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Urban teachers’ use of productive and reproductive teaching styles within the confines of the National Curriculum for Physical Education

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Abstract
The main purpose of this study was to describe the teaching styles employed by a sample of 18 teachers working in an urban setting under the conditions of the first revision of the National Curriculum for Physical Education. A second purpose was to compare the teaching styles used by this urban sample of teachers with those employed by a rural sample we had studied previously. Two lessons taught by each teacher to pupils in Years 7, 8, or 9 during one summer term were videotaped and coded with the Instrument for Identifying Teaching Styles, a systematic observation instrument designed to record the percentages of time in which teachers employ each of eight teaching styles. Descriptive statistics were computed across all 36 lessons and for lessons on striking/fielding games, track and field events, and tennis. Independent t-tests were used to compare the teaching styles used by the urban sample of teachers in the present study and those used by the rural sample previously studied. Results indicated that the teachers in the present study spent most of their time using direct styles of teaching. Their pattern of teaching style use was very similar to that of the rural teachers observed in the earlier study. Possible reasons for these findings are discussed.

Key-words: National Curriculum • physical education • teaching styles

The introduction of the National Curriculum for Physical Education (N CPE) in 1992 is arguably the most comprehensive attempt at innovation the subject has seen in
modern England and Wales. A central theme within the NCPE policy texts to date has been that pupils should be able to plan, perform, and evaluate movement (DFE, 1995; DES and Welsh Office, 1991a, 1991b; DfEE and QCA, 2000). As noted by Williams and Woodhouse (1996), the initial focus on these three strands of learning grew out of the prevailing physical education (PE) discourse of the 1980s. The subject of much of the literature and in-service provision of that period was the fostering of independent learners capable of thoughtful performance, the process model of education, and using alternative pedagogies to cater for pupils’ diverse and individual needs (e.g. DES and HMI, 1989; Evans and Clarke, 1988).

The government-appointed working group which designed the original version of the NCPE (DES and Welsh Office, 1991a, 1991b, 1992) was heavily influenced by the education professionals within it and, not surprisingly, produced a series of policy texts which reflected the prevailing discourse (Williams and Woodhouse, 1996). A number of scholars, however (e.g. Goldberger and Howarth, 1993; Keighley, 1993; Mawer, 1993; O’Neill, 1993; Read, 1993; Williams, 1993), worried that this discourse had had more influence on teachers’ thinking than their actions. In addition, they believed that, prior to the introduction of the NCPE, teachers had concentrated on improving their pupils’ performance of activity. In order to satisfy the requirements of the new curriculum, especially providing pupils with the opportunity to plan and evaluate movement, these scholars argued that teachers would need to expand the range of teaching styles they employed. Specifically, they suggested that teachers would need to shift from the exclusive use of direct, teacher-centred, or reproductive styles of teaching to employing more indirect, pupil-centred, or productive styles. For example, Mawer stated that:

> A range of teaching approaches may be necessary to meet the requirements of the National Curriculum. Examples of the language used [in the NCPE policy texts] include ‘setting goals,’ ‘exploring and selecting outcomes,’ ‘refining,’ ‘adapting,’ ‘improvising,’ ‘describing,’ ‘comparing and contrasting,’ ‘analysing,’ ‘judging’ and ‘reviewing.’ . . . The suggestion is that a variety of approaches are needed that will enable pupils to achieve the wider range of skills, including personal and social, communication, and problem solving. (1993: 5)

Similarly, Goldberger and Howarth observed that

> To achieve and assess the variety of skills suggested [in the NCPE], many of which are not in the motor domain, teachers will need to involve their students in many thinking operations. Such skills as decision-making, adapting, applying, judging, observing, selecting, organizing, and evaluating are not passively acquired but require active participation and practice. The teacher’s task will be to plan and conduct learning activities which allow and encourage these skills, without losing the practical nature of the subject. (1993: 23)

The reference to pupils being able to plan, perform, and evaluate movement was retained in two subsequent revisions of the NCPE (DFE, 1995; DfEE and QCA,
Several researchers, however, have highlighted the fact that government intervention led to these later policy texts being much more conservative than those written by the original working group (Curtner-Smith, 1999; Evans and Penney, 1995; Williams and Woodhouse, 1996). For example, teachers were now told that the greatest emphasis should be placed on performance. Moreover, and as noted by Williams and Woodhouse (1996), sport, especially ‘traditional’ British team games, was clearly given privileged status and the expectation that teachers should foster independent learning was dropped. Strongly implied in these changes to the NCPE, then, was that teachers should return to more traditional and direct pedagogies.

