

# Reconceptualising Motivational Climate in Physical Education and Sport Coaching: An Interdisciplinary Perspective

## Abstract

The purpose of this article is to re-conceptualise the phenomenon of motivational climate in Physical Education and sport coaching as a concept that is not purely psychological in nature, but also highly dependent upon pedagogical and sociological theories. In doing so, an interdisciplinary perspective is promoted where the three aforementioned disciplines combine and intersect in order to enrich teachers' and coaches' understanding of motivational climate. The ultimate aim is to assist practitioners in fostering an effective and stimulating learning environment. The pre-existing TARGET acronym (task, authority, recognition, grouping, evaluation and time) (Epstein, 1988) is used to structure the paper. These TARGET structures are further developed with links to relevant pedagogical and sociological theory to enrich them. Further, a strong emphasis is placed on 'relationships', which has not previously featured in the TARGET literature. It is anticipated that inter-disciplinary research on motivational climate will emerge from the ideas presented.

**Key words:** Motivational climate, interdisciplinary, TARGET

## 24 Introduction

25 Over the last thirty years or more, the perceived motivational climate created by Physical Education  
26 (PE) teachers and sport coaches has been predominantly considered from a psychological  
27 perspective, with a particular focus on Achievement Goal Theory (AGT) (Ames, 1992a; Nicholls,  
28 1984; Roberts, 1992) and more recently, Self Determination Theory (Deci & Ryan, 1985; Tessiera,  
29 Smith, Tzioumakisc, Quested, Sarrazina, Papaioannouc, Digelidis, & Duda, J., 2013). However, this  
30 paper argues that many aspects of the motivational climate fostered by PE teachers and sport  
31 coaches are pedagogical and sociological in nature and that focusing predominantly on the  
32 psychological domain limits the theoretical understanding of motivational climate and, perhaps  
33 more importantly, the practical strategies that PE teachers and sport coaches can adopt to foster a  
34 positive learning environment. The purpose of this article, therefore, is to reconceptualise the  
35 phenomenon of motivational climate in PE and sport coaching from an interdisciplinary perspective  
36 and to demonstrate how the pedagogical and sociological aspects of teaching and coaching  
37 environments are interrelated with the psychological perceptions of the participants (See Fig 1.). To  
38 achieve this, firstly, the paper briefly reviews the existing psychological theories associated with  
39 motivational climate, namely, AGT and SDT. Secondly, the paper introduces Epstein's (1988)  
40 pedagogical structures (Task, Authority, Recognition, Grouping, Evaluation and Time – TARGET ) that  
41 have been found to enhance the motivational climate in educational and sport settings. Thirdly, the  
42 various inter-related psychological, pedagogical and sociological concepts and theories are identified  
43 for each of these TARGET structures (See Table 1.). Finally, the paper proposes new theoretical  
44 perspectives and inter-disciplinary research directions for future consideration.

45 Existing psychological perspectives of Motivational Climate

Beginning with the most dominant theoretical conception of motivational climate, the psychological perspective initially focused on AGT (Nicholls, 1984) and the different perceptions of the motivational climate as either mastery (self-referenced) or ego (normative) involving (Ames, 1992a). It was theorised that these two different perceptions of the motivational climate were strongly influenced by the teacher or coach's behaviours in combination with an individual's goal orientation, or predispositions to be self-referenced (task oriented) or comparative with others (ego oriented) (Ames, 1992a; Duda, & Balaguer, 2007; Roberts, 2001). More recently, ego orientations were further divided into approach and avoidance goals (Elliott & Church, 1997; Elliott & MacGregor, 2001) but the basic theoretical concept was that an individual's goal orientations (predispositions to be task/mastery or ego focused) in combination with how they perceived the teacher/coach behaviours, significantly impacted on their perceptions of the motivational climate. In simple terms, if the teacher/coach emphasised self-referenced improvement, individual progress, effort and persistence then it was more likely that the climate would be perceived as mastery involving by the participants. If, on the other hand, the climate encouraged normative comparisons between participants as the criteria for success, then there was a stronger likelihood that an ego involving climate would be perceived by the participants (Ames, 1992a; Duda, & Balaguer, 2007; Roberts, 2001). These motivational responses however, were mediated by the participants' dispositional levels of task and ego orientations (Roberts, 2001). Perceptions of a mastery climate were shown to be associated with positive motivational responses such as beliefs that success was dependent on effort, high levels of satisfaction and enjoyment, choice of challenging tasks, intrinsic motivation and low levels of boredom (Carpenter & Morgan, 1999; Goudas & Biddle, 1994; Treasure, 1997). Perceptions of an ego climate, however, were related to a belief that success was dependent on ability, a choice of less challenging tasks, higher levels of boredom, lower levels of enjoyment and satisfaction, and a greater likelihood of cheating and unethical behaviours (due to a win at all costs attitude) (Carpenter & Morgan, 1999; Kavussanu & Roberts, 2001; Ommundsen & Roberts, 1999; Treasure, 1997). Whilst it is acknowledged that AGT and the mastery and ego involving aspects of

the practical environment are important areas to consider in evaluating and manipulating the motivational climate, this article argues that they are certainly not the only considerations and that a number of other interrelated, psychological, pedagogical and sociological aspects of the motivational environment fostered by the practitioner should also be considered.

