the advantage of the teacher having more control over the flow of a lesson and having students learn best from the teacher because they can effectively explain and demonstrate what is to be learned. For example, *"I like the direct method because it can be more focused on improving skill having a better progression, more actual game time and kids learn games properly the first time from someone who knows what they're talking about."*

Constructive criticism of direct teaching focused mainly ($n = 19$ comments) on its lack of emphasis on social interaction, creativity, exploration, application, problem-solving, and socio-emotional development. One example was: *"Direct teaching is good for some of the more complex sports like tennis but it's limiting the creativity and problem solving of students."* Some students ($n = 17$ comments) noted that direct teaching often was relatively boring rather than fun because students mainly listened to learn. For example, one student mentioned, *"I find direct very*

dry and boring no one likes to just sit and listen, they want to be more hands on." Some statements ($n = 12$) highlighted that direct teaching was too closed, teacher-driven, and authoritarian by inadequately enabling students' independent and peer-learning. Sample comments included: *"Direct is too much teaching in my view and you are not letting them think for themselves,"* and *"In direct teaching, athletes/students become dependent on the coach and only perform based on what the leader/coach tells them to do."* Finally, a few participants also emphasized that direct teaching was overused and especially ineffective for students in grades 7–8 and for those with lower or higher skill levels.

Sport Education

The results revealed five primary and several secondary themes in favor of sport education. The first was that it was fun and not boring ($n = 46$ statements). For example, *"In sport education students will engage more; it's more fun."* Students also generally viewed sport education as promoting team/small group focus, work, and building (e.g., *"you get to work a lot as a team"*) ($n = 41$ statements) and that the model teaches responsibility and equity through roles wherein students make their own decisions while participating in a varied of activities inside and outside of the gym ($n = 26$). One such comment was *"enjoy how sport education incorporates and involves all students and gives them specific roles."* The fourth prominent theme emerging from 28 statements was that learning through sport education was holistic, student centered, and open to student exploration as in *"on their own and what works best for them."* A fifth theme stemming from 24 statements was that the model was a *"hands-on"* approach that facilitated maximum student participation, spirit, and love of the game. For example, it *"gives students what they want: high interest level, high focus on affective, and maximum participation and involvement. It is rewarding."*

There were also several less prominent themes (15–19 statements for each) about the merits of sport education. These included that it adds an important focus on peer learning, festivity, culture, and a positive class atmosphere; promotes evolution of social skills/peer relationships and accountability; fosters the learning of skills by playing games that resemble actual sports; provides opportunities for healthy competition including knowing how to appropriately handle losing; and is a motivating and inclusive approach for students in part because each student fulfills a role that helps to make them feel valued. Although less prominent with 8–11 statements for each, other themes worth noting were that sport education develops students' character, leadership, life-skills, problem-solving, creativity, and physical skills mainly through discovery. This is partly illustrated in the following comment: *"I like giving students the responsibility. It will allow students to feel like they can be trusted. It allows students to problem solving, think critically and sometimes resolve conflict. I believe it helps develop leadership skills, collaboration, and teamwork."*

The relatively minor themes ($n = 4$ – 6 statements in each) that were critical of sport education were that it did not provide enough instruction or structure, was less effective for teaching skills, incorporated too much team cheering and competition, and was not appropriate for all ages like young children and those in grades 10–12 because it was too basic, and since students already drop out of PE in high school from PE being too sport-education

centered. Comments also reported frustration with the redundancy (repetition), laid back structure, over-emphasis on student-dependent instruction and student autonomy often resulting in students who lose interest, get bored, and “slack off.” Several statements highlighted that sport education was difficult to implement and to ensure learning and that more than one teacher was needed to apply it well. There was also some concern with the perceived overemphasis on roles that are often inequitable and/or that students do not enjoy performing. Some felt that students who have a lower physical skill would likely feel discouraged or left out in sport education; and, for successful implementation of the model, learners needed to already have the necessary motivation, commitment, and enthusiasm.

