



Applying the TARGET Pedagogical Principles in Physical Education to Enhance Students' Physical Literacy

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Applying the **TARGET** Pedagogical Principles



in Physical Education **TO ENHANCE** Students' Physical Literacy

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Previous research (Morgan, Bryant, & Diffey, 2013) has suggested that a mastery motivational climate, emphasizing self-referenced and individualized learning in physical education (PE), promotes the achievement of physical literacy (Whitehead, 2010). Based on Epstein's (1988) original work, Ames (1992) identified the TARGET (acronym for task, authority, recognition, grouping, evaluation and time) structures as the pedagogical principles that promote a mastery motivational climate (see Table 1). The purpose of this article is to propose TARGET as a pedagogical framework to enhance students' physical literacy in the PE curriculum. Specifically, this article will attempt to justify why the TARGET pedagogical structures are, in

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Table 1.
TARGET Structures

TARGET Structure	Mastery Climate
Task	Self-referenced goals Differentiated tasks Varied and multidimensional tasks
Authority	Students are involved in decision-making and are given leadership roles
Recognition	Individualized recognition of improvement and effort Developing nurturing relationships with learners
Grouping	Mixed-ability and cooperative groups
Evaluation	Self-evaluation Individual feedback by the teacher based on improvement and effort
Time	Flexible time for task completion

Sources: Ames (1992) & Morgan (2017)

the author's opinion, consistent with physical literacy. Further, it will make some suggestions as to how the TARGET structures can be manipulated to enhance the components of physical literacy — namely, the knowledge and understanding, perceived competence, confidence, and motivation to remain physically active for a lifetime. In order to do so, a brief introduction to motivational climate is deemed necessary.

Motivational Climate and the TARGET Pedagogical Principles

Motivational climate is defined as a situationally dependent, psychological (perceived) environment directing goals of action (Ames, 1992). When the teacher places an emphasis on learning, self-referenced goals, improvement and effort, a mastery climate is promoted. When such a mastery climate is perceived by students, they are more likely to adopt positive behaviors such as trying hard, selecting challenging tasks, and persisting in the face of difficulty (Ames, 1992; Braithwaite, Spray, & Warburton, 2011). In contrast, when the emphasis is placed on social comparison and outperforming others in PE, an ego-oriented climate is more likely to be perceived by the students. In this case (particularly when perceptions of ability are low), students often adopt more negative behaviors and demonstrate anxiety, boredom and a lack of effort and engagement, in an attempt to protect themselves from demonstrating low ability (Ames, 1992; Braithwaite et al., 2011).

Xiang, McBride and Solmon (2003) identified that PE teachers often create a “blending” of mastery and ego-oriented climates in their lessons. However, Nicholls (1989) argued that, at any one moment in time, individuals (students) can only be mastery or ego involved. It is unclear whether individuals can perceive the motivational climate to be task- and ego-centric at the same time, but it is difficult to imagine how such discrepant perceptions of the motivational climate can occur simultaneously (Duda & Balaguer, 2007).

Manipulating the TARGET structures — task, authority, recognition, grouping, evaluation and time — in PE to be mastery focused has been related to positive motivational responses such as higher levels of perceived competence, satisfaction and enjoyment; less boredom; a stronger preference for engaging in more challenging tasks; higher intrinsic motivation; and a stronger belief that success is the result of effort (Braithwaite et al., 2011; Digelidis, Papaioannou, Laparidis, & Christodoulidis, 2004; Morgan & Carpenter, 2002). Such student responses are highly consistent with the dispositions that physical literacy aims to develop (Whitehead, 2013). The following sections will identify some specific pedagogical principles and strategies that can be employed for each of the TARGET structures in order to enhance students' physical literacy.

Task

The emphasis in the task structure is threefold: (1) to promote personalized self-referenced learning goals, (2) to differentiate the tasks for inclusion and optimal challenge, and (3) to include a variety of tasks to maintain students' interest and engagement (Ames, 1992). Developing the ability to set realistic and achievable learning goals is an essential life skill for the enhancement of knowledge and understanding to maintain a healthy and active lifestyle, which is identified as the primary aim of physical literacy (Whitehead, 2013). In a PE context this process is likely to be shared between the teacher and students initially, but over time the aim should be to develop students' ability to set their own personalized learning goals for a sustainable healthy lifestyle. Teaching basic goal-setting techniques such as SMART goals (specific, measurable, achievable, relevant and time bound) could be one way to achieve this.