## **TARGET structures**

The work of Ames (1992a; 1992b) in particular, identified the teacher/coach behaviours that influenced the motivational climate. Emerging out of Ames' earlier educational research (Ames, 1992b; Ames & Ames, 1984; Ames & Archer, 1988), which focused on individualised, competitive and cooperative rewards structures, these teaching behaviours were represented in the literature by the acronym TARGET which referred to the task, authority, recognition, grouping, evaluation and time structures of a teaching situation (Ames, 1992a; Epstein, 1988). Briefly, Ames (1992a; 1992b) used Epstein's (1988) original TARGET structures to argue that a mastery motivational climate was fostered by self-referenced, differentiated and varied tasks, a sense of individual autonomy, the recognition of effort and individual progress, homogenous and cooperative groups, individualised formative evaluation/assessment and flexible time to learn. Previous intervention studies in PE and sport coaching demonstrated that it was possible to manipulate the TARGET structures to be mastery involving. This resulted in more positive motivational responses for the participants, such as higher levels of perceived competence, satisfaction and enjoyment, less boredom, a stronger preference for engaging in more challenging tasks, higher mastery goal orientations and a stronger belief that success was the result of effort. In contrast, when the TARGET structures were more ego-involving, participants' tended to be more ego oriented, had lower levels of perceived ability, satisfaction and enjoyment, were less interested in achievement tasks and believed success was the result of ability and deception (Solmon, 1996; Morgan & Carpenter, 2002; Digelidis, Papaioannou, Laparidis, & Christodoulidis, 2004; Hassan & Morgan, 2015).

Although it has not been considered in the sport and exercise psychology research to date, this paper suggests that the TARGET structures (Ames, 1992b) are closely associated with the innate needs that Self Determination Theory (Deci & Ryan, 1985) is built upon, i.e. autonomy, competence and relatedness. Autonomy is part of the authority structure of TARGET and emphasises the need for teachers/coaches to give ownership of activities to the participants in order to maximise their motivation. Competence is closely associated with the task, recognition and evaluation structures of TARGET where self-referenced goals, differentiated tasks and individualised recognition and evaluation based on effort and progress is more likely to motivate and be inclusive of all individuals. Finally, relatedness is the need to feel related to others, which is a key facet of cooperative grouping in TARGET. This paper argues , therefore, that TARGET is a broader framework to utilise in considering the psychological aspects of motivational climate than SDT and autonomy supportive environments (Tessiera, et al., 2013), that seemingly only cover a relatively small part of the pedagogical structures of the TARGET framework.

Whilst TARGET has been traditionally associated with AGT and adopted as part of this psychological theory (Ames, 1992a), in its original form it was developed as a pedagogical framework from educational research to assist schools in developing more effective students and schools (Epstein, 1988). Furthermore, a key premise of this paper is that the psychological perceptions of the motivational climate, by participants in PE and sport coaching environments, is heavily influenced by their social relationships with the teacher/coach and their peers. This article, therefore, is structured around the different aspects of TARGET and will aim to demonstrate the pedagogical and sociological links, which have not been considered in the motivational climate theory or research to date. These interdisciplinary connections have emerged over a period of twenty years of research and teaching by the author and this paper is an attempt to make sense of these links in a way that will help to facilitate practitioners in PE and sport coaching to foster a more positive motivational climate for their participants. It is not claimed that the theories covered in this article are all inclusive of everything that potentially influences the motivational environment in PE and sport settings,

rather, this is an attempt by the author to demonstrate the interdisciplinary relationship between key theories and concepts that he has been exposed to over a period of more than twenty years as a teacher, coach, teacher trainer, coach educator and pedagogic researcher.

## **Task**

Starting with the task structure of TARGET, three aspects were considered by Epstein (1988) and Ames (1992a) as instrumental in influencing the motivational climate, namely task goals, differentiation of tasks, and variety, novelty and creativity of the task design. There is a significant body of knowledge around goal setting within the discipline of sport psychology (e.g. Weinberg & Gould, 2003), and guiding principles for practical application which can be developed and implemented in teaching and coaching settings (Hardy, Jones, & Gould, 1996; Locke & Latham, 1990). It is beyond the scope of this paper to go into the goal setting literature in any detail but the primary focus, from a mastery motivational climate perspective (Ames, 1992a), is that individuals should be involved in setting their own self-referenced and self-determined goals, focusing on improvement and personal progress (i.e. process goals, rather than outcome goals, (Kingston & Hardy, 1997)). However, there is an assumption here that learners have sufficient knowledge and experience to set appropriate goals at the correct level and to challenge their own learning effectively. In reality, this process is complex and more likely to be successful when the learning is assisted by a more knowledgeable other, i.e., the teacher or coach (Vygotsky, 1978). This emphasises the need for shared goal setting between practitioner and coach (Jones & Standage, 2006) and setting appropriate learning tasks for a range of different abilities.