One of our research team’s interests has been how these contradictory and shifting discourses have influenced teachers’ use of different teaching styles, if at all. We noted that other researchers interested in the same topic had gathered data suggesting that teachers working with pupils in Year 7 in one local education authority at the time the original version of the NCPE was in operation used more direct teaching styles during lessons on athletics, outdoor and adventurous activities, and games, and more indirect styles during lessons on dance and gymnastics (Evans et al., 1996; Penney and Evans, 1995). As useful as this research undoubtedly was, we were concerned that the primary data collection method was to ask teachers about the teaching styles they employed in a survey. As Lawson and Stroot observed, research which relies almost exclusively on data generated by this method may be misleading and is certainly limited because ‘there are differences between what people say and what they do’ (1993: 445). Therefore, and in congruence with the suggestions of Lawson and Stroot (1993), in our own research of teaching styles we chose to collect data through direct observation of teachers’ instruction.

Our data indicated that the introduction of the NCPE had little or no influence on the teaching styles employed by one sample of 20 teachers working in a middle-class rural south-western English town. During the summer term before the NCPE was introduced and in the summer term two years after the new curriculum was implemented, these teachers predominantly employed direct styles of teaching while working with pupils in Years 7, 8 and 9 and teaching typical summer activities (Curtner-Smith and Hasty, 1997). Plainly, this sample of teachers had not expanded the range of teaching styles they used in congruence with the requirements of the NCPE.

**Purpose**

There is a need for additional data on the influence of the NCPE on teachers’ use of different teaching styles over time as the curriculum is modified, in different school environments, and in different regions of the country. Therefore, the main purpose of this study was to describe the teaching styles employed by a sample of teachers working in a depressed urban setting in south-east England and under the conditions of the revised NCPE (DFE, 1995). A second purpose was to compare the teaching styles used by this urban sample of teachers with those employed by the rural sample we had studied previously (Curtner-Smith and Hasty, 1997).
Predictions about what kind of results our study would yield were difficult to make. On the one hand, there were several reasons for expecting similar findings to our rural study; that is, that teachers would employ predominantly direct styles of teaching. First, based on previous research (Curtner-Smith, 1999), we believed the socialization of PE teachers in all regions of England and Wales to be similar. Thus, teachers in one region were likely to employ similar methods to those in another. Second, as already noted, the revised version of the NCPE was more conservative than the original version and inferred that teachers take a more direct approach. Third, the schools in which the teachers in the study worked were attended by a fairly high proportion of difficult pupils who brought with them many of the problems associated with living in a depressed urban environment. Teachers working in this setting, we hypothesized, might be reluctant to use more indirect styles of teaching for fear of losing control.

On the other hand, there were two reasons for expecting this urban sample of teachers to use a more expansive range of teaching styles than those in the earlier rural study had done. First, they had had more time to digest the messages in the original version of the NCPE and we already had evidence that some teachers were ignoring later government pressure to be more conservative in their approach and, instead, were choosing to follow the spirit of the earliest NCPE policy texts (Curtner-Smith, 1999). Second, we were aware that American research had indicated that teachers working in rural and urban settings often had quite different beliefs or value orientations about the purposes of their work (Ennis, 1994; Ennis and Chen, 1995; Ennis et al., 1992a, 1992b). Specifically, while teachers working in rural settings emphasized subject-matter mastery (i.e. sports and exercise skills), teachers employed in urban schools were more interested in realizing social goals. Given that teachers' beliefs influence their actions (see Jewett, 1994), if this finding generalized to England and Wales it suggested that teachers in rural settings might favour more direct styles of teaching while those in urban settings might favour more indirect styles.