Inclusion values the achievement of everyone equally and promotes the notion that all participants can achieve success irrespective of ability and personal circumstances (Stidder & Hayes, 2013). The design and choice of tasks is a crucial aspect in promoting such inclusion in PE lessons and in fostering a climate that helps to motivate students of all abilities to participate. Designing a varied and interesting range of tasks in such a way that the different levels of physical and cognitive abilities are challenged is a key consideration for PE teachers in facilitating an inclusive learning environment (Stidder & Hayes, 2013). Students need to be provided with choices, and they need to feel comfortable to opt in to the tasks that best suit their level of ability at that point in time (ability should be seen as “incremental” and not fixed). In such a learning environment students' confidence and perceived ability levels are protected, and their motivation is more likely to be enhanced (Ames, 1992). The teacher is instrumental in fostering this type of mastery climate, which links well to a “nurturing” pedagogical agenda where the personal development of the individuals is considered paramount (Almond & Whitehead, 2012), and confidence, perceived competence, and motivation are the key outcomes.

Multidimensional lessons, where students participate in different tasks (individually or in small groups) simultaneously and then move between the various tasks during the lesson can also be an effective strategy for maintaining interest and motivation when the lesson content lends itself to this design (Ames, 1992). Such multidimensional lessons also have the potential to limit the comparisons that students naturally make when the whole class is doing the same task.

How the task structure can be manipulated to enhance physical literacy:

- Share the intended learning outcomes with the students to develop their knowledge and understanding of the physical activities and of healthy lifestyles.
- Teach students how to set goals using the SMART acronym (specific, measurable, achievable, relevant and time bound) to promote personalized self-referenced mastery goals and enhance motivation.
- Differentiate the tasks by planning for different levels of ability and by allowing student choice for inclusion and optimal challenge, to develop confidence and physical competence.
- Include a range and variety of tasks within and between lessons to enhance motivation and develop a broad range of physical competences. Include multidimensional lesson designs, where several different tasks take place simultaneously, to help motivate students and de-emphasize opportunities for ability comparisons.

Authority

The authority structure relates to the balance of decision-making between teacher and students during the lessons and is directly relatable to self-determined motivation (Deci & Ryan, 1985; Prusak, Treasure, Darst, & Pangrazi, 2004). A mastery climate encourages learners to take on leadership roles and participate in decision-making during PE lessons. Involvement in decision-making has been associated with positive motivational responses such as feelings of self-competence, responsibility, independence, and greater levels of self-determination and engagement in learning (Ames, 1992; Prusak et al., 2004). This aspect of the TARGET structures is closely related to the “autonomy” need in the self-

determination theory of motivation (Deci & Ryan, 1985; Prusak et al., 2004). As motivation is considered an important outcome of physical literacy, autonomy within the authority structure is considered vital in developing lifelong physical activity behaviors. Student voice, therefore, is an important pedagogical consideration and increasing student choice within the curriculum can have a positive effect on students’ motivation in PE (Ntoumanis, 2001). Linked to this, research by Morgan, Sproule and Kingston (2005) demonstrated that student-centered teaching styles, such as the reciprocal and guided discovery styles from Mosston and Ashworth’s (2002) spectrum, can foster a more mastery-involving motivational climate than teacher-centered styles such as command and practice.

How the authority structure can be manipulated to enhance physical literacy:

- Encourage students to participate in decision-making during lessons to develop their confidence in and knowledge and understanding of physical activities and healthy lifestyle behaviors.
- Provide students with autonomy and choice in lessons — for example, on the type and difficulty level of tasks and the time to spend on each activity — to enhance their self-determined motivation and perceived competence.
- Create opportunities for students to take on leadership roles — for example, captain, coach, referee or timekeeper — to develop their confidence, knowledge and understanding.
- Adopt student-centered teaching styles, such as reciprocal (peer teaching) and guided discovery along with other styles from the “production cluster” in Mosston and Ashworth’s (2002) spectrum of teaching styles to promote a mastery learning environment. See Morgan’s (2011) “Athletics Challenges” for examples of how this can be achieved in track and field lessons.



Recognition and Relationships

The types and reasons for recognition have important consequences for students' learning, perceived competence, confidence and motivation in PE lessons (Ames, 1992). According to Ames (1992), to foster a mastery motivational climate, the recognition should be focused on individual learning, effort and progress rather than on ability comparisons with other students. This will provide equal opportunity for all students to be recognized for their accomplishments — not just the high achievers, as everyone can try hard and there is always room for improvement (Ames, 1992). When students are encouraged to focus on self-referenced improvement, they are more likely to make favorable judgments and to develop a growth mindset (Philpott, 2016).