The second facet of the task structure, differentiation, lends itself more to a pedagogical emphasis than a psychological one. It has close links with the educational concept of inclusion, which 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). According to Ames (1992a), in order to foster a mastery climate and provide equal opportunity for all

participants to achieve success in PE and sport coaching environments, the tasks set by practitioners should cater for a range of abilities and be set at different levels of difficulty. This concept can be considered in the planning process by using terminology such as 'working towards', 'working at', and 'working beyond' a particular level of a task. If the coach/teacher has planned effectively with previous knowledge of the ability of the group, the majority of a mixed ability group of participants will most likely be 'working at' the planned level of difficulty of a particular task. However, there will be some participants who will be 'working towards' the task by engaging in an activity that is less challenging than the majority of the class. Similarly, others will be participating in an activity that is 'beyond' the level of challenge of the majority of the class, in order to maximise their learning. Such a task structure is consistent with an Inclusion style of teaching in Mosston and Ashworth's teaching styles Spectrum (2002). This style allows the learners to select the level of difficulty of a task at an appropriate level for their individual ability and learning. However, research has shown that some learners selected inappropriately in order to protect their self-esteem in such situations (Goldberger & Gerney, 1986). One key consideration, therefore, is to design tasks in such a way that the different levels of ability are not overtly evident, or emphasised by the practitioner. In such learning environments, the participants' confidence and perceived ability levels are protected and not negatively affected (Ames, 1992a). Whilst it may be evident that the task is different for some individuals or groups, it is important that all participants are made to feel that they are considered equal and are achieving positively at their own level of ability. The practitioner is instrumental in setting this learning climate, which links well to a 'caring' (Nodding, 2005) and 'nurturing' (Almond & Whitehead, 2012a) pedagogical agenda. In such a learning environment, the emotions and personal development of the individual participants are considered paramount. Such pedagogical skills are seen as crucial in developing physical literacy, defined as "a disposition acquired by human individuals encompassing the motivation, confidence, physical competence, knowledge and understanding that establishes purposeful physical pursuits as an integral part of their lifestyle." (Almond & Whitehead, 2012b, p68).

The third and final component of the task structure of TARGET is the variety, novelty and creativity of the tasks (Ames, 1992a; Epstein, 1988). Whilst the impact of varied and novel tasks is fairly obvious in relation to promoting interest and relieving boredom, the principles of skill acquisition and the role that repetitive practice plays in this process should not be neglected (McMorris, 2015). Mc Morris (2015) draws on the principles of skill acquisition including strategies such a whole and part learning, massed, spaced and variable practice, to emphasise the need for variety and perceived relevance of tasks to alleviate boredom and motivate learners. Cecchini, Fernando Riez, and Mendez-Gimenez(2014) promoted the motivational and learning effects of problem based tasks within the TARGET framework in order to engage and challenge the learners. This suggests that variety and novelty of tasks are important aspects in motivating individuals. However, according to Mc Morris (2015), repetition is also important for learning and should be an important part of the process. In order to foster a motivational climate that also promotes effective learning, therefore, a balance between task novelty and repetition is suggested. Future research should investigate this balance in developing effective learners and enhancing the motivational climate.

## **Authority**

There are numerous interconnecting psychological, pedagogical and sociological theories that relate specifically to the authority structure of TARGET. These include self-determination theory (Deci & Ryan, 1985), empowerment (Kidman, 2005), orchestration (Jones et al., 2013), scaffolding and the zone of proximal development (Vygotsky, 1987), the teaching styles Spectrum (Mosston & Ashworth, 2002) and teaching models such as Teaching Games for Understanding (TGfU)(Thorpe, Bunker & Almond, 1986) and Sport Education (Seidentop, 1994). The authority structure in a mastery climate promotes active learning by allowing shared responsibility for decision making, active thinking, questioning, learner choice, self-direction, and leadership (Epstein, 1988). As already identified, SDT is built on the premise of autonomy being an innate human need (Deci & Ryan,



198 1985). On this basis, empowering individuals by providing them with choices and a sense of  
199 ownership over the tasks they are participating in is a key strategy in teaching/coaching situations. In  
200 the sport coaching context, empowerment involves athletes being actively engaged in shaping and  
201 directing what happens in their sporting life (Kidman, 2005). This approach is believed by some to  
202 enable athletes to take greater ownership and responsibility for their sporting performances,  
203 resulting in greater tactical and technical understanding and higher levels of commitment (Kidman,  
204 2001).