**Theoretical framework**

In similar fashion to others who have been interested in studying the teaching styles of PE teachers, during this study we relied greatly on the work of Muska Mosston. Mosston's spectrum of teaching styles (Mosston, 1981; Mosston and Ashworth, 1990) is a theoretical framework of different instructional approaches derived from the chain of decision-making occurring in the teaching-learning process. Within what he calls the 'anatomy of a teaching style', Mosston theorizes that there are three sets of decisions which have to be made in every 'teaching episode'. These are (a) planning or preimpact decisions, (b) implementation or impact decisions, and (c) evaluation or postimpact decisions. Specific teaching styles emerge based on whether the teacher or the pupils make these decisions.

Spectrum theory suggests that there are two 'pure' styles of teaching. At one end...
of the spectrum is a style in which the pupils make all the decisions and at the other end is a style in which all decisions are made by the teacher. Between these two pure styles, Mosston and his colleagues have identified nine landmark styles. Each of these styles is unique because each has its own decision-making anatomy which involves the teacher and pupils operating under different sets of conditions. Moreover, different landmark styles are thought to facilitate the realization of different objectives (i.e. psychomotor, affective and cognitive) and have different ‘developmental effects’ on pupils. Mosston theorizes that these effects promote physical, cognitive, social, moral and emotional development.

Mosston and his colleagues identify two ‘clusters’ of landmark styles. The styles in one cluster are known as ‘reproductive styles’ because within each style pupils reproduce skills or information demonstrated or provided for them by the teacher. In contrast, the styles in the second cluster are called ‘productive styles’ because pupils produce skills or information with which they were formerly unfamiliar. Based on the type of cognitive processes pupils employ when they are taught by productive styles, they are also often called ‘problem-solving’ or ‘discovery’ styles. Moreover, because pupils make more of the preimpact, postimpact, and impact decisions when they are taught by teachers using productive styles, these styles are relatively and progressively more indirect in comparison to the reproductive styles in which teachers tend to make more of the decisions.

Finally, Mosston also suggests that there is an infinite number of ‘non-landmark’ styles along the spectrum. These styles also have their own decision-making structure. Analyzing a non-landmark style’s anatomy allows one to locate its approximate position on the spectrum. During this classification process, these non-landmark styles are described as falling ‘under the canopy’ of the nearest landmark style.

Method

Participants and setting

Eighteen specialist PE teachers employed in a large urban city in south-east England consented to participate in the study. Nine of the teachers were female and nine were male. They taught in seven inner-city, mixed-sex, state comprehensive secondary schools which were located in one of the poorest boroughs in the country. The pupils taught by these teachers were mainly from low-income families.

Two lessons of each teacher’s choice in which they taught any activity to pupils in Years 7, 8, and 9 were videotaped during a three-week period of the summer term. Participants were assured that data collection would be confidential and asked to use their usual teaching methods.

Of the 36 lessons taped during the study, 16 were girls-only, 14 were boys-only, and six were mixed-sex. Eight lessons were taught to pupils in Year 9, 17 to pupils in Year 8 and 11 to pupils in Year 7. The mean length of these lessons was 46.68 minutes (SD = 12.02) and the mean class size was 20.83 pupils (SD = 7.12).
Activities chosen by the teachers were javelin (three lessons), discus (two lessons), shot (one lesson), long jump (two lessons), high jump (four lessons), multi-athletics (one lesson), cricket (seven lessons), generic striking/fielding games (13 lessons), and tennis (three lessons). The multi-athletics lesson involved pupils practising relay exchanges, triple jump, shot, discus, and javelin at stations.

**Systematic observation instrument and coding**

Lessons were coded with the Instrument for Identifying Teaching Styles (IFITS) (Hasty, 1997). IFITS is an interval recording instrument developed to record the amount of time in which teachers use each of eight teaching styles originally identified by Mosston (1981). The first five styles – style A (command), style B (practice), style C (reciprocal), style D (self-check), and style E (inclusion) – are reproductive styles. The last three styles – style F (guided discovery), style G (divergent), and style H (going beyond) – are productive styles. A management category was also included in the instrument since when teachers are not employing one of the teaching styles they are involved in some type of managerial action. Definitions of the teaching styles and management are found in Figure 1.

