

COMPARISON OF PHYSICAL EDUCATION TEACHING EVENTS' PERCEPTION BY BEGINNING AND EXPERIENCED TEACHERS

Marc Cloes, Axel Vandersmissen & Maurice Pieron
University of Liège (Belgium)

The research on teacher thinking is seen as a growing area of research focusing on the understanding of how teachers make decisions. Teachers' interactive decisions occurring during the teaching process represent a powerful aspect of the «inside teachers' heads» variables influencing directly teacher-student relationships.

In physical education settings and in classroom teaching, it is argued that experience leads teachers to develop schemata that guide their practice and allow them to anticipate events during the teaching process (Byra & Sherman, 1993; Clark & Peterson, 1986; Graham, Hopple, Manross & Sitzman, 1993; Paquay, 1991; Treutlein, Janalik & Hanke, 1993). Siedentop & Eldar (1989) mentioned that, having developed finer discrimination, expert teachers see things that non experts do not see and respond quicker and with a larger repertoire than the latter.

According to Clark & Peterson (1986), schemata would influence the teachers' perception of events occurring during the teaching process. Good & Brophy (1991) considered that perception of teaching behaviours was influenced by the personal frame of reference. Past experience and attitudes act like a filter. The observer selects the situation that he/she wants to observe. Results of several studies in the classroom and gym environments tend to confirm this assumption. Bell, Barrett & Allison (1987) and Barrett, Allison & Bell (1985) observed changes between the beginning and end of their initial preparation in what physical education pre-service teachers see when watching physical education lessons. From oral descriptions of common classroom critical incidents, Calderhead (1981) pointed out that beginning teachers differed from experienced ones in the sophistication of their interpretation and understanding of classroom events.

Training teachers to perceive, analyse and transform their perception of teaching events in the same way that experienced teachers do was suggested as a relevant process in teacher education (Clark & Peterson, 1986). Several authors have proposed training programmes based on video-taped events or lessons (Graham et al., 1993; Treutlein et al., 1993), on reports of true-life teaching situations (Paquay, 1991), or on both (Byra & Sherman, 1993).

Video-taped teaching events could also be used as starting points to compare the perception of beginning and experienced teachers. In comparison with earlier approaches, the analysis of selected video-taped events allows for:

- (1) the standardisation of the situations presented to subjects;
- (2) the contextualisation of a real situation (close to the ecological setting).

The purpose of this study was to analyse the variability of teachers' perception of teaching events and their problem solving approach according to their teaching experience. The main hypotheses were that experienced teachers:

- (1) identify more reasons explaining the event's occurrence;
- (2) direct their attention towards the most meaningful aspects of the teaching process;
- (3) select and propose a larger variety of options to deal with class events.

Research method

Sixteen video-taped events were selected by two observers in 35 PE lessons selected from a video data bank (Table 1). Events lasted from 13 seconds to 2 minutes.

Teaching events were selected according to the observers' agreement on the incidents' identification. Moreover, they were chosen among several main aspects of the teaching process: appropriateness of the task to the students' level (7, 9, 16); class management (3, 5, 11, 15); instruction and intervention (1); pupils' misbehaviours (2, 4, 6, 8, 10, 12, 13, 14).

Half of the events involved discipline. This was justified by the fact that pupils' misbehaviours constitute one of the most important concern of pre-service teachers (Behets, 1990). They were identified among the main factors of anxiety in physical education teachers (Capel, 1993).

Selection of events related to class management was based on the fact that this variable is frequently considered by methodologists as a pre-requisite point for quiet and efficient lessons (Good & Brophy, 1991; Siedentop, 1983).

As pointed out by Tousignant & Siedentop (1983), the difficulty of a task must match the student skill level in order to create a challenge. Moreover, flexibility -adjustment of the task to the students' level- was seen as one of the variables distinguishing physical education teachers as most and least effective (Phillips & Carlisle, 1983). Teachers must identify problems of task maladjustment and propose appropriate solutions. It was the reason why the researchers selected several events related to this task's characteristic among the selected teaching episodes.

▼ **Table 1.** List of the video-taped events.