Killingbeck and Whitehead (2015) emphasized the need to view students as individuals when observing them, and to realize that they are all at different stages of personal development, with different levels of self-confidence. Providing individual feedback and distributing this equally among the class members is a logistical challenge for PE teachers. However, by providing one-on-one feedback the teacher recognizes every student's individual learning needs, which is more likely to enhance their motivation, perceived competence, and levels of confidence (Ames, 1992) — all key factors in enhancing physical literacy.

Almond and Whitehead (2012) suggested that in order to foster a caring and nurturing climate for the development of physical literacy, teachers should value all individuals equally and create a caring and considerate atmosphere that is sensitive to individual differences, needs and interests. Further, building productive work-

ing relationships is a key aspect of the pedagogue's role (Almond & Whitehead, 2012). Given the importance of developing such positive relationships with the students in PE, Morgan (2017) argued that the "R" in TARGET should also represent *relationships* and considered it to be a crucial part of a mastery motivational climate. Further, the "R" could also represent the feeling of *relatedness* among students (Deci & Ryan, 1985), which is covered in more detail in the next section on grouping.

How the recognition structure can be manipulated to enhance physical literacy:

- Encourage all students and attempt to recognize them equally for their individual learning, effort and progress to allow them equal opportunity for success and to develop their confidence, competence and motivation.
- Urge students to track their own progress instead of comparing their performance with others, to develop a growth mindset and enhance self-confidence, perceived competence, and self-determined motivation.
- Consider students as individuals, with different learning needs, and educate them to realize that they are all at different stages of personal development, thereby enhancing their self-confidence and perceived competence.
- Value all students equally and aspire to create a caring and considerate atmosphere that is sensitive to individual differences, needs and interests to boost confidence and motivation.
- Aim to develop good teacher–student relationships by getting to know and understand students as individuals, to help boost their motivation to participate.



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- Plan and design activities that allow opportunities for students to relate with one another during PE lessons to improve their motivation and sense of relatedness. Adopting the cooperative learning model (Dyson & Casey, 2012) is an excellent way of achieving this, as identified in the next section.

Grouping

According to Ames (1992), when the teacher promotes mixed-ability and varied grouping arrangements, a mastery climate is more likely to be perceived. Furthermore, cooperation within groups is an essential requirement of a mastery climate (Ames, 1992). This is consistent with the cooperative learning model in PE (Dyson & Casey, 2012). According to Dyson and Casey (2012), for groups to be truly cooperative, the following elements need to be in place: positive interdependence among group members, face-to-face interaction, individual accountability, personal responsibility to achieve the group's goals, frequent use of relevant interpersonal and small-group skills, and frequent and regular group processing of current functioning to improve future effectiveness. Fostering such team dynamics is a difficult and time-consuming challenge for PE teachers, but, if successfully achieved, it can be an effective way of developing students' confidence and motivation to participate by enhancing their feelings of relatedness (Deci & Ryan, 1985).

Another important aspect of the grouping structure is the use of varied grouping arrangements, which involves regrouping students on a regular basis both within and between lessons (Ames, 1992). This can make it more challenging to build positive interdependence and individual accountability due to potentially difficult interpersonal relationships between different group members. However, such varied grouping arrangements have the potential for significant gains in students' personal and social development, as they would need to practice their interpersonal skills with a wider group of peers (Dyson & Casey, 2012), which can be seen as crucial for lifelong participation in group-based physical activities outside of and beyond the school setting.

How the grouping structure can be manipulated to enhance physical literacy:

- Use varied grouping arrangements by regrouping students regularly, both within and between lessons, to develop interpersonal and social skills for lifelong participation in group-based physical activities.
- Encourage cooperative groups, where students work together toward a common goal and help one another to improve and to develop confidence and motivation.
- Implement the cooperative learning model (Dyson & Casey, 2012) to develop students' confidence and motivation to participate in PE by enhancing their feelings of relatedness.