205 Whilst the benefits of an empowering and autonomy supportive environments are well  
206 documented, researchers have also recommended a more in-depth examination of the practices,  
207 philosophies and ideologies regarding its implementation (Jones, 2007; Nelson, Cushion, Potrac &  
208 Groom, 2014). Indeed, some have argued that empowerment is more of an illusion created by the  
209 coach to 'orchestrate' the environment, and that shared leadership is more of a realistic portrayal of  
210 the coach-athlete relationship (Jones, Bailey & Thompson, 2013; Jones & Standage, 2006; Santos,  
211 Jones & Mesquita, 2013). This is consistent with the approach taken by elite 'All Blacks' rugby  
212 coaches, Graham Henry and Wayne Smith in the period between 2004 to 2011, culminating in  
213 winning the world cup in 2011. This was a philosophy to provide players with ownership, but  
214 importantly, it was a dual management approach between both players and coaches, rather than  
215 complete player autonomy. In the words of one of the coaches, Wayne Smith:

216 "We went away from making any unilateral decisions as [the] coaching and management  
217 team, and [instead we] involved the leadership group in everything... [in] all areas of our  
218 campaigns." (Hodge, Henry & Smith, 2014, p65.).

219 Orchestration is a metaphor used to identify what good practitioners do within dynamic and  
220 complex contexts, such a coaching and teaching (Jones et al., 2013; Jones & Wallace, 2006). Jones et  
221 al., (2013) argued that to orchestrate a situation effectively the coach/teacher needs to notice what  
222 is going on and to manage the micro-politics between individuals and groups that may occur when  
223 greater autonomy is given to them. A further concept discussed by Jones et al. (2013), is social irony

(Hoyle & Wallace, 2008). In explaining this concept, Jones et al., gave an example of providing athletes with more authority as weakening coach control over decisions for which he/she was held accountable. It could be argued, therefore, that a coach who cares about the learning, health and safety, and personal, social and emotional development of his/her athletes, has to maintain authority on many occasions in order to create the most effective learning environment. A perceptive and caring practitioner wouldn't, for example, expose a less competent performer, who lacks self-confidence and leadership qualities and has a low social status within the group, to a team captaining or officiating position within a fully competitive game environment without providing a high level of support and control of the environment. This appears reminiscent of emotionally intelligent coaching (Chan & Mallett, 2011), which emphasises the importance of the interpersonal connections between leader and followers. The authority structure is, therefore, rife with intricacies and difficulties in PE and sporting environments and it should not simply be a case of providing all learners with maximum autonomy at all times. However, there is strong evidence that an autonomy supportive environment is worth striving for in fostering a positive motivational climate, provided that it is well 'scaffolded' and supported by the coach/teacher.

Santos, Jones and Mesquita (2013) identified the notion of 'scaffolding' learning as an essential part of orchestration. Scaffolding has traditionally been associated with Vygotsky's (1987) social constructivist theory and is a metaphor for the process of assisting learning within a 'zone of proximal development'; the gap between tasks that can be completed by the learners without assistance and tasks that require coach/teacher assistance to be successfully achieved. Setting tasks within an individual's zone of proximal development is, therefore, an important part of developing an effective learning climate. Giving learners' autonomy, without scaffolding the learning process, would, according to Vygotsky (1987), not enable effective learning to take place. Encouraging an appropriate amount of learner autonomy, whilst still providing a 'scaffold' is, therefore, an essential aspect of social constructivist learning.

Mosston and Ashworth's (2002) teaching styles Spectrum is based on who (teacher or student) makes the decisions in the pre-impact (planning), impact (delivery) and post-impact (evaluation) phases of a teaching/coaching episode. There are two clusters of teaching styles; the reproductive cluster where the learners reproduce information presented by the teacher/coach, and the productive cluster, where the learners are more active in producing their own outcomes. Clearly, the productive cluster promotes greater learner authority/autonomy and is more mastery involving. Research by Morgan, Kingston and Sproule (2005) showed that more pupil-centred teaching styles including guided discovery and reciprocal, resulted in more mastery focused teaching behaviours and greater pupil motivation than the more traditional teacher centred command/practice style of teaching. However, Mosston and Ashworth (2002) argued that no teaching style is superior to any other (non-versus perspective) and different learning outcomes and teaching situations lend themselves best to different teaching styles. Therefore, according to the 'non versus' perspective, more pupil centred teaching styles may not necessarily be the best approach in certain teaching/coaching situations. .

Two further pedagogical models that lend themselves well to an empowering and autonomy supportive environment are TGfU (Thorpe, Bunker & Almond, 1986) and Sport Education (Seidentop, 1994). It is beyond the scope of this paper to consider these two models in any great depth but both of them are built on social constructivist learning principles that focus on discovery based learning and group interaction. Both models promote student/athlete authority within the sessions by offering them opportunities to make choices, learn how to find solutions to problems and develop higher levels of motivation (Kidman, 2005).

## **Recognition**

Noticing (Mason, 2002), nurturing (Almond & Whitehead, 2012a) and positive feedback are all closely associated with the recognition and rewards element of TARGET, which emphasises equal opportunity and distribution of rewards based on individual progress, effort and improvement.