1. Teacher stopping the activity to remind the goals of the exercise to pupils (primary level)
2. Pupils modifying the task during a basket-ball lesson – Teacher does not identify the incident (secondary level)
3. Pupils practising one by one a psychomotor task (primary level)
4. Pupils disturbing the activity - Teacher minimizes the incident (primary level)
5. Distribution of balls to pupils (primary level) completed within a high degree of confusion
6. Noise during instruction - Teacher ignores the incident (secondary level)
7. Teacher actuating an activity appropriate to the pupils' level (secondary level)
8. Pupils talk during instruction - Teacher threatens to punish (secondary level)
9. Low pupils' success rate and high teacher's involvement during an exercise of serve reception (secondary level)
10. Noise during instruction - Teacher does not identify the incident (primary level)
11. A well organized distribution of rings, group by group (primary level)
12. Grumbling during activity - Teacher asks to stop (primary level)
13. Pupils' disobedience during instruction - Teacher restates rules (primary level)
14. Pupils fighting during activity - Teacher restates rules (primary level)
15. Long explanations concerning the organization of a gymnastic circuit (primary level)
16. Well adapted and organized hockey like task (primary level)

Only one event dealing with instruction and intervention was included in the list of teaching situations presented to the subjects. The reason was that most of the teaching episodes involving these teachers' behaviours risked being perceived as too common to be worthy of note. In this case, the teacher's verbal expression was so clear and typical that it did not lead to a reflective approach.

Twelve beginning teachers and 12 experienced teachers participated in the study. The beginning teachers -four females and eight males- had a maximum of one year experience. The experienced teachers -seven females and five males- had a minimum of 10 years experience. They were also regularly involved in teacher training as co-operating teachers or supervisors.

Subjects participated in an individual session during which researchers asked them to watch one by one the 16 selected teaching events. After each event they were interviewed. Following a brief description of the situation, subjects had to assess the character of the event as positive or negative. The following task was: (1) to determine the origin of the positive/negative episodes, and; (2) to propose behaviours that she/he would adopt in a similar situation.

The session lasted about three hours with a break after 90 minutes. Despite the length of the session, the subjects' interest was sustained.

Answers were audio-taped for further analysis. Intra-observer reliability was controlled through two analysis of 288 items six weeks apart. It exceeded 85 %.

Comparison of event assessment and of the distribution of origin and solution categories were based on biostatistical software (Glantz, 1988).

Results

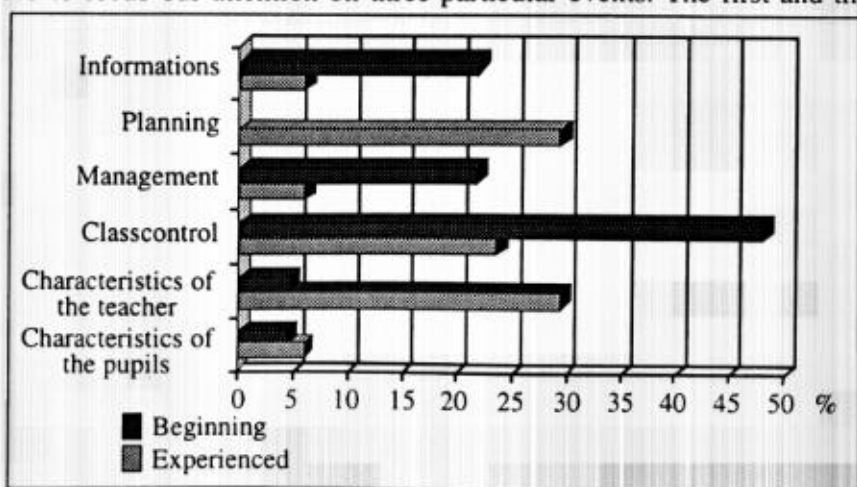
Assessment of the events

Despite the diversity of the situations which were recorded, the inter-subject agreement amounted to 79.2%. This underlined the subjects' reliability when analysing teaching events.

Inter-observer agreement did not differ when considering the predominantly positive (80.6%) or negative (81.5%) character of the events. No difference was observed between beginning and experienced teachers (80.7 vs 78.7% respectively) ($p > .20$; $t = .05$). This finding underlined that, as soon as they begin to teach, teachers were able to assess the overall character of a teaching episode.