Evaluation

Evaluation is one of the most important features of the PE environment, and, consequently, students' motivation can be easily undermined by it (Morgan, Milton, & Longville, 2015). Evaluation that emphasizes normative assessment and peer comparisons promotes an ego-oriented climate that can impair students' perceived ability, intrinsic interest, and self-esteem (Nicholls, 1989) — all of which are key factors in physical literacy. In contrast, when evaluation is based on improvement, progress toward indi-

vidual or team goals, participation, and effort, all students have equal opportunity to achieve success and to develop their physical competence. Formative assessment strategies for the promotion of a mastery motivational climate are consistent with assessment for learning (AfL) strategies (Assessment Reform Group, 1999). Such strategies include informing students of the criteria against which they are being evaluated and including them in self-evaluation and reflection activities. By becoming more aware of their own strengths and areas for development, students are more likely to understand their own learning and performance and to be able to set themselves realistic and achievable goals for improvement.

Identifying where the students are, communicating their strengths and areas for development, and agreeing on the next steps required for improvement are all essential elements of effective evaluation (Newton & Bowler, 2015). Further, the use of teacher questioning, combined with self-evaluations, is an important strategy for evaluating learning and fostering a positive motivational environment (Newton & Bowler, 2015). Such evaluation strategies are more likely to enhance the knowledge and understanding, physical competence, and confidence of the students, all of which are key components of physical literacy (Whitehead, 2013).

How the evaluation structure can be manipulated to enhance physical literacy:

- Base student evaluations and rewards on improvement, progress toward individual or team goals, participation, and effort to enable equal opportunity for success and to develop physical competence and confidence.
- Use formative assessment strategies, such as informing students of the criteria against which they are being evaluated, questioning, and including them in self-evaluation and reflection activities, in order to improve their knowledge and understanding of performance and healthy lifestyle behaviors. The Programmed Practice Sheet (Prusak, 2005) is an excellent example of an effective skill evaluation tool that fits especially well with a motivational climate and with promoting physical literacy.
- Identify where the students are in their individual learning journey, communicate with them about their strengths and areas for development, and agree on the next steps for improvement.

Time

The pace of instruction and the time allotted for completing tasks significantly influences students' motivation (Ames, 1992). From a mastery perspective, the key concept is to allow flexible learning time to accommodate individuals with different skill levels (Ames, 1992). If this is neglected, PE teachers will deny differences in students' learning rates and reduce the number of effective learners (Epstein, 1988). In promoting a mastery motivational climate, the use of extension tasks is an effective strategy for those students who finish the task early. Similarly, allowing additional time for those who need it will allow students to progress at their own optimal rate of learning (Epstein, 1988).

How the time structure can be manipulated to enhance physical literacy:

- Allow students flexible learning time on tasks to accommodate their individual differences and learning needs and to develop competence, confidence and motivation.
- Include extension tasks for those students who finish tasks early, and allow additional practice and learning time for those

who need it to promote optimum challenge and to encourage students' motivation, confidence and inclusion.

- Encourage students to be physically active for as long as possible during lessons while also allowing for learning opportunities and the development of knowledge and understanding.

The Interrelatedness of the TARGET Structures

Ames (1992) argued that the TARGET structures are interdependent but posed the more specific question of whether they operate in an additive or multiplicative fashion. If they are additive, then they become complementary and inadequacy in one structure can be compensated for by strengths in another. If, on the other hand, the structures are multiplicative, they cannot compensate for another structure's deficiencies. Researchers have found evidence of an additive relationship between the TARGET structures in PE, with recognition and evaluation being the most influential in determining students' climate perceptions (Morgan, Sproule, Weigand, & Carpenter, 2005). Thus, despite competition being part of PE, teachers can still emphasize, recognize and evaluate the mastery elements of effort, participation, cooperation, parity and persistence (Pangrazi, 2001) and promote an overall mastery-involving climate (Morgan, Sproule, Weigand, et al., 2005).

Conclusion

In summary, a mastery motivational climate is created when the teacher organizes tasks that are multidimensional, designed for variety and enjoyment, and are differentiated to meet the needs of all learners. Additionally, a mastery climate is achieved when the teacher encourages the students to make decisions; when groups are of mixed ability, varied and co-operative; and when recognition is focused on learning, effort and improvement. Finally, the emphasis in evaluation should be on assessment for learning, and for the time structure students should be allowed flexibility in the duration they spend on tasks to accommodate their different rates of learning. When the TARGET (task, authority, recognition, grouping, evaluation and time) principles are adhered to in PE, students' intrinsic motivation is enhanced, and this in turn promotes higher levels of enjoyment, perceptions of competence, and a positive attitude toward the activities (Morgan, Sproule, & Kingston, 2005). Such student responses are entirely consistent with enhancing physical literacy. This article has described how the pedagogical principles of TARGET can be used as a framework to enhance physical literacy in PE lessons.

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