According to Mason (2002, p. xi), pedagogues need to 'increase the range and decrease the grain size' of what they notice to develop their professional practice. The ability to see what is going on in the practical context is, therefore, a precursor to good pedagogy and requires highly developed observational skills. From a motivational perspective, Killingbeck and Whitehead (2015) emphasised the need to view learners as individuals when observing them, and to realise that they are all at different stages of their personal journey, with different levels of confidence and self-esteem. Pedagogically, therefore, an appreciation of individual differences and particular learning needs, should, play a part in observation and recognition (Killingbeck & Whitehead, 2015). Killingbeck and Whitehead (2015) also warned of the dangers of personal beliefs and frames of reference when observing others, emphasising the need for pedagogues to consider the motives of the learners rather than their own, when noticing learners. Noticing improvement, effort, confidence and social skills (or a lack of) requires a different level of observational skills than simply noticing the most able performers. The Sport Education model (Seidentop, 1994) allows for the recognition and rewards of such personal and social skills and focuses the practitioner on noticing them.

From a pedagogical perspective, Almond and Whitehead (2012a) advocated a nurturing and caring community in PE and suggested that individuals only learn to care about others and act responsibly if the environment supports this form of concerned response. They suggested that, in order to foster a caring and nurturing climate, 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 working relationships is a key aspect of the pedagogues role and an essential element of this is giving the learners a voice and allowing them to take responsibility over their own learning (Almond & Whitehead, 2012a). Strategies such as self and peer evaluation lend themselves very effectively to this type of motivational environment, both of which will be discussed further in the evaluation structure of TARGET to follow. Providing pupils with a voice enables the practitioner to recognise the learners' perceptions of their own progress and to gauge their effort, engagement and desire to learn. Private rather than public recognition can also

help to develop a caring and nurturing environment and to foster positive relationships with learners. However, there are some issues around the practicalities of providing individual private feedback in a PE and sport coaching setting (Hassan & Morgan, 2105). Given the importance of striking up a rapport and developing positive relationships with the learners, this paper argues that the R in TARGET should also represent 'relationships'. To date, this has been a missing element of the TARGET acronym that is considered to be a crucial part of motivational climate.

In order to foster an effective motivational climate, recognition in the form of feedback to the learners from the coach/teacher should be intelligible and prescriptive, informing them of what they need to do to improve (McMorris, 2015). The skill acquisition literature discusses the feedback process in detail, covering aspects such as the timing, frequency and precision of feedback (McMorris, 2015). The overriding message is that feedback should be given sensitively on an individual basis, take previous learning into consideration and focus on individual improvement and progress. Such an approach combines the pedagogical, psychological and sociological aspects of teaching/coaching. Positive reinforcement on a one to one basis that values progress, effort and persistence, and is both encouraging and specific, is likely to foster a positive motivational climate. However, it is important to remember not to over use praise, or it could become meaningless to the learners (Whitehouse, Barber & Jones, 2015).

## **Grouping**

From a sociological and pedagogical perspective, grouping learners into mixed ability groups (Ames, 1992a) is a contentious area of TARGET. AGT (Nicholls, 1984, 1989) perspective, argues that homogenous ability based groups will result in perceptions of ability differences (ego perceptions) between groups and potentially have a negative impact on the self-esteem, confidence and perceived ability of those in the lower ability groups. However, unless a mature and highly cooperative environment is fostered by the practitioner, it is quite possible that mixed ability groups could result in more overt ability comparisons; as the less able and skilled participants will be unable

to perform at the level of the more able, which could emphasise ability differences more than working with others of a similar ability level to themselves. This is supported by Hassan (2011), who found that sport coaches believed that the confidence of less able athletes can be negatively affected when they are grouped with more able performer. Further, more able athletes can become frustrated in such situations as they are not being challenged at their optimal level (Hassan, 2011). However, if a climate of cooperation and teamwork can be effectively developed and nurtured, heterogeneous grouping arrangements can result in a positive motivational environment where all group members can learn effectively. This sense of belonging is consistent with the need for relatedness (Deci & Ryan, 1985) and team affiliation, which is a key aspect of the Sport Education Model of PE (Seidentop, 1994). In this model, pupils are grouped into teams early in the unit and participate in these teams throughout the whole season (usually over a half or full school term). An important part of the teachers' role in this situation is to facilitate cooperative teamwork and to ensure inclusion and equal opportunity for all. Recognition and rewards are given for aspects such as good leadership, teamwork and fair play, thus developing a sense of community and cooperation which are key elements of a positive motivational climate.