Analysis of three selected events

An inter-subject agreement higher than 80% was observed for the character of nine events out of sixteen. Six were considered to be negative and three were described as positive. However, one of the sixteen events was considered to be neither positive nor negative. According to the diversity of the situations, we preferred to focus our attention on three particular events. The first and the second cases concern management episodes while the third dealt with the appropriateness of the task to the students' skill level. Subjects' agreement concerning the character of the first two events was close to 100%. For the third, subjects were evenly shared between positive and negative assessment. It must be noted that no teaching situation dealing



▲ Figure 1. Origins of event #1(%)($p=.022$; ** $p=.082$).

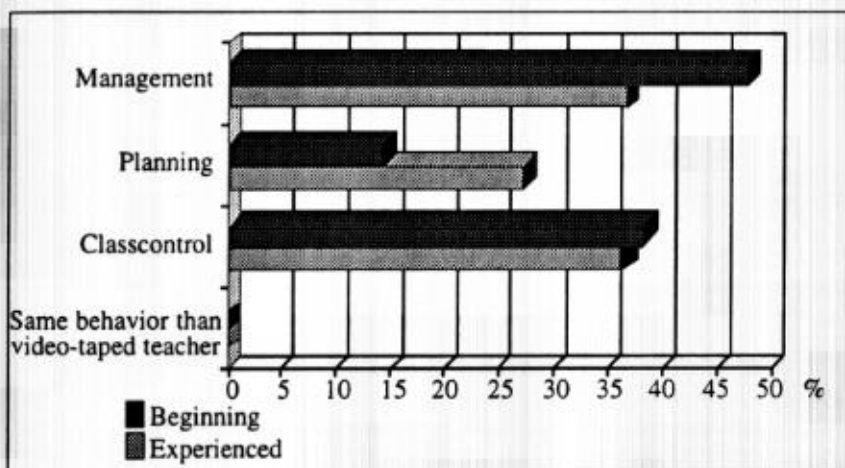
with pupils' misbehaviours appeared among the three events selected for detailed analysis. Subjects' agreement in discipline events reached 77.6%. This is consistent with findings of Fernandez-Balboa (1991) underlining the fact that the same pupil's action may be considered as a misbehaviour by one teacher while another does not pay it any kind of attention.

Event #1

This event was described as «a distribution of balls to pupils (primary level) completed within a high degree of confusion». It was assessed as negative by all the subjects.

The number of items proposed by subjects as the origin of the problem did not differ between beginning and experienced subjects (1.9 vs 1.4 item/subject; $p = .188$; $t = 1.36$). This contradicts previous findings from classroom settings (Calderhead, 1981). It seemed that each experienced teacher tended to identify categorically one possible reason for the problem shown by the video-taped teacher while beginning teachers tended to be less confident in their perception.

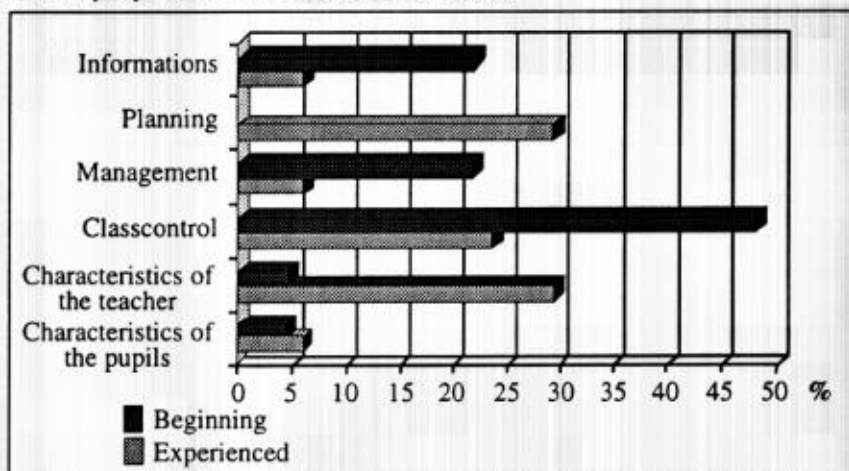
With beginning teachers, the origin of the problem was mainly related to a lack of class control (47.8%). Experienced teachers were more convinced that planning (29.4%) and teacher characteristics (29.4%) represented the origin of the problem (Figure 1). Differences between groups were significant only for the planning category ($z = 2.296$; $p = .022$). However, lack of class control was perceived as the origin of the incident by eight beginning teachers out of twelve while only four experienced teachers identified it among the possible causes of occurrence. This finding was relevant to the usual concern about class management in young teachers (Behets, 1990).



