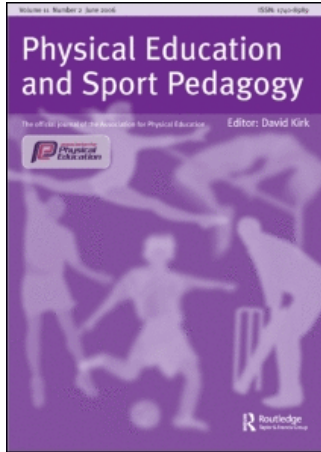


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Physical Education & Sport Pedagogy

Publication details, including instructions for authors and subscription information:
<http://www.informaworld.com/smpp/title-content=t713674664>

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Alvaro Sicilia-Camacho ^a, David Brown ^b
^a Almería University, Spain
^b Exeter University, UK

First Published on: 14 November 2007

To cite this Article: Sicilia-Camacho, Alvaro and Brown, David (2007) 'Revisiting the paradigm shift from the **versus** to the **non-versus** notion of Mosston's Spectrum of teaching styles in physical education pedagogy: a critical pedagogical perspective', *Physical Education & Sport Pedagogy*, 13:1, 85 - 108

To link to this article: DOI: 10.1080/17408980701345626

URL: <http://dx.doi.org/10.1080/17408980701345626>

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Revisiting the paradigm shift from the *versus* to the *non-versus* notion of Mosston's Spectrum of teaching styles in physical education pedagogy: a critical pedagogical perspective

Alvaro Sicilia-Camacho^{a*} and David Brown^b

^aAlmería University, Spain; ^bExeter University, UK

Background: Teaching styles in physical education (PE) found prominence through Muska Mosston's teaching styles 'Spectrum' model. Mosston's Spectrum has been remarkably successful and its logic currently underpins the conceptualisation of teaching styles in many PE practices in Western education systems, including those in the United States, Australia, Spain and the United Kingdom. While we acknowledge the enormous contribution that Spectrum research has made to the development of PE pedagogy over the years, the Spectrum has evolved in ways that give cause for concern.

Purpose: Drawing on a broadly critical pedagogical perspective, it is the purpose of this paper to focus attention on the nature of this evolution and the possible problems it introduces. First, we identify the paradigm shift that occurred in Mosston's second edition that has been further consolidated in subsequent editions. Next we elucidate how this shift involved the original teaching styles Spectrum moving from a *versus* (opposing) notion of learning and teaching to a *non-versus* (non-opposing) notion. While seemingly innocuous, we contend that this shift can be seen in epistemological terms as an advance (back) towards a positivism in PE despite years of dialogue from emerging interpretive standpoints. Next, we consider some of the creeping practical consequences of this shift as its emphasis on a continuing drive towards a universalised technocratic delivery of PE knowledge takes hold in institutional culture. More specifically, we consider the impact of this re-objectification of teaching as a form of de-personification of the individual teacher and pupil. Finally, we focus on the way in which the logics embedded with the *non-versus* model of the Spectrum are vulnerable to manipulation by coalitions of powerful groups who continually seek to impose their own agendas on PE.

Conclusions: We conclude with a call for a greater critical scrutiny to be paid to the 'Truth' claims of these and other 'scientific' models of pedagogy that have found renewed vigour in an increasingly neo-liberal, ends-led, performativity culture in Western education systems. In so doing we

*Corresponding author. Universidad de Almería, Facultad de Humanidades y Ciencias de la Educación, 04120 La Cañada de San Urbano, Almería, Spain. Email: asicilia@ual.es

suggest that a rapprochement of the curriculum and pedagogy literatures in PE research remains an important catalyst for a sustained and sophisticated critique to (re) emerge.

Keywords: *Critical pedagogy; Spectrum of teaching styles; Paradigm; Politics; Subjectivity; Epistemology*

Introduction: revisiting Mosston's Spectrum of teaching styles

Muska Mosston's *Teaching physical education* (1966) remains one of the most influential pedagogical texts in PE. Indeed, a few years after its publication, Nixon and Locke (1973) stated that this was 'the most significant advance in the theory of physical education pedagogy in recent history' (p. 1227). In 1992, a little over 25 years after the publication of the first teaching style Spectrum, *The Journal of Physical Education, Recreation, and Dance* published a series of articles that further endorsed the major impact of this text on PE teaching and research within the United States, parts of Australia and Europe (Franks, 1992; Mellor, 1992; Mueller & Mueller, 1992; Telama, 1992). In the United Kingdom the *British Journal of Physical Education* has also been receptive to discussion strongly advocating the teaching styles logic with a special feature dedicated to the subject in 1993 (Mawer, 1993; Williams, 1993; Goldberger & Howarth, 1993). These and a substantial number of other scholarly publications suggest that the logics embedded within teaching styles, and the Spectrum, have taken a central place in PE pedagogy to a point where they have become an almost taken-for-granted core logic for knowledge transmission (see for example, Metzler, 1983; Biddle & Goudas, 1993; Whitehead & Capel, 1993; Mawer, 1999; Cothran *et al.*, 2005). However, there has been an important paradigm shift from the first edition of *Teaching Physical Education*. This paradigm shift concerns how Mosston's teaching styles Spectrum has come to be conceptualised in an increasingly universalising and technocratic direction as exemplified by Goldberger's (1992) proclamation that 'although the theory has not yet completed the full program of testing Nixon and Locke called for, results to date confirm the theory's power to both describe teaching events and predict learning outcomes' (p. 45). It seems that this shift advances a positivistic understanding of learning and teaching that has largely slipped through the net of the critical pedagogical gaze in recent years. This is significant because critical pedagogues would have been likely to ask some probing questions about the epistemological plausibility of such a shift with reference to the possibility of making predictive and causal claims between the nature of teaching and learning that are now being assumed. Part of the reason for the absence of scrutiny may be because the main focus of critical pedagogy over the past two decades has quite rightly been preoccupied with the content of PE, rather than the methods of educational transmission and the not so subtle neo-liberalising pressures that have been placed upon it by a raft of government policymakers internationally (see for example, Kirk, 1993; Penney & Evans, 1999; Tinning, 2000). Another possible reason for the lack of critical scrutiny is that one outcome of the educational paradigm debates of the late 1980s and early 1990s

(see for example, Eisner, 1988; Guba, 1990; Sparkes, 1992; Smith, 1992) may have led to something of a 'fusion of horizons', to borrow Gadamer's (1975) often-cited term, in which a greater dialogic understanding was fostered between different groups representing quite different epistemological and methodological standpoints. This outcome may have had the unintentional consequence of closing down, 'settling' or even finalising cross paradigm discussion and critique on the topic.