Positive interpersonal relationships are the key to an effective grouping structure and also an important element of the social learning domain in Mosston and Ashworth's (2002) Spectrum of teaching styles. Peer or reciprocal teaching, where one pupil acts as the teacher and another as the learner, is a good example of a Spectrum teaching style that aims to promote peer interaction and social development. The interactions between the 'teacher' and 'learner' are crucial to the success of this style. Consequently, part of the teacher's role within such teaching episodes is to ensure that the feedback given by the pupil adopting the teaching role, is both positive and sensitive to the needs of the learner. The type of grouping arrangement within peer teaching or small group work allows for more individual feedback for the learners. However, it is essential that the feedback given is both accurate and encouraging in order to create a positive motivational climate (Epstein, 1989). Allowing pupils to group themselves into friendships pairings is often the most beneficial in terms of

developing a positive and caring culture but this raises potential issues and difficulties. Indeed, the grouping of learners into self-selected or friendship groups, versus teacher/coach selected non-friendship groups is an interesting and challenging area. Learners often prefer to participate in friendship groups, but this may not be the most effective arrangement for learning and development. Grouping them into non-friendship groups is an opportunity to teach the importance of cooperative group work and developing new friendships, as well as the need in life to work productively with others who are not your friends, or even those you do not like! However, this requires a level of maturity that can sometimes outweigh the need for a more positive working atmosphere. Varying the grouping arrangements and criteria for forming groups is, therefore, a key strategy in fostering a positive learning environment (Ames, 1992a).

## **Evaluation**

Progressing to the Evaluation structure of the TARGET framework, the pedagogical principles that relate best to developing a positive motivational climate are, in the authors opinion: assessment for learning (AfL), formative assessment, ipsative assessment and social exchange. Assessment or evaluation is an integral part of learning and teaching and is a key element in creating an effective motivational climate (Ames, 1992a). Recognising where the learners are, communicating their strengths and areas for development and identifying steps required to further improve are all essential elements of effective evaluation (Newton & Bowler, 2015). Formative assessment is designed to assist the learners in progressing their own learning, whereas, summative assessment is concerned with prior achievement and usually given at the end of a session or block of sessions. Formative assessment looks forward, and is also known as AfL, whilst summative assessment looks back and is also referred to as assessment of learning (Newton & Bowler, 2015). From a mastery perspective (Epstein, 1988; Ames, 1992a), AfL is what pedagogues should aim for in order to optimise the motivational climate. Feedback has been found to play a crucial role in the evaluation process and in promoting AfL (Assessment Reform Group, 1999). According to Ames (1992a) and

Epstein (1988) it should be individualised and focused on effort and progress, thus providing equal opportunity for it to be received. Further, practitioners should aim to distribute feedback equitably amongst the participants, to help motivate all participants rather than a select few (Ames, 1992a), whilst also acknowledging that some learners may need more feedback than others. A further consideration for practitioners is the manner in which they provide feedback. This involves not only 'what' is said to the learners, but 'how' it is said including the accompanying body language, eye contact and facial expressions, in addition to the opportunity for learners to question the feedback and clarify any misconceptions. Coaches' positivity was identified by Keegan et al. (2009) as having a significant motivational effect on young athletes and should be a key consideration, even when providing corrective feedback, in order to promote a positive motivational climate.

Ipsative assessment compares an individuals' level of achievement with their own previous attainment and is totally consistent with the principles of a mastery motivational environment. Comparing performance levels with those of others (ie ego involving evaluation) is known as norm-referenced assessment, whereas criterion referenced assessment measures performance against predetermined criteria (Newton & Bowler, 2015). All of these types of evaluation have a place in PE and sport coaching, but the AGT literature (Nicholls, 1984; 1989; Ames, 1992a), predominantly emerging from a Western perspective, contends that ipsative (mastery involving) assessment is most likely to motivate the majority of participants in achievement situations such as PE and sport. Evaluation that emphasises normative comparisons (norm referenced assessment) can impair self-worth, intrinsic interest and perceived ability (Nicholls, 1989) and should, therefore, be used sparingly. However, there are times in performance sport environments when some participants are more highly motivated by comparative situations, when they have the opportunity to compete against others (Hassan, 2011). This is particularly the case for individuals with high levels of perceived ability (Roberts, 1992).. However, there are times in all performers' careers when their confidence and perceived ability is put under strain and in such circumstances, emphasising comparative standards may have a negative impact on their motivation.



The use of questioning, along with self and peer evaluation are all important strategies for evaluating learning and in fostering a positive motivational environment (Newton & Bowler, 2015). Effective questioning technique is essential in evaluating learning, knowledge and understanding and is an important aspect of constructivist theory and 'scaffolding' learning (Vygotsky, 1987). The use of more open ended questions promotes higher order thinking skills such as application, analysis, synthesis and evaluation whereas, more closed questions promote lower order skills such as recall (Bloom et al, 1956). PE research suggested that teachers' questions were more fact-seeking in nature and seldom required the learners to think beyond the simple recall of information (McNeill et al., 2008). Similarly, recent studies in sport coaching have demonstrated that coaches ask more convergent than divergent questions (Harvey et al., 2013). Clearly, this is an area that needs to be focused upon and improved in order to foster a more positive learning environment. Using more divergent discovery and problem solving teaching styles (Mosston & Ashworth, 2002) would seem to be a positive direction to move towards in developing more effective questioning strategies. Questioning can also help to develop mutual respect, provided the responses are valued and not dismissed.