Every 20 seconds a coder using IFITS makes a decision about which teaching style a teacher is using or whether he/she is engaged in managerial activity. Within intervals in which two or more teaching styles are used, the least direct style (the style which is further along the spectrum from style A) is given preference and recorded. Within intervals in which management occurs but teachers also employ one of the eight teaching styles, the teaching style is given preference and recorded. All videotaped lessons were coded by the second and third authors. Observer training continued until an interobserver agreement of 86 percent was reached using strict interval-by-interval comparisons.

**Data analysis**

Descriptive statistics were computed across all 36 lessons and for lessons on striking/fielding games, track and field events, and tennis. In addition, comparisons were made between the teaching styles used by the urban sample of teachers in the present study and those used by the sample of rural teachers studied by Curtner-Smith and Hasty (1997) following the introduction of the NCPE using the same protocol. This was achieved by employing independent t-tests and utilizing the Dunn (Bonferroni) method (Glass and Hopkins, 1984) to control for inflated type I errors.

**Results**

Table 1 shows the percentages of intervals in which teachers in the present urban study employed each of the eight teaching styles and were engaged in management. Also shown in Table 1 are the percentages of intervals in which the rural sample of
Reproductive Styles

**Style A (Command):** The teacher makes all the decisions. The teacher demonstrates or explains a task for the pupils to emulate, then directs the pupils' practice by giving commands. The pupils react only when told to do so by the teacher. The teacher evaluates pupils' performances in terms of congruence with the prescribed task. Example: Pupils 'shadow' the service action demonstrated by the teacher during a tennis lesson.

**Style B (Practice):** The teacher demonstrates or describes a task and the pupils practise the task at their own pace. The teacher provides pupils with performance feedback. Example: The teacher demonstrates seam bowling during a cricket lesson and then circulates giving feedback to pupils as they practise.

**Style C (Reciprocal):** The teacher demonstrates or describes a task. The pupils then practise in pairs. One pupil (the doer) practices while the other pupil (the observer) evaluates his/her partner's performance and provides feedback based on criteria supplied by the teacher. During the practice phase, the teacher assists the observer while taking care not to take over the observer's role. Example: The teacher demonstrates correct discus-throwing technique. During the practice phase, pupils work in pairs and take turns at throwing and providing feedback.

**Style D (Self-Check):** The teacher presents a task. Pupils practise at their own pace but are now responsible for analysing their own performances. During practice the teacher does not provide performance feedback. Instead his/her role is to help pupils hone their self-evaluation skills. Example: The teacher demonstrates correct long-jumping technique. During the practice phase he/she asks the pupils to evaluate their own performances.

**Style E (Inclusion):** The teacher models a task with several levels of difficulty. At the beginning of the practice phase the pupils choose the level of difficulty at which they feel most comfortable. During practice they are encouraged by the teacher to evaluate their own performances and decide when to change to a new level of difficulty. Example: The teacher demonstrates high-jumping with the 'straddle' technique and allows the pupils to decide on the heights they wish to attempt to clear.

Productive Styles

**Style F (Guided Discovery):** The teacher asks a series of questions or sets a series of physical problems that when answered or solved lead the pupils to discover a desired skill or concept. Examples: (1) During a cricket lesson, the teacher asks a series of questions about body positioning while fielding which leads pupils to discover and understand the concept of the 'long barrier'. (2) The teacher asks the pupils to engage in two conditioned games of tennis, one on a 'long thin' court and one on a 'short fat' court. Pupils are then asked how they can best move their opponents around in these conditions so that they discover the drop-shot, the lob and the concept of using angles.

**Style G (Divergent):** The teacher asks a question or sets a physical problem to which there are many possible answers or solutions. The pupils then set about finding and evaluating alternative answers and solutions. Examples: (1) The teacher provides the class with an assortment of suitable equipment and asks groups of pupils to design their own striking/fielding game. (2) During a track and field lesson, the teacher asks pupils to come up with different strategies that they might try if engaged in a 1500-metre race.