With the above scenario in mind, we strongly agree with Penney and Evans (1999) who comment that 'perhaps more than anything else we need to talk of pedagogy in physical education' (p. 135). This paper undertakes to do just that by examining the paradigm shift in the teaching styles Spectrum from a broadly critical-pedagogical perspective. In adopting this perspective, we align ourselves with both Kirk (1992c) and Fernández-Balboa's (1998) definitions of critical pedagogy that place Wright-Mill's (1959) notion of the 'sociological imagination' at the centre of the critical pedagogical endeavour. Kirk (1992c) continues:

Integrated with this historical dimension, Mills argues that the sociological imagination requires 'anthropological insight' or, to say this another way, a concern for meaning-making activities of a society, and a critical edge or political consciousness. Expressed in this way, the sociological imagination is at the heart of what I mean by the term critical pedagogy. (Kirk, 1992c, pp. 226–227)

Furthermore, as Kirk outlines, the main task of a critical pedagogy is to 'combine these three dimensions of the sociological imagination to see beyond the obvious, surface image' (p. 227). Therefore, the main task of this paper is to get beneath the surface of one of the dominant models of knowledge transmission in PE with a view to making some sense of the nature and implications of the shift that has taken place. We should strongly qualify at the outset that this critique is not intended to be taken as a criticism of the whole of Mosston's work, or his conceptualisation of teaching styles or the Spectrum *per se*. Nor is it a nostalgically motivated call for a return to the *versus* notion of the Spectrum. As with most observers, we would contend that there is much to value in the work done in this area by those developing the Spectrum since its inception. Both ideas represent potentially powerful models for knowledge transmission. However, rather like Fernández-Balboa (1998) we shall contend that any pedagogical model that attempts to universalise and objectify will necessarily have to separate personhood from pedagogy, and thereby once again devalue and neglect the important issue of subjectivity. Therefore, we agree with O'Sullivan *et al.* (1992) that in spite of the 'competing viewpoints' addressed in this paper, we very much hope that our viewpoint is received in the spirit of a critical collegiality, as this is how it is intended. Moreover, we hope that the concerns raised in this critique will promote reflection upon the direction of change in which that the Spectrum has taken its logics and how the model might be able to engage with subjectivity in future revisions.

The development of the 'versus' logic of the teaching styles Spectrum

The original Spectrum of teaching styles was made up from a collection of eight commonly observed teaching approaches or *styles*: (1) teaching by command; (2) teaching

by task; (3) reciprocal teaching; (4) small group; (5) individual programme; (6) guided discovery; (7) problem solving; and (8) creativity (the next step). The first version of the Spectrum of teaching styles was based on a *versus* notion of teaching in which those styles categorised as reproductive (i.e. command style, teaching by task and reciprocal teaching) were considered in opposition to another category of styles termed productive/discovery (i.e. guided discovery and problem solving). Furthermore, the *versus* notion also relates to oppositions between the teaching styles *within* these broader categories. Therefore, for example, command and task styles are seen as simultaneously reproductive yet oppositional and similarly, problem solving and creativity styles are both seen as productive yet remain oppositional as they were based on quite different assumptions about learning and teaching. These multi-layered categorical oppositions in Mosston's (1966) original Spectrum were a theoretical attempt to construct a coherent linear developmental learning *and* teaching framework. The main oppositional logic at work here was based on two philosophical assumptions; first, that learning PE was an 'evolutionary' *process* that had as its goal an idealised end point: independent decision-making ability and an open mindedness towards knowledge. Second, it considered teachers as pivotal participants in this process, who were subjective, idiosyncratic beings that are themselves always learning how to teach. The dominant metaphor here is that of a journey for teachers and pupils alike. Subsequently, a number of acknowledged philosophical standpoints emerge from this position that we outline briefly below.

First, Mosston developed the original Spectrum of teaching styles to offer teachers an evolutionary process of teaching physical activity which consistently augments and develops two further processes: (a) the individualised learning process; and (b) the cognitive process (Mosston, 1966). Thus, as Mosston (1966) noted in the preface of the original text, the Spectrum of styles reflects a (his) philosophy of education. Importantly, these teaching styles were arranged around a conception of teaching that accorded it a pivotal role for promoting independent pupil decision-making about finding and using alternative ways of learning. As Mosston (1981) later acknowledged, this first proposal for the Spectrum of teaching styles reflected and shared in the coming together of notions of a liberal education and the discourses of individualisation that emerged as progressive educational theory during the 1960s and the early 1970s. Indeed, Mosston's (1965) work, *Developmental Movement*, published just one year earlier than his Spectrum of teaching styles, closely illustrates this individualised concept of teaching. In it he comments:

The materials presented here are based on two premises: one is that overall physical development is composed of various physical attributes, such as agility, balance, flexibility, endurance, strength and relaxation. Every person possesses these qualities in varying degrees of development, and every person relies on these qualities when physical performance is required . . . The second premise is that these physical attributes can be developed. These can be developed to higher levels by gradual sequences of movement determined by the laws of motion in a manner that allows anyone to start his [sic] development at his present level. (Mosston, 1965, p. vii)

Secondly, because the Spectrum was constructed around this single philosophical orientation—the independence in decision-making—teaching styles could be hierarchically ordered from command to creativity according to their perceived lowest or highest likelihood of promoting this single philosophical ‘good’, that of independence in pupil’s decision-making. This conception of Spectrum of teaching styles ‘assigns a very “small value” to style A. Each subsequent style has a greater “value” until “maximum value” is assigned to the style that promotes creativity’ (Mosston, 1981, p. viii). As Figure 1 shows, it would consist in progressing through different teaching styles toward the highest independence in student decision-making. Education towards learner independence, Mosston (1966) assumes, must be ‘a ... freeing process that the student’s dependency on the teacher gradually diminishes until the free student emerges’ (p. 17). In fostering this, teachers should take advantage of the dependence which the student usually has to guide them during the learning process.

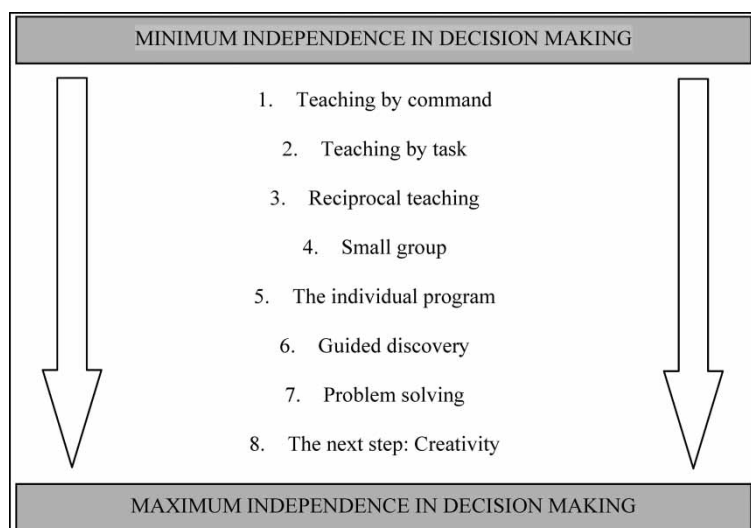


Figure 1. Structure of the continuum in teaching styles of Mosston (1966)

Third, Mosston (1966) conceptualised teaching styles from the perceived need to identify and clarify the structure of teaching behaviour. It means that the identification of each style and its design helps teachers become aware of their own learning process. Thus the structure of teaching styles helps to cover the gap between the structure of all substantive subject matter, in PE on the one hand, and the structure of learning, on the other. However, in the original Spectrum Mosston (1966) admits that when a teacher uses a teaching style it will be impossible to disconnect it from his/her *self*. That is, in this version of Spectrum the term teaching style refers to a structure that is dependent of one’s subjective idiosyncrasies. As Mosston (1966) clarifies:

The teacher brings... his [sic] total self—his cultural background, all his biases and personal limitations, his own needs for self-assertion, and his value structure—and this largely dictates his behavior and the conduct of this teaching. The chain of decisions he makes about the student and about the handling of subject matter is a projection of

these conditions, enhanced by a personal belief about what the teaching–learning process should be. (Mosston, 1966, pp. 2–3)

Because the *versus* notion of teaching styles is assumed to be dependent upon a teacher's idiosyncrasies then the teacher would be expected to locate themselves as professionals at a given point on the Spectrum. This location would reflect the teacher's current beliefs and circumstances in both personal and professional senses. Consequently, there would be a range of positions along the Spectrum that teachers would typically find themselves located at in relation to their current 'ability' to teach in ways that fostered the maximum independence of decision-making in pupils. In all cases, as illustrated in Figure 1, progression through the continuum of the Spectrum will be in one direction. Furthermore, it would be a slow process because it would involve, in some way, a transformation of the professional (and often also the personal) identity of the teacher.

Therefore, the original *versus* notion of the Spectrum contained within it, a universalist conception of the ultimate goal for teachers and teaching (fostering independent thinking and decision-making). This universalism, it should be qualified, rests broadly on the values of a progressive liberal education, an approach that is not in itself immune to criticism or manipulation by educational politics. However, the *versus* notion did at least present a philosophically *coherent* set of premises because the proposal of teaching styles is viewed as an evolutionary process of teaching which attempts to increase the independence of decision-making in pupils, and it also tried to accommodate the issue of subjectivity. Furthermore, it was acknowledged that all teaching styles conflict with one another because each is built upon a slightly different philosophical assumption about what education is and, consequently, will be closer or further away from the overall objective of the Spectrum (the development of independence of thought and decision-making in pupils). Therefore, teaching styles, while incompatible in juxtaposition, can be coherently organised into a Spectrum as a process of transformation along a continuum moving broadly from one paradigmatic position to another over time.

The *non-versus* notion as paradigm shift

As indicated earlier, there have been a number of new editions of *Teaching in Physical Education* since the 1980s (Mosston, 1981; Mosston & Ashworth, 1986, 1994, 2002). All these editions have steadily revised the Spectrum, gradually increasing its scope to include up to 11 teaching styles. Most of these changes to the Spectrum were intended to go beyond the 'The Discovery Threshold'. This threshold clearly distinguishes between *groups* of differentiated styles 'in terms of their objectives, the behaviours of the teacher, and the expectations of the learner's behaviour' (Mosston & Ashworth, 1986, p. 233). As we indicate in Figure 2, each teaching style can be either on one or the other side of the discovery threshold. In what amounts to a categorical consolidation, these were alphabeticised (see Figure 2) and now range from reproduction styles (styles A–E) to the group of styles based on discovery and producing the unknown (styles F onwards) (Mosston & Ashworth, 1994, p. 5).

<i>Original Spectrum proposed by Mosston (1966)</i>	<i>Spectrum proposed by Mosston (1981)</i>	<i>Spectrum proposed by Mosston and Ashworth (1986)</i>	<i>Spectrum proposed by Mosston and Ashworth (1994, 2002)</i>
Teaching by Command	The Command Style (Style A)	The Command Style (Style A)	The Command Style (Style A)
Teaching by Task	The Practice Style (Style B)	The Practice Style (Style B)	The Practice Style (Style B)
Reciprocal Teaching: The use of the partner	The Reciprocal Style (Style C)	The Reciprocal Style (Style C)	The Reciprocal Style (Style C)
The Use of the Small Group			
The Individual Program	The Self-Check Style (Style D)	The Self-Check Style (Style D)	The Self-Check Style (Style D)
	The Inclusion Style (Style E)	The Inclusion Style (Style E)	The Inclusion Style (Style E)
THE DISCOVERY THRESHOLD			
Guided Discovery	The Guided Discovery Style (Style F)	The Guided Discovery Style (Style F)	The Guided Discovery Style (Style F)
Problem Solving			The Convergent Discovery Style (Style G)
The Next Step: Creativity	The Divergent Style (Style G)	The Divergent Style (Style G)	The Divergent Production Style (Style H)
		The Individual Program: Learner's Design (Style H)	The Individual Program: Learner's Design (Style I)
	Learner's Initiated Style (Style H)	Learner's Initiated Style (Style I)	Learner's Initiated Style (Style J)
		Self-Teaching Style (Style J)	The Self-Teaching Style (Style K)

Figure 2. Links between Mosston's original styles (1966) and the revisions proposed by Mosston (1981) and Mosston and Ashworth (1986, 1994, 2002)

However, the most important change introduced after the second edition of the book, is not the modification and creation of new teaching styles within the Spectrum. Rather, it is a paradigm shift of the Spectrum's conceptual foundation which became reconstructed around a different perspective of teaching altogether: this is what we refer to as the shift from a *versus* (oppositional) to a *non-versus* (non-oppositional) notion of teaching PE. The revised conceptual basis of the Spectrum is moved away from the central aim of facilitating the independent, decision-making individual, towards the idea that each style has its own place in reaching a plethora of discrete, differentiated objectives each of which might be achieved by using single styles. From this revised perspective, 'no style, by itself, is better or best' (Mosston, 1981, p. viii). Consequently, teaching styles are no longer ordered hierarchically, as illustrated in Figure 1, but rather the use and the importance of each individual style is determined by the objectives or 'ends' set (see Figure 3).

That these objectives might come to assume a prioritised position, over teachers' personal characteristics, is illustrated by Mosston and Ashworth (1994) themselves who clarify that, 'in the literature, this term [teaching style] is presently used in reference to personal style. . . . In this book, as in the previous edition, it is just the opposite. The term teaching style refers to a structure that is independent of one's

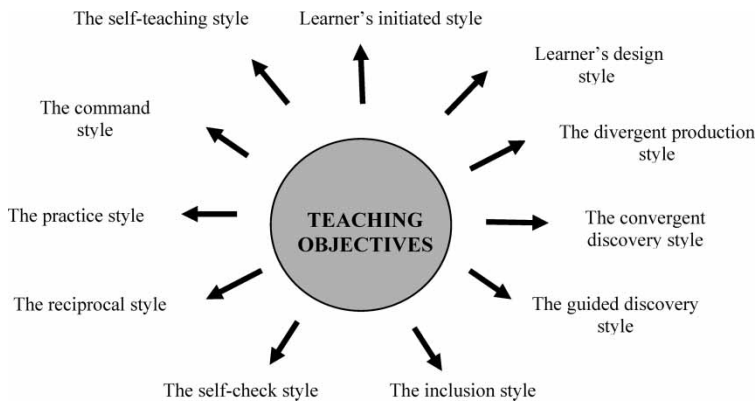


Figure 3. Spectrum structure since the 2nd edition of *Teaching Physical Education* (Mosston, 1981; Mosston & Ashworth, 1986, 1994, 2002)

idiosyncrasies' (p. vii). Indeed, in their 1994 edition, Mosston and Ashworth acknowledge that the original Spectrum was based on a conception of teaching which *prevented* the construction of a unified and universal theory:

I realized that my experiences, my idiosyncrasies were mine—solely mine. I realized that they were only a part of the story of teaching. But, what is the other part? Or perhaps other parts? I kept asking myself: What is the body of knowledge about teaching that is beyond my idiosyncratic behaviour? Is there such a possibility? Is it possible to identify a framework, a model, a theory that will embrace the options that exist in teaching, or a framework that might embrace future options? . . . It became clear to me that arbitrary teaching, scattered notions, fragmented ideas, and isolated techniques—successful as they might be—do not constitute a cohesive framework that can serve as a broad, integrated guide for teaching future teachers. The search for a universal structure of teaching had begun. (Mosston & Ashworth, 1994, p. vii)

Therefore, the definition of teaching style shifts to mean almost the opposite of its original conception, moving away from the individual and towards more objectified and universal claims and understandings of what it means to educate and be educated. From a critical pedagogical perspective it is hard not to recognise this as Mosston shifting his considerable intellectual abilities towards an allegiance with a epistemologically modernist stance, a feature of which is the removal, denial or 'excavation' of subjectivity, including his own. Consequently, the purpose of the Spectrum is no longer to develop a teacher toward facilitating creativity and independence in pupil decision-making, but rather to provide teachers with 'alternatives in teaching behavior and to invite them to travel with the students along the Spectrum in both directions, indeed, to exhibit mobility ability' (Mosston, 1981, p. ix). This concept of *mobility ability*, as Goldberger (in Mosston & Ashworth, 2002) clarifies in a foreword to the fifth edition, comes to be defined as the practical 'ability of a teacher to comfortably shift from one teaching style to another to match changing learner objectives' (p. xi). Perhaps inevitably, embedded within this shift is the concomitant value judgement that henceforth 'good teachers' could and should use and mix

different teaching styles driven by criteria externally set and independent of their own idiosyncratic teaching selves. As Goldberger (in Mosston & Ashworth, 2002) advocates, such objectively referenced performativity is now 'not only acceptable, it is the hallmark of an effective Spectrum teacher' (p. xi). In principle, this shift might seem an inherently positive development, with the idea that no one teaching style is better than another and, therefore, teachers must use a diverse range of teaching styles to achieve their learning objectives in their classes (see Figure 4). As Mosston (1981) clarifies, 'this development in the conception of the Spectrum, as a schema of integrated contribution of all styles is the major change since the first edition' (p. viii). However, while seemingly innocuous, these foundations changed the very meaning and the concept of what had hitherto been understood as a teaching 'style' in a strongly universalising direction.

The rationale for this shift is clearly important. Mosston (1992), and Mosston and Ashworth (1994) gave at least four reasons for accepting the *non-versus* notion within the Spectrum of teaching styles: '1) personal; 2) the diversity of the student population; 3) the multiple objectives of education; and 4) the need for a coherent, comprehensive and integrated framework for teaching' (Mosston, 1992, p. 27; Mosston & Ashworth, 1994, p. 6). These are indicative of a shift in logic that warrants some brief elaboration. Firstly, the *non-versus* notion means the teacher should not become anchored in a particular method of teaching and that he/she should explore new forms beyond the styles in which he/she is already proficient. Secondly, by using different styles, the teacher can adapt to the diversity of learning abilities among his/her students and can reach out to a greater number of students. Thirdly, teaching PE involves a wide-ranging set of objectives that requires a

The ' <i>versus</i> ' notion of teaching styles	The ' <i>non-versus</i> ' notion of teaching styles
<ol style="list-style-type: none"> 1. The Spectrum of teaching styles is founded on an explicit particular philosophical base: the importance of the independence of making decisions. 2. Teaching styles are hierarchically ordered according to the chances of reaching the maximum independence of making decisions. For instance: minimum value for command style and maximum value for creativity. 3. Teaching styles are dependent on teacher's idiosyncrasies. 4. Teachers modify their teaching styles as they are going to assume and interiorise the new basis of the next style. The mobility through the spectrum is a slow process. 5. Teachers must travel along the spectrum in one direction: toward the independence of students. 	<ol style="list-style-type: none"> 1. The Spectrum of teaching styles is presented as a 'universal' theory about teaching; as a schema of integrated contribution of all styles. 2. No teaching style, by itself, is better or best. Each style has its place in reaching a specific set of objectives. 3. Teaching styles are independent of teacher's idiosyncrasies. 4. Teachers modify their teaching styles as soon as they can learn the alternatives. When teachers master all teaching styles mobility is constant. 5. When teachers master all styles they can travel along the Spectrum in both directions depending on the specific set of objectives they must reach.

Figure 4. Characteristics of the '*versus*' and '*non-versus*' notion of teaching styles

wide variety of teaching styles. As a result, 'teachers who are willing to expand their teaching repertoire beyond their personal styles and wish to reach more objectives and more students are ready to learn additional teaching styles' (Mosston & Ashworth, 1994, p. 7). Finally, if meeting the aims is the most important aspect of teaching, we must ascertain which style is appropriate for reaching the objectives of a 'given episode', so that 'every style has a place in the multiple realities of teaching and learning' (Mosston & Ashworth, 1994, p. 7). Consequently, the new basis for the Spectrum of teaching styles shows an image of the 'good' teacher as a teacher who should be familiar with, and able to use, a wide range of styles in line with learning abilities and with the ultimate aim set for his/her teaching. As Jewett and Bain (1985) asserted, research on teaching reveals a profile of the effective teacher as a professional who has a range of teaching competencies or styles and who knows when and how to use these competencies to promote student learning. The logic embedded in recent editions of *Teaching Physical Education* goes as follows. To be able to select the teaching style appropriate for each class sequence, the teacher is assumed to have a full grasp of each and every one of the styles in the Spectrum. Once the teacher is fully trained and has attained the range of teaching modes, the sequence is, in theory, relatively straightforward. The session should be broken down into as many episodes or sequences as there are available to enable the aims targeted in each episode to be pinpointed. Once these aims have been selected, exercises or tasks must be chosen for each episode, and the group of styles for each sequence must be ascertained. Indeed, pinpointing each episode in the session on the right side of the Spectrum threshold becomes a prerequisite for selecting the appropriate style. As Figure 5 illustrates, each group of teaching styles share common characteristics and aims and, consequently, teachers are able to place themselves on one side of the Spectrum or the other before selecting the suitable style. This is what we would describe as an *ends-driven* approach.

Therefore, if the class sequence requires reproduction, i.e. if it is situated on the left side of the Spectrum, teachers must choose from among five teaching styles for the teaching process (styles A–E). If, on the other hand, the class sequence requires discovery and production of alternatives and examination of these ideas, teachers must shift to selections from on the right-hand side of the Spectrum and select one of these teaching styles (styles F–K) (Mosston & Ashworth, 1994, 2002). Consequently, any given class session or episode may be made up of different teaching episodes that alternate between different teaching styles (see Figure 6).