Teaching Games for Understanding

There were over seven times more positive than negative comments about TGfU. The two most prominent affirming themes were that TGfU is fun or enjoyable (30 statements) and that learning is fostered through student exploration and autonomous choices in the form of learning on their own and making decisions based on what works for themselves and their team (34 statements). For example, one student remarked: “*I gave TGFU the highest mark as I feel students learn best when they can put their creativity to use and work in a fun, friendly, self-enhanced environment.*” Other prominent (20–23 statements for each) availing aspects were that TGfU fostered participating in and learning from playing games especially a variety of lead-up games; is student-centered and fosters learning using a constructivist approach that emphasizes learning through experience; and, that TGfU allowed for communication, cooperation, decision-making, and collaboration through team-oriented peer learning. There were considerable quantities of students (12–18 statements each) highlighting the merits of TGfU’s promotion of skill development, transferable skills and tactics in and between games, and overall understanding, knowledge, learning, and development; and, that it was particularly useful for younger kids or those new to sport, inclusive by fostering participation of various skill levels, helps keep students motivated and on task, and promotes problem solving and/or critical thinking, helps students to help students to make connections to world outside of games or sports. Several (4–6) statements noted how TGfU helped students develop their own skills before being introduced into more of a competitive game situation, that the step-by-step progression enhanced student’s understanding of the basic skills of a game, that it was effective for comprehending the whole game (not just parts) along with aspects of many different games, and that it fostered an improved movement vocabulary, life skills, autonomy, creativity, and a positive attitude in students. A sample comment was: “*TGFU is student-based, promotes physical literacy, increases movement vocabulary, is more fun, more participation, and encourages more movement.*”

The relatively scant comments (4–11 for each) about students’ dislikes of TGfU were that it was repetitive, boring, and not very enjoyable because, for example, teachers often asked students too many questions, it was not appropriate for early-to-mid elementary school age, took valuable time away from play and skills practice and knowledge, and was often too confusing, rigidly structured, difficult to properly implement, and

challenging to thoroughly complete in the time provided. A sample comment was: “*TGFU take away too much from skill and emphasizes confusing goals. Treats students like delicate flowers.*”

4. Discussion

The aim of this study was to increase understanding about prospective physical educators’ preferences, likes, and dislikes for direct teaching, sport education, and TGfU when teaching games. There was substantial support for each of the three instructional models as 37% preferred TGfU, 34% sport education, and 29% direct. The finding that more students preferred the less direct teaching models of TGfU and sport education over the direct style provides some support for the explicit teaching and practice of sport education and TGfU with undergraduate prospective physical educators that may lead to the desired effect of them changing from more traditionally direct (i.e., behaviorist, authoritarian) styles of teaching towards more constructivist student-centered techniques (Cothran & Kulinna, 2006). This might also coincide with their increased knowledge of the advantages and disadvantages of each of these models and that effective implementation of sport education and TGfU can lead to increased knowledge, motivation, performance, physical activity, affect, problem-solving, and social and life skills (Byrne & Spittle, 2009; Curtner-Smith & Stran, 2009; Oslin & Mitchell, 2006).

Direct teaching remained the preferred instructional model for close to one-third of the students in this study. This corroborates previous findings that direct teaching tends to be the preferred instructional method in both prospective and practicing PE teachers even after professional development in the use of more indirect methods (Butler, 2005; Metzler, 2017; Oslin & Mitchell, 2006). For example, Pill et al. (2018) conducted interviews with secondary physical educators after implementing a training intervention on indirect teaching models. The results revealed that the “teacher directed demonstrate-explain-practice pedagogy remained the common and dominant” model (p. 2). Rovegno and Dolly (2006) report that teachers often resist using less direct teaching models like TGfU and sport education because they believe these methods are risky to their self-esteem, are unfamiliar with them, and emphasize performance-based outcomes such as grades and skill at the expense of mastery-oriented learning outcomes like improvement and cooperation. Our findings might also align with evidence that before and early in their teaching journey, individuals are prone to being more idealistic and open to new less direct methods such as sport education and TGfU (Butler, 2005); however, over time, these beliefs and practices tend to revert to those more traditionally practiced (i.e., direct teaching) and are more resistant to change (Tsangaridou, 2006).

The students’ qualitative comments about direct teaching, sport education, and TGfU provided valuable insights into their awareness of each and perceived advantages and disadvantages of each. The study participants had substantially more positive than negative comments about each model (i.e., 700% more for TGfU, 400% more for sport education, and 300% more for direct teaching). This indicates that, despite their relative preferences for each model, the sample viewed each model as highly more advantageous than disadvantageous. This could be considered an

availing aspect of these prospective physical educators because research has revealed the merits of using a variety of instructional models and occasionally hybrid (blending of) models when teaching PE depending on the learning context and desired outcomes (Casey, 2014; Metzler, 2017). Of course, students likes and dislikes of each model in this study related to their experiences with the other models. For example, some students general dislike about direct teaching as being too teacher-centered and inadequately interactive, autonomous, and inclusive based on their enjoyment of such aspects of sport education and TGfU. On the other hand, students may like direct teaching's emphasis on clarity, transparency, teacher directedness, physical safety, and ensuring content comprehension particularly in novel sports are likely based on how much they may view more constructivist models like sport education and TGfU and over-emphasizing cognitive problem-solving, teacher questioning, affect, competition, and student autonomy.