**Style H (Going Beyond):** The pupils identify problems and set about finding and evaluating alternative solutions. The teacher assumes the role of facilitator. This involves providing help when it is asked for and asking questions for clarification. Example: During a tennis lesson, pupils are asked to decide which skills or strategies they need to work on, to design and engage in activities which might lead to skill improvement, and to evaluate their own performances.

**Management (M):** The time the teacher is engaged in activity not related directly to instruction. This includes time spent beginning and ending classes, managing equipment, organizing, dealing with pupil behaviour, and any other tasks other than instruction or class management. Example: The teacher gives out floats to pupils participating in a swimming lesson.

Note: Definitions of teaching styles are based on descriptions provided by Jewett and Bain (1985) and the definition of management is based on descriptions provided by Phillips et al. (1986).

Figure 1 Definitions of the teaching styles and management
teachers studied by Curtner-Smith and Hasty (1997) used the eight teaching styles and managed their classes. Table 2 shows the percentages of intervals in which teachers in the present urban study used these teaching styles or managed their classes during lessons on striking/fielding games, track and field events, and tennis.

An examination of the descriptive data in Table 1 indicates that the pattern of teaching style used by the urban sample of teachers in the present study was very similar to that of the rural sample of teachers previously studied by Curtner-Smith and Hasty (1997). Supporting this observation were the results of the independent t-tests. These revealed only that the urban teachers used the practice style for a significantly higher percentage of time \( t(74) = 6.99, p < .05 \) and managed their classes for a significantly lower percentage of time \( t(74) = 6.85, p < .05 \) than the rural teachers had done.

The descriptive data in Table 1 also indicate that the teachers in the present study spent the majority of their time employing reproductive styles of teaching (78.31%). In contrast, productive styles of teaching were used infrequently (4.99%). Moreover, examination of Table 2 indicates that this pattern of teaching style use was very similar during lessons on different activities. Regardless of the activity they taught, teachers spent a large proportion of their time employing the practice style. Conversely, they used the command and guided discovery styles sparingly and the reciprocal, self-check, inclusion and divergent styles very rarely. Furthermore, they did not employ the going beyond style at all.

**Discussion and conclusions**

The main finding of this study was that it indicated that the teachers in it spent most of their time using more direct styles of teaching. In addition, given that they used the practice style significantly more often and spent significantly less time in management, it appeared as if the sample of urban teachers in the present study employed a more conservative approach to instruction than the rural teachers studied previously by Curtner-Smith and Hasty (1997).

The teaching style used for the vast majority of time by the sample of teachers in the present study was the practice style. Since this style has been shown to be most effective when the objective is to teach sports skills (Goldberger and Gerney, 1986, 1990; Goldberger et al., 1982), this finding suggests that these teachers focused almost exclusively on improving their pupils' performance of the various summer activities. Conversely, the teachers in the study used teaching styles likely to improve their pupils' ability to plan and evaluate movement infrequently. In fact, they rarely used teaching styles in which pupils had to make more planning (styles F, G and H) and evaluation (styles C, D, E, F, G and H) decisions. Moreover, they rarely differentiated the content of their lessons (style E) and did not provide pupils with the opportunity to work independently (style H).

As alluded to in the purpose section of this article, we speculate that the reasons for the teachers in the study predominantly using direct styles of teaching may have
been environmental, political, or a result of their occupational socialization. Most likely, however, we believe this pattern of teaching style use was the result of a combination of all three of these factors. In any event, our hypotheses that urban teachers would use indirect teaching styles because they emphasized social goals or were influenced by the spirit of the earlier more liberal NCPE policy texts were proved wrong.