The styles on either side of the Spectrum, however, are still seen as 'landmark' styles. This means that each style belongs to a conceptual category that excludes the other, and in this sense they still retain some measure of 'oppositional' or *versus*. Following this logic, the architects of the Spectrum accept that not all of the possible categories have yet to be defined, and moreover, that there are class situations that will also not yet have been defined by any of the guideline styles proposed. Nevertheless, in the absence of complete taxonomies, teachers must oscillate between two universal styles, and accept that any given decision analysis must currently be located under the 'canopy' of one or other of these landmark styles.

Common characteristics and aims in the reproductive style group (A–E)	Common characteristics and aims in the productive style group (F–J)
<ol style="list-style-type: none"> 1. Reproduction of knowledge and skills (known to the teacher and/or the learner). 2. The subject matter is concrete, mainly containing facts, rules, and specific skills. (basis knowledge, fixed knowledge). 3. There is one correct way to perform the task—by emulation of the presented model. 4. Time is needed for practising and learning to adhere to the model. 5. The cognitive operations mainly engaged in are memory and recall. 6. Feedback is specific and refers to the performance of the task and its approximation to the model. 7. Individual differences are accepted only within the learner's physical and emotional boundaries. 8. The class climate (the spirit of the learning environment) is one of performing the model, repetition, and the reduction of errors. 	<ol style="list-style-type: none"> 1. Production of knowledge and skills new to the learner and/or the teacher. 2. The subject matter is variable, mainly containing concepts, strategies, and principles. 3. Alternatives in design and performance are called for. There is no single model to emulate. 4. Time is needed for the cognitive processes involved. 5. Time is needed to evolve an effective climate conducive to producing and accepting alternatives and options. 6. The cognitive operations engaged in are comparing, contrasting, categorising, problem solving, inventing. 7. Discovery and creativity are manifested through these cognitive operations. 8. Discovery but the learner is developed through convergent and divergent processes or a combination of both. 9. Feedback refers to producing alternatives and not a single solution. 10. Individual differences in the quantity, rate, and kind of production are essential to maintaining and continuing these styles. 11. The class climate (the spirit of the learning environment) is one of searching and examining the validity of alternatives, and going beyond the known.

Figure 5. Characteristics of the groups of teaching styles according to Mosston and Ashworth (1986, p. 234, 1994, p. 246)

As mentioned above, the *non-versus* notion paradigm shift also contains a shift in the value structure of the Spectrum model that 'good' teachers should use diverse teaching styles. This value judgement and the *non-versus* logic have become embedded in a number of prominent teacher-education texts (see for example, Fenstermacher & Soltis, 1986; Joyce & Weil, 1986). Although highly complex in its permutations, the 'scientific' logic of the revised *non-versus* notion, with its mechanistic processes and

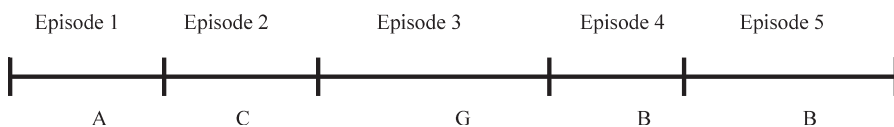


Figure 6. Episodes in a lesson and teaching styles used (Mosston & Ashworth, 1986, p. 239, 1994, p. 252)

pragmatic, menu-like, ends-driven style selection criteria has proved attractive to teachers, teacher educators, some scholars and policymakers. Consequently, many in the field of PE (a community that has long been seeking cultural legitimacy, through scientific verification as a means towards irrefutable recognition and status: Kirk, 1993), were receptive to such carefully constructed universalising discourses. Accordingly, a number of texts emerged that appeared to share the underpinning logic of the *non-versus* notion of teaching (see Singer & Dick, 1980; Jewett & Bain, 1985; Pieron, 1985; Siedentop, 1991; Mawer, 1993, 1995). The *logic* of using several teaching styles selected independently from other styles in the Spectrum, has also been considered particularly attractive for the implementation and evaluation stages of curriculum planning (Whitehead & Capel, 1993; Goldberger & Howarth, 1993). Consequently, the universalised *non-versus* logic and its value judgements have provided a platform for the reconstruction of a dominant underpinning epistemology in PE teacher-education (PETE) literature in many countries. This considerable achievement is highlighted in the foreword of the fifth edition of *Teaching physical education* (Mosston & Ashworth, 2002), in which Telama asserts:

The Spectrum is a logically beautiful system. Its logic makes it universal. That this opinion is not only my personal idea is evidenced by the fact that the Spectrum has been used in all continents and has been translated to many languages. This also indicates that the Spectrum is not only an American [sic] system but it really is universal. (Telama, cited in Mosston & Ashworth, 2002, pp. ix–x)

The replacement of the *versus* logic in styles by the *non-versus* logic has undoubtedly had a significant impact on the advancement of Spectrum *research* for education generally (Byra, 2000). However, it is important to emphasise that the development of the *non-versus* logic advances teaching and learning theory in a certain epistemological direction and we remain concerned that this direction necessarily always constitutes positive advances *sine qua non* for theoretical or practical applications of a critical PE pedagogy. It is to these critical issues that the discussion shall now turn. Before we develop in this critique, we would like to qualify that the criticism raised in this article does not mean to deny the major contributions made by theories of teaching styles to education and to PE more generally, or those by Mosston and Ashworth (1994, 2002) more particularly, especially those from earlier stages of the Spectrum's development.

The *non-versus* logic of teaching styles in theory: the epistemological problem of universalism and objectification

From a critical pedagogical standpoint, the *non-versus* logic underpinning the revised Spectrum of teaching styles is a step towards reducing teaching action to a technical or mechanical rationale and the imposition of an ends-led model. However, the *non-versus* logic's claimed cohesion between means and ends distracts teacher attention from the nature and aims of PE which are taken as a given (see McKay *et al.*, 1990; Tinning, 1990). Moreover, the means to achieve these unquestioned ends are becoming increasingly de-personalised and de-contextualised through this approach.

The belief that an effective teacher must be proficient in a range of teaching styles is developed around two inter-related assumptions. First, the theory of teaching styles assumes a *direct* relationship between each style and certain learning processes engaged in by pupils (Rink, 2001). Second, it also assumes that the teacher who is proficient in the greatest variety of styles is able to address all possible learning required in PE more effectively and is, therefore, likely to be the most effective teacher. While it is not inconceivable that talented teachers might come to understand and simultaneously deploy different, mutually contradictory philosophical positions, this is only achievable if that teacher ignores aspects of the underlying educational theory that informs these styles, replaces them with a form of pedagogical pragmatism, and 'performs' them with the authenticity of an accomplished actor.