The main features that students in this study liked about TGfU were that it was exploratory, autonomous (choices), enjoyable, interactive while playing a variety of games, student-centered, and intentionally structured and sequenced to foster student autonomy, communication, decision-making, peer learning, and transferable skills and tactics between games. These findings resemble some of the theorized and research-based benefits of TGfU reviewed earlier such as elevated enjoyment (especially for increased game play), autonomy, team-based social interactions, appropriate challenge, and physical activity (Barba-Martin et al., 2020; Mandigo et al., 2008; Morales-Belando et al., 2018; Oslin & Mitchell, 2006; Wright et al., 2009). On the other hand, there were relatively few stated dislikes about TGfU in this study. The dominant concerns – that it was boring due to too much questioning, had a rigid structure, and was challenging to implement especially in the limited time allotted for most PE lessons – have also been reported previously (e.g., Fry et al., 2010; Mandigo et al., 2008; Light & Butler, 2006; Wright et al., 2009). The results of this study do, however, provide valued insight into relative strength and specificity of students' views about TGfU especially compared to sport education and direct teaching as TGfU was the most preferred model and had the highest ratio of "likes" to "dislikes."

The prominent "likes" about sport education reported in this study were that it was fun (not boring), holistic, student not teacher centered, explorative, and that emphasized collaboration, experiential (hands on) learning, problem-solving, and team building in small groups through participation in novel physical activities that collectively develop responsibility, engaged participation, spirit, and a love for the game. Conversely, students' main "dislikes" about sport education were its perceived challenge to implement, inadequate structure, use of non-experts rather than experts to instruct the main content, and its over-emphasis on team affect (i.e., spirit), competition, sports, and student choices that prompted learners to become too autonomous and "laid back." These findings reinforce many of the research-based advantages and disadvantages of sport education reported earlier (Byrne & Spittle, 2009; Curtner-Smith & Stran, 2009; Farias et al., 2019; Kinchin, 2006; Pritchard et al., 2014; Smither & Zhu, 2011). Our findings signal that sport education instruction can heighten "pedagogical dilemmas" wherein it fosters increased independence, decision-making, team belongingness, game

performance, seasons of play, and the fulfillment of diverse roles while potentially elevating the risk of having students feeling anxious and alienated from the heightened autonomy (especially if they have lower perceived competence and social status), encountering over-aggressive and competitive students, inadequately fulfilling (or knowing how to fulfill) key roles (e.g., student-coach), and by not having the necessary knowledge to effectively implement one's role or the instructional model (Harvey et al., 2020; Rocamora et al., 2019). Some of these challenges may be eased when sport education is implemented with fewer roles and smaller teams (Smither & Zhu, 2011) or when a healthy interdependent relationship exists "between the nature of the instructional processes used, the level of cognitive and social engagement of students with the subject matter, and specific constraints imposed on the game forms (level of defensive pressure, the dimension of the field)" (Farias et al., 2019, p. 267).

There were several limitations of the study that are important to note. Among these are the collection of data over several years, the potential of some training bias for the increased use of less direct teaching models like TGfU and sport education, and the inherent variability in how the study participants experienced the instructional models across the two courses (team and individual formal games), different teaching assistants, and varied student-taught lessons during the game labs. Despite following recommended qualitative data analysis protocols (Creswell, 2013; Merriam, 2009), we also acknowledge the many factors that could influence the number of and names of codes that emerged from the data that include yet are not limited to the length of participant responses and the repetition of codes within a participant. We also highlight that basic qualitative methodology does not infer transferability of results to other settings so it important to consider these and other demographic factors in other settings such as participants' racial/ethnic background and variations in curricula and pedagogy.

In conclusion, the results of this study provide valuable insight into the relative strength and specificity of prospective physical educators' views about TGfU, sport education, direct teaching particularly after receiving significant training and experience with all three models. The findings provide evidence that, in settings where instructional models are explicitly taught and practiced, prospective physical educators can have the progressive knowledge and beliefs about them. The results affirm other research noting that, although early physical educators find more novel indirect models like TGfU and sport education rather difficult to implement, they prefer these compared to direct teaching when they value critical inquiry as a learning outcome, are familiar with the models, and have had significant practice with implementing the models experientially (Pill et al., 2018). Future research should investigate these model preferences more long-term and with collaborative partnership between experts, beginning, and prospective teachers because progressive pedagogical change often takes place gradually and once teachers feel comfortable with an instructional model after as long as two years of professional learning (Casey, 2014). Another useful inquiry could be prospective physical educators' experience with hybrid (i.e., blended) instructional models since research (e.g., Stran et al., 2012) has noted promising outcomes (e.g., elevated student engagement) when blending sport education and TGfU,

especially if instructors have requisite pedagogical content knowledge.

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