### Table 1
Percentage of IFITS intervals for each teaching style and management in the present urban study and in the Curtner-Smith and Hasty (1997) rural study

<table>
<thead>
<tr>
<th>Teaching style</th>
<th>Urban setting (N = 36)</th>
<th>Rural setting (N = 40)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Reproductive styles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Style A (Command)</td>
<td>4.28</td>
<td>6.33</td>
</tr>
<tr>
<td>Style B (Practice)</td>
<td>72.94</td>
<td>12.54</td>
</tr>
<tr>
<td>Style C (Reciprocal)</td>
<td>0.64</td>
<td>1.40</td>
</tr>
<tr>
<td>Style D (Self-Check)</td>
<td>0.39</td>
<td>0.75</td>
</tr>
<tr>
<td>Style E (Inclusion)</td>
<td>0.06</td>
<td>0.22</td>
</tr>
<tr>
<td><strong>Productive styles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Style F (Guided Discovery)</td>
<td>4.01</td>
<td>3.49</td>
</tr>
<tr>
<td>Style G (Divergent)</td>
<td>0.98</td>
<td>5.42</td>
</tr>
<tr>
<td>Style H (Going Beyond)</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>16.82</td>
<td>8.17</td>
</tr>
</tbody>
</table>

### Table 2
Percentage of IFITS intervals for each teaching style and management during lessons on striking/fielding games, track and field events, and tennis

<table>
<thead>
<tr>
<th>Teaching style</th>
<th>Striking/fielding (N = 20)</th>
<th>Track and field (N = 13)</th>
<th>Tennis (N = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>Reproductive styles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Style A (Command)</td>
<td>2.85</td>
<td>5.81</td>
<td>4.38</td>
</tr>
<tr>
<td>Style B (Practice)</td>
<td>73.45</td>
<td>12.20</td>
<td>74.08</td>
</tr>
<tr>
<td>Style C (Reciprocal)</td>
<td>0.25</td>
<td>0.64</td>
<td>1.23</td>
</tr>
<tr>
<td>Style D (Self-Check)</td>
<td>0.40</td>
<td>0.88</td>
<td>0.46</td>
</tr>
<tr>
<td>Style E (Inclusion)</td>
<td>0.10</td>
<td>0.31</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Productive styles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Style F (Guided Discovery)</td>
<td>4.32</td>
<td>4.19</td>
<td>3.00</td>
</tr>
<tr>
<td>Style G (Divergent)</td>
<td>1.65</td>
<td>7.38</td>
<td>0.15</td>
</tr>
<tr>
<td>Style H (Going Beyond)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>17.12</td>
<td>7.99</td>
<td>16.69</td>
</tr>
</tbody>
</table>
The main environmental factor which we speculate may have influenced the teachers’ styles of instruction was the difficult behaviour of a large proportion of their pupils. Allowing pupils prone to misbehaviour to make a great many decisions in the teaching–learning process, as teachers must in Mosston’s later reproductive (styles C, D and E) and productive (styles F, G and H) styles may have been considered too risky, particularly given the time constraints within which most PE programmes must operate (see Evans and Penney, 1993).

The political factor to which we refer is the focus of the later NCPE policy texts, most notably the first revised order for the new curriculum (DFE, 1995). Specifically, requiring teachers to give priority to improving pupil performance and dropping the reference to independent learning may have been crucial.

Finally, some previous research (Curtner-Smith, 1999) and logic suggest that the teachers’ own activity backgrounds (mainly traditional games playing), school experience (most likely taught by teachers employing direct styles), initial teacher education (most likely focused on pupil skill development) and the influence of their colleagues (more likely to use direct styles) were collectively likely to lead to the kind of instructional styles we observed.

The main strength of this study was that it produced accurate and detailed data about the teaching styles used by the teachers who agreed to participate. Previous research had not achieved this goal. There were, however, a number of limitations which need to be acknowledged. First, it is important to emphasize that the data produced by the study simply tell us about the focus of the teachers’ instruction rather than its quality. Future research might also examine how successful teachers are in employing each of Mosston’s styles. This would provide data which would be of great practical use for those responsible for initial and in-service teacher education. Second, the study was restricted to lessons taught to pupils in Years 7, 8 and 9 on typical summer activities. Future research which also includes lessons taught to different year groups on winter games, swimming, dance, gymnastics, and outdoor and adventurous activities may yield different results. Finally, we should emphasize, again, that our thoughts as to why teachers employed the instructional styles they did are based on logical speculation. Future research which also included a qualitative component might provide support for our hypotheses or unearth alternative reasons for teachers’ use and avoidance of specific teaching styles.