The *non-versus* notion of teaching styles bases itself on knowledge predominantly generated through quantitative empirical research over the last few decades. As Byra stated (2000), 'a decade or more of experimentation resulted in the understanding that each style of teaching was not inherently better or more effective than the others, but rather that each style met a specific set of unique objectives or goals' (p. 230). This perspective reinforces the idea that given a well-defined learning outcome, one can determine the most appropriate teaching style to meet that outcome in that given situation (Goldberger & Howarth, 1993). However, while it may be tempting to establish predictive causal relationships between human behaviour in this manner, it is extremely difficult to do so scientifically. In order to evaluate and predict learning it is necessary to *bracket* a number of unquantifiable factors at any given moment in time. The positivistic epistemological logic of the *non-versus* Spectrum of teaching styles in its current form does just that through the way in which it uncouples the personal and social peculiarities that dynamically configure the physical and psycho-social arena of the class and influence the teaching techniques deployed. In this way, classroom interaction is systematically and strategically simplified in order to construct an irreducible 'objective' set of causal relationships between teaching styles and learning outcomes. Furthermore, attempts to present these relationships in a generalised form only further compound the reductionism and depersonalisation of teaching styles (Sicilia, 2001). Similar concerns have also recently been voiced by Cushion *et al.* (2006) in relation to the development of coaching models.

From a critical pedagogical perspective these 'Truth' claims are being made at the expense of forms of unquantifiable interpersonal interaction, political, biographical and historical influences. The question that arises is which factors become bracketed out and which ones become included and assumed as relevant to the pursuit of establishing cause and effect relationships between learning and teaching in physical educational research? Many of these epistemological concerns have already been explored at length by the paradigm debates in and around the humanities, social sciences, education and PE over the past two decades (see for example: Tinning, 1987, 1991; Sparkes, 1989, 1992; McKay *et al.*, 1990; Fernández-Balboa, 1993; Kirk, 1993; Penney & Evans, 1999). However, despite these debates and the very

real concerns that emerge from them, teaching styles continue to be developed and disseminated as neutral, technical instructional devices that reflect no particular value. As so many philosophers and sociologists of education have long since pointed out, these assumptions of neutrality, while neither good nor bad in essence, do not withstand critical scrutiny, over the claims they make concerning objective neutrality. Furthermore, the belief that each style meets a specific set of unique objectives or goals raises the issue of who sets the goals to be attained in the first place (Peters, 1966; Young, 1971; Hirst, 1974; Young & Whitty, 1977; Whitty, 1985). It is worth reiterating Carr (1993, p. 265) who reminds us that all educational endeavours such as the *non-versus* notion are initiated and conducted in light of some conception of a *good* to be achieved, but they also necessarily ignore that there are widespread disputes and disagreements about the very nature of this good. Each style has been defined from a given behaviour that is reducible, easier to measure and hence *more* desirable. Other kinds of learning that are more difficult to measure may be excluded or marginalised as unquantifiable, such as co-operation, tolerance, sensitivity and social awareness, even though many scholars argue they are at least of equal importance for intended outcomes of educational programmes (Kirk, 1992a, 1993; Fernández-Balboa, 1993). For these well-rehearsed reasons, we remain concerned that the widespread deployment of the *non-versus* logic is not accompanied with epistemological circumspection that such claims to Truth, universalism and prediction should be cushioned within a reflexively modern era.

In fairness, a number of those working on the development of the Spectrum have acknowledged some of these limitations, especially regarding the assessment of those teaching styles related to more multidimensional aspects of learning which have proved to be the most difficult to evaluate. More than a decade ago, Metzler (1991) acknowledged that there was little consensus concerning the appropriateness of different teaching styles for any given teaching situation. Around the same time, Goldberger (1992) also conceded that little work had been done with styles in the 'productive' cluster and 'before setting forth in this area we must first more clearly define terms such as discovery, divergent, production, and self-teaching, and devise instruments to measure these constructs' (p. 45). More recently, Byra (2000) has expressed rather more circumspection, suggesting that at this time, *Spectrum research has only uncovered the tip of the iceberg*. In short, there is clearly a lack of epistemological clarity and in our view it is an insufficiently coherent version of the 'Truth' to rely upon as a taken-for-granted theoretical building block for national teacher education programmes. Nevertheless, despite all these qualifications, Goldberger (in Mosston & Ashworth, 2002) reiterates a classically positivistic viewpoint stating, 'suffice it to say, the Spectrum has undergone extensive verification and without equivocation, there is no question of its validity' (pp. xi–xii). In this sense, the *non-versus* logic embedded in the revised version of the Spectrum of teaching styles is a clear attempt at *objectification* and *universalism*, that derives directly from its positivistic epistemology. There are a number of practical consequences of this shift that we will begin to articulate below.

The *non-versus* notion of teaching styles in practice: towards a market oriented pedagogy?

While we have no reason to doubt that the architects of the *non-versus* logic intend to improve the quality of teaching and learning in PE, from a critical pedagogical perspective it may well prove misguided in its transition from theory to practice. As recently suggested by Cothran *et al.*'s (2005) cross-cultural study, physical education teachers, influenced by demands of teaching guidelines and national curricula, often *report* using a wide variety of teaching styles whereas in *practice*, in the classroom, there is a tendency to rely on a core of reproductive styles (see Curtner-Smith *et al.*, 2001; Sicilia & Delgado, 2002). One of the main consequences of this paradigm shift is well-known and concerns the tendency towards technocratisation and de-personification that theoretical claims of universalisation and standardisation introduce into educational practice. Indeed, as Tinning (1990) defines it a 'technocratic rationality embraces science as a value-free technical process. It assumes that social problems can best be solved by the application of scientific thought' (p. 16). The subtle yet significant modification of the teaching Spectrum towards the *non-versus* notion nevertheless signifies an endorsement of technocratic orientations in teaching. This orientation is problematic because it reduces professional reflection to decisions about choosing from a universalised menu rather than why, and how given teaching styles are relevant to a particular cultural context (see also Evans, 1992). For example, Curtner-Smith *et al.* (2001) showed that the discourses emerging from the first revision of the National Curriculum for PE in England and Wales suggested that teachers should use more diversity of teaching styles. While Curtner-Smith's work showed this edict had little influence on the teaching styles actually employed by teachers, it does demonstrate that shift in power relations in teaching does now extend to the level of instructional styles. Furthermore, and almost more concerning, is the way in which the shift moves PE pedagogy back to technocratic visions of teaching which serve to de-personify or *de-subjectify* those involved in the teaching process, including pupils, by reducing them to a diversified group of 'learners' and teachers as technicians rather than professionals with lives and identities that they bring to their professional vocations (Evans, Davies & Penney, 1996). This standpoint is extremely problematic because subjectivity is critical to the process of knowledge transfer. Any theory that brackets subjectivity opens itself up to questions of its correspondence to the practical life-worlds of teachers and students alike. Furthermore, technocratisation increases the possibility of political manipulation by powerful coalitions of interested parties, who will see opportunities to vocationalise the profession through lobbying policymakers hard to insert their own curriculum content. In this vein we see some connections between the *non-versus* logic embedded in the revised teaching styles Spectrum and what Bernstein (1990, cited in Tyler, 1995) goes on to define as a 'market oriented pedagogy', which Tyler (1995) defines as a:

Hybrid or technicized kind of code, showing elements both of a strong classification in its visibility of outcomes and of weakness of framing in its personalized modes of control (skill programs, negotiation of profiles). (Tyler, 1995, p. 245)

Therefore, in what follows we draw attention to some of these practical problems from a critical pedagogical standpoint, in the areas of teacher subjectivity, learner subjectivity and finally the politics of pedagogy.

