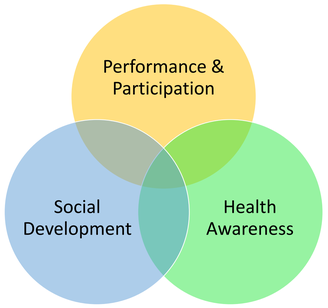
CREATING MASTERY CLIMATES FOR LEARNING WITHIN SECONDARY CORE PHYSICAL EDUCATION

1. Introduction

Due to the desire for Core PE to have an increased accountability, there is often debate regarding the subject's contribution towards students' secondary education. Hardman (2011) prioritised 3 main aims for PE:



However, for many practitioners of PE the primary aim remains developing sporting performance, which the National Curriculum (DfE, 2013) emphasizes through its sportisation of PE .

Whilst the National Curriculum advises on performance being measured by students' personal skill development, technical mastery and performance improvement, through personal bests and self-reflections, the reality is PE remains predominately measured by comparative norms between pupils.

Due to PE being a highly cooperative and competitive environment in lessons, levels of performance are easily visible for social comparison against peers. This results in a marginalisation of low ability students as they become disengaged and less motivated to participate within PE lessons, as well as outside of school, due to the perceived frequency of failure.

Rather than removing performance measures from core PE, which would otherwise limit the subject's credibility, a mastery-oriented climate should be adopted within PE to uphold low-ability participation and celebrate high attainers through self-referenced interpretations of success.

2. Achievement Goal Theory

Nicholl's (1984) Achievement Goal Theory suggests that students, as goal-directed individuals, conceptualise their internal sense of competence along a continuum of **Performance** (ego) and **Mastery** (task) **orientations** to establish their own disposition as to how they reference achievement.

The visual below conceptualises how these dispositions manifest in PE:

PERFORMANCE	MASTERY
Others-referenced perceptions of competence	Self-referenced perceptions of competence
Focussed on the game/competition outcome	Focussed on the mastering the task/skill development
Tendency to withdraw when faced with failure	Tendency to maintain motivation despite failure

Due to the current nature of PE, students are often performance-oriented, resulting in the low ability fostering of ego-avoidance goals. As, rather than display personal improvement, they desire to mask their incompetence through disengagement (Elliot, 1999).

3. Mastery Climates

Teaching Standard 1 (DfE, 2019) sets out a requirement for teachers to create **positive learning environments** that support students' **motivations** and **challenge** them to make **good progress**.

Dispositions can be **influenced by students' perceived classroom climate** to produce their **overall goal orientation** (Ames, 1992). These **motivational climates are of two dimensions:**

1. Mastery climate – influencing a task/mastery goal orientation
2. Performance climate - inducing an ego/performance goal orientation.

- ❑ Due to sports, and often PE, being competitive outcome-based activities, students naturally tend to develop performance goal orientations.
- ❑ Therefore, PE practitioners should actively seek to create mastery climates to foster facilitative goal orientations amongst students, in order to receive its benefits for student learning.
- ❑ Morgan and Kingston (2010) demonstrated that mastery climates can be achieved by manipulating Epstein's (1989) **TARGET structures** to emphasis self-referenced improvement, students' autonomy over learning and differentiated to reduce normative comparisons.

Mastery orientations in PE have been found to be significantly correlated with…

Less Anxiety and self-consciousness → **Greater Enjoyment** → **Greater Confidence** → **Greater Self-Determined Motivation** → **Greater Skill Development & Engagement**

(Review of Correlation studies, Duda & Ntoumanis, 2003)

4. Classroom Practice – Athletics, Sprinting

- ❑ **TARGET** provides a structure to create lessons, of either motivational climate, to induce particular goal orientations amongst students.
- ❑ This is broken down into 6 areas: **Task, Authority, Recognition, Groupings, Evaluation and Time.**
- ❑ The **TARGET** framework has been widely used to foster mastery climates within practical PE (Ames, 1992). Therefore, I structured my lesson around the following hinge question, using the TARGET framework in my planning, to create a mastery climate within my Year 7 sprinting lesson.
- ❑ This worked to avoid a typical sprinting lesson, involving competitive races throughout the lesson with teachers providing few generalised teaching points in-between, fostering performance climates which, although favored high ability students' perceptions of competence, resulted in low ability disengagement.