Peer evaluation requires careful planning and involves one learner observing and providing constructive feedback to another. The use of criteria sheets can aid this process and focus the observer on the key points for evaluation and improvement. However, it is imperative that the observer understands the criteria that they are feeding back on. It is the responsibility of the practitioner to ensure that this is the case and that the feedback provided by the observer is constructive and delivered in a sensitive manner to the needs of the learner. The process of peer evaluation also has a positive effect on the learning of the observer, as it deepens their understanding of the task. In such teaching/coaching episodes, the feedback given by the class teacher or coach should not be on the performance of the learner, but on the accuracy and quality of the feedback by the observer (Mosston & Ashworth, 2002). Self-evaluation is more difficult in many ways, as performers cannot see themselves, unless they use a video camera. They can,

428 however, feel the movement and see the outcome of their performance which allows them to  
429 reflect upon and improve their learning.

#### 430 **Time**

431 The final TARGET structure is time which has links to the pedagogical concept of 'time on  
432 task' or 'active learning time' in PE (Metzler, 1989). This has been defined as the time learners are  
433 engaged in motor and other learning activities in order to achieve the learning outcomes (Metzler,  
434 1989). Time to learn is, therefore, more than just time to be physically active and can involve  
435 cognitive and social learning activities which are not physical in nature. From an inclusive learning  
436 perspective, the key concept is to allow flexible learning time to accommodate the variations in the  
437 time needed for learning by individuals with different prerequisite skills (Ames, 1992a; Epstein,  
438 1988). If this is neglected, practitioners deny differences in learning rates and reduce the number of  
439 effective learners (Epstein, 1988).

#### 440 **Relationships**

441 Although it is an aspect that has already been touched upon in the authority, recognition  
442 and evaluation structures of TARGET, the relationship between practitioner and learners is an area  
443 that is mostly neglected in TARGET, but one that is vitally important in fostering an effective  
444 motivational climate (Mageau & Vallerand, 2003). In an attempt to identify the significance of  
445 relationships, the following section will further argue for the importance of positivity, caring, respect  
446 and the use of humour in developing an effective motivational climate. Beginning with positivity,  
447 Keegan et al. (2009) found that this was the one consistent factor identified by youth sports  
448 participants as having a positive effect on their motivation. In a similar vein, Whitehouse et al. (2015)  
449 discussed the importance of energy and enthusiasm and of being alert, lively and encouraging in  
450 motivating learners. They argued that a lethargic teacher/coach is unlikely to create a dynamic  
451 motivational climate and strategies such as voice intonation, positive body language, gestures, facial

expressions and listening skills all play a key part in creating a positive motivational environment (Whitehouse et al., 2015). This is compatible with the dimension of inspirational leadership in transformation leadership theory (Bass & Riggio, 2006).

According to Bass and Riggio (2006), inspirational leadership involves promoting optimism and enthusiasm, which inspires and motivates others to exceed expectations and realize a collectively shared vision of excellence. The other components of transformational leadership that have relevance in fostering a positive motivational climate are: idealized influence, intellectual stimulation and individualized consideration. Idealized influence occurs when leaders serve as role models and demonstrate high standards of ethical and moral excellence. According to Bass and Riggio (2006), this is likely to engender admiration, trust, and respect from others whilst inspiring them to maximize their personal and collective potential. Intellectual stimulation takes place when leaders promote more flexible and creative thinking patterns by prompting individuals to think independently, challenge commonly held assumptions, and view problems from different perspectives. Finally, consistent with the concept of inclusion and differentiation discussed earlier in this article, individualized consideration occurs when leaders provide challenges and empathetic, supportive feedback that is tailored for each individual, and when they recognize and celebrate the personal contributions that each individual makes to the group (Bass & Riggio, 2006).

Transformational leadership is a critical feature of transformational teaching that can maximize students' potential for academic success, and significantly enhance students' attitudes, values, beliefs, and skills (Slavich & Zimbardo, 2012). Slavich and Zimbardo define transformational teaching as 'the expressed or unexpressed goal to increase students' mastery of key course concepts while transforming their learning-related attitudes, values, beliefs, and skills'. This process is, therefore, totally consistent with a mastery motivational climate and involves creating dynamic relationships between teachers and learners that promotes student learning and personal growth (Slavich & Zimbardo, 2012).

Being approachable and sympathetic are factors that demonstrate a caring pedagogy (Nodding, 2005). Practices such as valuing learners, helping them, being tolerant of mistakes, supporting, encouraging and treating them respectfully are all indicators of a caring pedagogy, which emphasises the personal and social growth of the learners (Seidentop & Tannehill, 2000). If participants feel listened to and respected by the teacher/coach then they are more likely to apply themselves fully (Whitehouse et al., 2015). Mutual respect, accepting and valuing each other's viewpoint, is also a key element of a positive motivational climate. Getting to know the participants is an important aspect in developing and gaining this mutual respect, as is learning participants' names and showing an interest in them as people. However, there is a danger of over familiarisation with some participants and keeping a distance and a level of authority can also be important in order to maintain respect. In this sense, respect is something that is given or not by the participants, based on their judgement of the coach/teacher as a professionally and socially competent leader (Potrac et al., 2002). Respect, therefore, needs to be earned in order to develop and maintain a positive motivational environment.