The problem of teacher subjectivity

Our concern here is that the *non-versus* logic and its values are likely to legitimise quite superficial applications of pedagogical principals as it meets with the ‘real life’ scenarios of the classroom and particularly with teacher subjectivity. If a teacher adopts the whole repertoire of teaching styles, this would normally also mean that he/she also accepts the different assumptions about the correlations between teaching styles and learning processes and outcomes embedded within their logics. For example, on Monday a teacher might implement a teaching style geared towards behaviourist understandings, while on Tuesday, the teacher might change this approach in order to develop a more personal and autonomous constructivist teaching style and so on. In practice the classes are likely to happen on the same day, with the teacher radically changing styles, based on quite different underlying theoretical assumptions that stand in total contradiction to those used to support his/her teaching just one hour/day/class before (Dillon, 1998). While it is complicated enough to change teaching styles from one day to the next, or from one class to the next on the same day, it is even more complicated to combine styles in a single session (see Figure 6). However, this is difficult to imagine on a practical basis, unless, as explained earlier, the epistemological and philosophical positions underpinning each style are ignored, and practical implementation is entirely separated from any idiosyncrasy held by the teacher applying that particular style (Mosston & Ashworth, 1986, p. vii). Our concerns seem echoed by Rink (2001) who concludes:

Unless teachers implement methodologies with a knowledge of what processes should be taking place, and unless they are given strategies to confirm that those processes are taking place, we are placing teachers in an untenable position. They too must understand that there is no direct link between what the teacher does and what the student learns. (Rink, 2001, p. 124)

Nevertheless, this is precisely what is being promoted as the technical application of the *non-versus* notion. Indeed, in another PE teaching manual that assumes a similar logic, Mohnsen (1997) contends that ‘as a physical educator you’ll often work with 20 to 60 different learning styles during one instructional period . . . by employing a wide variety of instructional styles and strategies, you will engage and promote learning for all’ (p. 130). Such a view of teaching and learning is suggestive of constructing a pedagogical laboratory in which socio-cultural dynamics are hermetically sealed from the process. Moreover, even if this were to be achievable, the use of many teaching styles would not necessarily mean that the teacher has changed their beliefs about teaching and learning. This approach amounts to a practical pragmatism that then becomes the foundation for teaching styles instead of the theoretical model that is being claimed. Somewhat ironically, the *non-versus* logic does not require the teacher to change in any deep sense, as in the logic embedded in the previous

versus notion. Rather, it merely requires that the teacher performs with technical proficiency. As Sparkes (1990) suggested, a *real* change would need a transformation of PE teachers' underlying beliefs; he continues:

Mixed-ability grouping may be adopted in a school without a corresponding transformation by many staff to mixed-ability teaching, since many teachers will be unwilling, or unable, to change their views on the nature of 'ability' in children. Some will continue to believe that children are limited in what they can learn by a genetically 'fixed' amount of intelligence. Others, at the opposite end of a continuum, will continue to believe that the environment plays a more important part in the learning process. These basic beliefs about ability will influence the ways in which teachers work with children in the classroom . . . This is precisely why ideological transformations need to occur if we are to stimulate change at the deeper levels. (Sparkes, 1990, p. 5)

Analogously, using several teaching styles does not act as an indicator of the quality of the experience if the ideologies that each style is based on are not also assumed by the teachers. Conversely, the *non-versus* notion of teaching styles can only be generalised if teaching takes place on a superficial level, and if teaching styles are operating independently from teachers' beliefs. In short, teaching would need to occur in a socio-cultural vacuum and clearly this does not happen. Put differently, a teacher will only be able to use all extant forms if he/she merely retains the instructions and does not engage with the philosophy of each style. While this approach may well sit comfortably with the performativity cultures of many Western educational institutions, nevertheless, we feel it raises a serious pedagogical problem that is addressed below.

It might not be surprising that as Curtner-Smith *et al.*'s (2001) empirical work demonstrates, some teachers have preferred styles that they gravitate towards, presumably engrained through socialisation and regular practice. This was particularly the case in relation to how particular teaching styles were relied upon to enhance the maintenance of discipline and control over children. Moreover, some of these styles appear to be actively encouraged by their particular institutional and gendered socio-cultural environments (Brown, 2005). Elsewhere, as Brown and Evans (2004) suggest, individual teachers may experience the use of unfamiliar teaching styles as taking a pedagogical risk, resulting from their not feeling able to perform these styles convincingly. These are risks that have implications for personal and professional identities, should these teaching style experiments go wrong. Therefore, the rhetoric that often supports combining teaching styles generates incompatible expectations that are difficult to fulfil at a personal level, even by the most professionally committed teacher. For this reason, in any critical pedagogical proposal teacher subjectivity and, more specifically, the links between pedagogy and personhood, become central rather than peripheral considerations (Fernández-Balboa & Marshall, 1994; Fernández-Balboa, 1998; Sicilia & Fernández-Balboa, 2006).

The problem of pupil subjectivity

Penney and Evans' (1999) Bernsteinian view that 'how children and young people "receive" knowledge is as important in educational terms as what they receive'

(p. 135), may seem a moot point in a discussion of teaching styles. Nevertheless, with the switch to the *non-versus* logic and the removal of an overarching pupil-centred goal, the development of independent decision-making, the status of pupil subjectivity and agency seems to be somewhat suppressed with the revised *non-versus* logic. Therefore, while pupils are conceptualised as being *active* learners with different needs, like the teachers above, they are nevertheless also positioned as de-subjectified recipients of a universalised learning framework, most of the decisions for which are assumed to be made by the teacher or curriculum writer. As we have seen, the practical application of the *non-versus* logic assumes that some very dynamic and complex pedagogical events must occur habitually. The practicalities of such technical complexity, while laudable in terms of the intended consequences for maximising learning differentiation, are far from evident from the point of view of pupil subjectivity. The question that emerges is how do pupils, as learners, make these paradigm shifts? Although such huge differentiation is intended to accommodate pupil *needs* it is far from clear that *the pupils*, as learners, are either able or willing to affect such dynamic changes. Moreover, if they are not, cannot, or will not, then what happens to the teaching style selection process?