"How to perform the correct sprinting technique in Athletics"

Task	• Students' had the option of being timed for either 5, 7 or 10 seconds to see how far they could sprint (differentiated task). The increase in distance covered within the timeframe allowed the goal to be self-referenced as they achieved new personal bests with improved technique.
Authority	• Students rotated between different roles after each run: the performer, coach and measurer. The coach had the responsibility of using the technical coaching resource to provide effective individualised feedback, which helped their peer improve their performance.
Recognition	• Throughout the lesson I circulated the class, offering further technical guidance and support for students to give effective feedback. I also gave praise and House Points throughout the lesson for effort, improvement and effective coaching.
Groupings	• Although the classes themselves are ability groups, within the class, students were put into mixed ability groups to support the removal of normative comparisons.
Evaluation	• Students were able to self-assess their performance through the improvement in their own distance markers, as well as peer assess the performance of the peer they were coaching, through a technical checklist, to evaluate their technical improvements.
Time	• The activity was student-led allowing them to do the task at their own pace with their group.

5. Outcomes

- ✓ The use of a mastery climate proved to show an increasing amount of ***engagement from lower ability students***.
- ✓ The greater student autonomy and responsibility ***made it easier for students to assess (self and peer) and see their own progression*** by setting individualised targets to improve.
- ✓ ***All students made greater technical improvements and skill developments*** compared to when I observed a different year 7 sprinting lesson that fostered a performance climate.
- ○ ***Some disengagement from high ability students*** who missed the element of competitive races.

6. Discussion

The mastery climate helped me to create an autonomy-supportive environment, linking to Deci and Ryan's (1985) Self-Determination Theory, by fostering my students self-determined motivation through the constructs of autonomy, competence and relatedness. Ommundsen and Kvalø (2007) found these environments to increase students' intrinsic motivation and decrease amotivation. Accordingly, my lower ability students were more actively engaged in the lesson, through their self-directed learning, questioning, and peer feedback. This resulted in greater participation, echoing Bowler's (2009) intervention's results of greater physical activity levels (9%) found in PE intervention groups using mastery TARGET structures.

Theeboom et al.'s (1995) study found that mastery climates result in greater objective skill development and perceived competence, as they support students' progress reflections. The coaching resource enabled my students to see the clear progressions of sprinting technique. This, supported by peer and self assessment, allowed them to give individualized feedback, used to set personal goals to be achieved with each run. These could then be reflected upon to develop their sense of competence.

There purposefully wasn't an opportunity to display competitive performance in my lesson, to prevent low ability disengagement. However, this adversely effected some engagement of my high ability students, who require these opportunities to satisfy their ego-approach disposition, as Duda & Ntoumanis (2003) suggests is common amongst this student group, and gain a sense of competence.

7. Reflection

Brookfield's (1998) Lenses aided my reflection of the strengths and weakness of creating a mastering climate in my teaching practice, through different perspectives.

	Self	Student	Self	Student
Positives	Greater lower ability engagement	"I can't sprint… Miss look how much further I ran!" (Low Ability Student)	How can I make it contextually relevant to competition?	"I'm bored, can we race yet?" (High Ability Student)
	"They made much more progress"	'predicted enhanced levels of interest/ enjoyment' (Ommundsen & Kvalø, 2007, p.385)	"How can we assess them? We have no comparisons"	'bring some competition… it's a competitive sport isn't it' (Morgan & Kingston, 2010, p.740)
Negatives	Peer	Literature	Peer	Literature

8. Conclusion and Future Considerations

The benefits of creating mastery climates in PE lessons are extensive, with lower ability students benefitting the most due to the focus of competence being evaluated through personal improvement rather than normative comparisons against peers. This limits perceptions of incompetence and subsequent disengagement.

On reflection, there does still need to be some competitive elements in order to satisfy those students with ego-approach goals, namely high ability students.

Therefore, in future I will …

1. Continue implementing mastery climates within Core PE lessons and evaluate its effectiveness with other classes.
2. Introduce a competitive element into the lesson to satisfy the needs of ego-approach goal orientated students.
3. Incorporate cooperative learning to achieve a group goal, enhancing students' relatedness and optimising student motivation and inclusion in PE (Morgan 2019).

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