The appropriate use of humour can also be a powerful skill in developing effective relationships and a positive learning climate (Ronglan & Aggerholm, 2013). Humour can be used in a self-effacing way to laugh at one's self to defuse potential conflict, to break the ice in new situations, or to reassure learners who are anxious, demonstrating the human side of the teacher/coach (Ronglan & Aggerholm, 2013). According to Ronglan and Aggerholm, a sense of humour and appropriate use of it can be seen as part of overall social competence, which is an important element of fostering a positive learning environment. Indeed, pedagogical research has demonstrated a positive relationship between teachers' use of humour and student learning (Wanzer & Frymier, 1999). Furthermore, shared humour amongst a group can also lead to a sense of belonging, which links well to the grouping structure of TARGET (Ames, 1992a) and innate needs in Self Determination Theory (Deci & Ryan, 1985), both of which have been discussed earlier in this article.

## Conclusion

In conclusion, this article has attempted to argue the case for a re-conceptualisation of motivational climate as a phenomenon that is not purely psychological in nature, and represented predominantly by psychological theory, but also highly dependent upon pedagogical and sociological structures and theories in PE and sport coaching environments. Indeed, this article argues that it is the practitioners' understanding of the interdisciplinary relationships between these three areas that will help them to make sense of their practical contexts and to foster an effective and stimulating learning environment. Interdisciplinary research is often difficult to generate but it is anticipated that this article will inspire such research into motivational climate in PE and sport settings by identifying the interdisciplinary link within the phenomenon, whilst adopting a modified TARGET framework (See Table 1.). In particular, the greater focus on the relationships between teacher/coach and learners is a potentially rich area for future research. As such, the addition of 'relationships' to the recognition and rewards (R) structure of TARGET is considered to be an important conceptual and theoretical development in this article. The other key argument is that the modified TARGET framework presented in this paper provides the broadest and most holistic framework to combine the psychological, pedagogical and sociological aspects of motivational climate and should, therefore, be further researched and developed to investigate and broaden the concept of motivational climate.

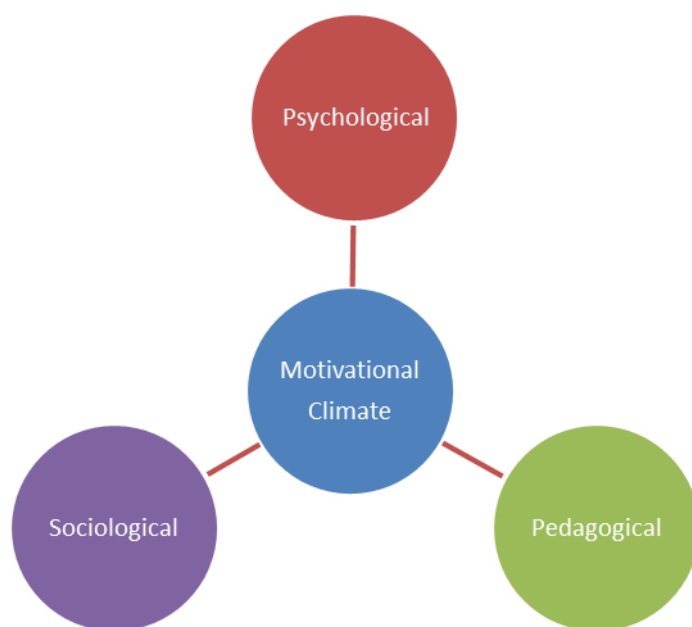


Fig 1. The different disciplines that impact on motivational climate in PE and sport coaching

TARGET Structure	TARGET Description	Interdisciplinary Links
Task	Shared goals Differentiation Variety & Novelty	Goal setting Inclusion Teaching styles Spectrum Physical Literacy Caring & nurturing Skill acquisition TGfU model
Authority	Decision making and leadership opportunities	Self Determination Empowerment Orchestration Scaffolding Teaching styles Spectrum Teaching models: TgfU & Sport Education
Recognition, Rewards & Relationships	Notice individual progress effort and improvement.  Develop effective relationships with learners. Care for individuals.	Noticing Nurturing Feedback Sport Education model Positivity Caring Respect Humour Transformational leadership Transformational teaching
Grouping	Cooperative groups Homogenous & heterogeneous Variety	Relatedness Affiliation Interpersonal relationships Sport Education Model Peer/reciprocal teaching styles
Evaluation	Individual self-referenced progress and effort	Observation Assessment for learning Formative assessment Questioning Feedback Peer & Self evaluation Ipsative assessment
Time	Flexible time to learn	Time on task Active learning time

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540 Table 1. Redefined TARGET structures and interdisciplinary connections

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