Empirical work that has included pupil subjectivity and hence a degree of agency on the part of the learner paints quite a different picture of this process. For example, the broadly ecological work of Tousignant and Siedentop (1983) and Tinning and Siedentop (1985) on task structures and task accomplishment both clearly revealed the impact of pupil agency on the nature of the learning environment constructed by teachers. In particular, Tousignant and Siedentop's (1983) qualitative work led them to conclude that 'cooperation between the teachers and students in the observed physical education setting was achieved through a rather subtle and tacit process of negotiation' (p. 56). More recently, Sicilia and Delgado's (2002) empirical work revealed something of a dialectic in the negotiated process of selection and implementation of teaching styles used by the teacher. For example, one teacher they observed met subtle but considerable resistance from pupils when attempting to implement innovative teaching styles that fell outside of the instructional styles considered normal and familiar to the pupils. In this context and process the pupils appeared most compliant with task, partner and small group approaches and began resisting when more extreme reproductive *or* productive teaching styles were attempted. Moreover, this negotiation was shown to be a multi-way dynamic in which largely unconscious teacher interaction with individual pupils was also mitigated by the affect of pupil-pupil interaction. The conclusion that Sicilia and Delgado (2002) reached, is that teachers do not exclusively select a teaching style, rather they negotiate their selections with individual and groups of pupils and this process of negotiation can be seen as an implicit dialectic, in which a synthesis or agreement reached often restrains innovations intended by the teacher. Therefore, it would seem that bracketing pupil subjectivity and agency is a perilous pedagogical strategy, as it moves further away from what actually happens in the classroom and towards the subjective aspirations hidden in the methodologically constructed and generalised prescriptions of the researchers.

The problem of the cultural politics of education

In spite of the *lack of consensus* over predictive correlations between what the teacher does and what the student learns, the *non-versus* logic typified in the revised Spectrum has been widely accepted, endorsed and absorbed into mainstream thinking about knowledge transmission. While we agree with Davis (1999) that it is not a question of rejecting outright the prescriptions laid down in PE teaching texts just because these are informed by a positivistic paradigm the use of which we take epistemological issue with in this context, it is important to ask some critical questions over *why* such universalist visions remain in the ascendancy? This ascendant trajectory for such positivistic logics is especially curious at a time when so many alternative visions of teaching and learning are emerging that are also sensitive to qualitative, subjective ways of knowing (see for example, Fernández-Balboa, 1997; Williams, 2000; Hayes & Stidder, 2003; Evans *et al.*, 2004; Penney *et al.*, 2005) in education and PE. Whatever our views on these various approaches, we should remain cognisant of the paradigmatic positions that these various approaches take and that they constitute a struggle over *values* that are an omnipresence in education and PE around the world. Many of these struggles amount to what Apple (1997) refers to as the *cultural politics of education*. What concerns us is that with a few notable exceptions (see for example, Penney & Waring, 2000) there remains an insufficient range of critique that attempts to connect the practical, procedural and technical aspects of everyday pedagogical practice with broader historical and political discourses; or put in more sociological terms, the connections between the micro to the macro. With this connection in mind, the advance of the *non-versus* logic of teaching styles has not only become absorbed into mainstream educational theory and practice, it has also had the unintended consequence of being a convenient tool in a neo-liberal era being used by those who conceive education and teaching as little more than the transmission of skill-based knowledges that service the interests of the free market (Apple, 1990, 1993, 1997; Evans, Penney & Davies, 1996). The technocratisation and de-subjectification of teachers, teaching and learning create a decision-making vacuum that is quickly filled by those who would seek to shape our society in their own interests. The *non-versus* logic has been seized upon by unlikely (and we suspect often politically unaware) coalitions of teacher educators, scholars, policy-makers and those with strategic economic and political interests in education, with the effect that teachers are increasingly losing control of broader decision-making responsibilities which are then handed over to the 'experts'. In this way teaching styles, *as well as* curriculum content, increasingly becomes an instrument for surveillance, control and a mechanism for reproducing valued social and cultural 'goods' that pander to the interests of the cultural status quo and especially the economically elite (see Kirk, 1992b, 1993; Webb *et al.*, 2004). Therefore, we consider that if deployed uncritically the *non-versus* logic is a powerful tool that can be manipulated for cultural and political reasons.

Finally, we should not fall into the romanticised research held view that rests on the assumption that teachers are always and everywhere antagonistic to these cultural

politics that might very strongly encourage them to become good teacher technicians. Therefore, it is important to recognise these pressures and teachers' responses to them as Penney and Evans (1999) articulate with some disquiet:

Given the intensification of their workloads and the ever increasing pressures towards accountability to a centrally defined criteria, the momentum towards the standardization of curriculum content and the separation of the determination of that content from the process of teaching, may well be welcomed rather than resisted by some teachers facing 'contradictory realities' and 'contradictions in their own consciousness' ... The choices facing teachers are as awesome as they are unenviable: status and dignity as a professional, with a working life of struggle; or a move towards becoming a technician, delivering a packaged curriculum, forfeiting status, authority and control in education, but perhaps achieving stability and much needed peace of mind. (Penney & Evans, 1999, p. 135)

Our main concern is that the paradigm shift inherent in the *non-versus* notion, introduces a logic towards knowledge transmission that exacerbates rather than challenges the above problems. In summary, it rather appears that the *non-versus* notion of teaching styles is a good example of Bernstein's conception of a *market oriented pedagogy*.

Concluding remarks

As Tinning (2000) points out, these are in many ways unsettling 'New Times' for educators living in a reflexive modernity dominated by scientific uncertainty. In spite of the popularity of Mosston's teaching style Spectrum and, specifically, the widespread endorsement of the *non-versus* logic in teacher education programmes, in teaching itself and amongst policy makers, it does not in our view provide a solution to this problem of uncertainty but rather, is symptomatic of it. It is perhaps even more concerning however, that if not subjected to constructive criticism, the logics introduced in this revised model will continue to become the market orientated pedagogical ideology of the culturally powerful (rather than that aroused by scientific curiosity) as it becomes absorbed into the mainstream consciousness as an idealised blueprint for teaching delivery for future generations of teachers. As Mawer (1993) articulates, we need to continually review whether or not we are 'pursuing ideologies rather than educational strategies that have well supported evidence of their educational value' (Mawer, 1993, p. 7). Part of what motivated us to write this paper was that we came to the view that there needs to be a greater sensitivity to this situation, and as a result, considerably more critical attention needs to be focused on this (and other) teaching models by those interested in critical pedagogy and the sociology of education more generally. Indeed, with a few notable exceptions (see, Schwager, 1997; Young, 1998; Penney & Waring, 2000) there is an almost perceptible divide between the research literature of curriculum content and that of the actual *practice* of delivery, and perhaps these research literatures need to be brought closer together, to instigate a more penetrating critique, as Penney and Chandler (2000) put it:

A focus on the detail of teaching is certainly a critical dimension to consider, perhaps *the* most significant, and the one that others have highlighted as inadequately pursued in contemporary contexts of policy and curriculum development in physical education. (Penney & Chandler, 2000, p. 84)

We share Penney and Chandler's concern for this critical focus, because in our view these developments in teaching style logics should give cause for critical pedagogical concern. The 'detail' in the minutiae of everyday practical rituals, and procedures that constitute the process of everyday transmission of knowledge in PE needs continually connecting to the broader social structures, discourses and actions that produce and sustain them and which they sustain in return. For these reasons, a rapprochement of the critical and procedural pedagogical literatures and research agendas with a view to re-establishing dialogue, is, in our view, increasingly necessary, although we suspect that invitations to this kind of critical dialogue may not always receive a warm welcome.

Acknowledgements

An early version of this paper was presented at the AIESEP conference in Lisbon, Portugal in November 2005. The authors would like to thank the reviewers for their helpful comments on earlier drafts of this paper.

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