Note
1 As indicated earlier in the article, in more recent work Mosston and Ashworth (1990) identified three more productive teaching styles, essentially by dividing the components of the styles identified in the present study as guided discovery, divergent and going beyond. Since our preliminary review of the videotaped lessons indicated that teachers had used productive teaching styles infrequently, we made the decision not to code lessons for these newer productive styles.
References


Department for Education and Employment and the Qualifications and Curriculum Authority (2000) National Curriculum Online [Internet site]. www.nc.uk.uk.net/


Department of Education and Science and the Welsh Office (1991b) Physical Education for Ages 5 to 16: Proposals of the Secretary of State for Education and Science and Secretary of State for Wales. London: HMSO.


Résumé

Usages urbains d’enseignement et styles d’enseignement – productifs et reproductifs – dans le cadre des limites du curriculum national d’éducation physique

Le principal propos de cette étude est de décrire les styles d’enseignement employés par un échantillon de 18 enseignants qui travaillent dans un contexte urbain dans les conditions de la première révision du curriculum national d’éducation physique. Le second projet était de comparer les styles d’enseignement utilisés par cet échantillon à ceux utilisés par un échantillon rural précédemment étudié. Deux leçons enseignées par chaque enseignant aux enfants des années 7, 8 et 9, durant une période d’été, ont été filmées et codées avec un instrument d’observation systématique défini pour enregistrer les temps relatifs selon lesquels les enseignants emploient chacun des huit styles d’enseignement. Des statistiques descriptives ont été calculées sur 36 leçons, concernant divers jeux dont le tennis. Des t-tests indépendants ont été utilisés pour comparer les styles d’enseignement utilisés par l’échantillon urbain...
d'enseignants dans la présente étude et ceux utilisés par l'échantillon rural étudié précédemment. Les résultats ont indiqué que les enseignants de la présente étude utilisent une plus grande part de leur temps selon des styles directs d'enseignement. Leur modèle d'intervention était assez proche de celui des enseignants ruraux observés dans la précédente étude. Les raisons probables de ces résultats sont discutées.

**Zusammenfassung**

Die Verwendung inductive und deductive Unterrichtsstilen von Lehrern und Lehrerinnen an städtischen Schulen in den Grenzen des Nationalen Curriculum für Schulsport


**Resumen**

La utilización de estilos de enseñanza de profesores de ámbitos urbanos en el marco del Curriculum Nacional de Educación Física

El objeto central de este estudio fue describir los estilos de enseñanza empleados por una muestra de 18 profesores que trabajaban en un entorno urbano bajo las condiciones marcadas en la primera revisión del Curriculum Nacional de Educación Física. El segundo objetivo fue comparar los estilos de enseñanza utilizados por esta muestra urbana de profesores con los empleados por otro grupo de profesores de entornos rurales que fueron observados en un estudio preliminar. Cada profesor impartió dos clases a alumnos de los cursos 7, 8 ó 9 a lo largo de un verano, las cuales fueron grabadas en video y codificadas mediante un instrumento adecuado para identificar los estilos de Enseñanza, un instrumento de
observación sistemática diseñado para recoger los porcentajes de tiempo que cada uno de los profesores empleaban en cada uno de los ocho estilos de enseñanza. Las 36 lecciones fueron objeto de estadística descriptiva. Para el caso de lecciones dedicadas a juegos de golpeo, pruebas de atletismo y tenis, se aplicó un t-test para muestras independientes con objeto de comparar los estilos de enseñanza de los profesores de la muestra urbana del presente estudio y los utilizados por los de la muestra rural estudiados previamente. Los resultados mostraron que los profesores observados en el presente estudio pasaron la mayor parte del tiempo utilizando estilos directos de enseñanza. El patrón de estilo de enseñanza utilizado fue muy similar al de los profesores pertenecientes a entornos rurales observados en el estudio preliminar. Se discuten las posibles causas de estos hallazgos.

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