Surprisingly, both groups proposed the same number of solutions to the problem (1.8 item/subject). In fact, experts are usually seen as more effective problem solvers (Clark & Peterson, 1986) and as having a larger response repertoire (Siedentop & Eldar, 1989) than beginning teachers.

▲ Figure 2. Alternative solutions proposed to deal with event #1(%).

However, the analysis of experienced subjects' answers showed that their solutions were better balanced between classcontrol, modification of the management and correction of the planning than those of beginning teachers (Figure 2). Nevertheless, differences observed between both groups did not reach statistical



▲ Figure 3. Origins of event #2(%).

significance ($p > .20$; $z < .672$). It must be pointed out that no subject proposed to adopt the same behaviour as the video-taped teacher.

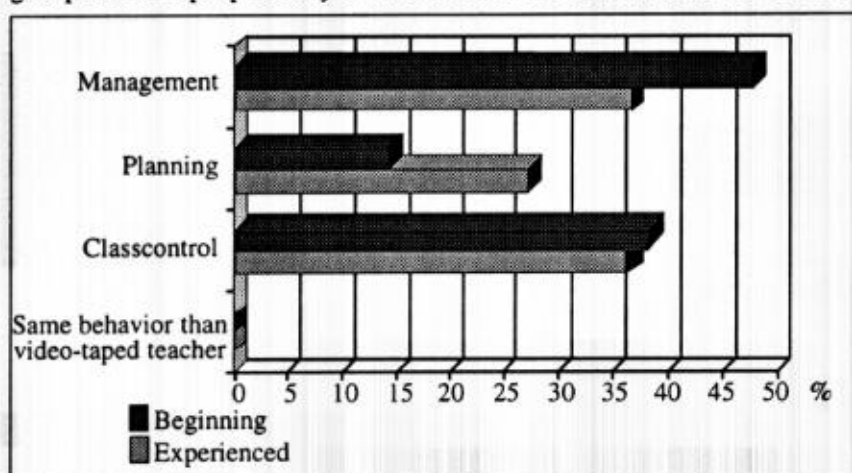
Event # 2

It was considered to be positive by 23 subjects out of 24. The event # 2 was described as «a well organized distribution of rings, group by group (primary level)».

The number of items proposed by subjects as the origin of this situation did not differ between groups (1.5 vs 2.0 items/subject in beginning and experienced teachers; $p = 17.1$, $t = 1.417$).

The distribution of the items was better balanced in experienced teachers than in beginning teachers (Figure 3). For the latter, management represented 50% of the origins named for the event. Experienced teachers could have taken advantage of their knowledge of the teaching process to diversify the possible causes of this situation considered as favourable. Experienced teachers would share the assumption that a unique variable is unable to explain the success of the teaching process. Pupils were never reported as the source of top quality in this teaching episode although their behaviour was totally appropriate.

Concerning the alternative solutions to the behaviours shown on the video-tape, experienced teachers tended to propose more changes in the management (organisation of the class) and less in class control (discipline) than the beginning teachers (Figure 4). This underlines again the predominant focus of the beginning teachers on class control. About one half of the subjects in both groups did not propose any other solutions to the situation shown on the videotape (5 beginning and



6 experienced teachers). This finding is surprising as it seems to indicate that all subjects possess a limited repertoire of schemata or were unable to propose alternative solutions leading to the good situation shown on the video-tape.

▲ **Figure 2.** Alternative solutions proposed to deal with event #1(%).

	Event perceived as positive		Event perceived as negative	
	Experienced n=6	Beginning n=6	Experienced n=6	Beginning n=6
Positive atmosphere	2	2	-	-
Characteristics of the pupils	1	-	-	1
Characteristics of the teacher	-	-	2	-
Management	-	1	2	-
Planning	-	1	2	4
Information	13	8	2	1

▲ **Table 2.** Comparison of the origins proposed by subjects for the event# 3 when perceived as a positive or negative situation (number of items).

Event # 3

The event was described as «an exercise to improve the reception of a serve during a volleyball lesson for girls, characterized by a low success rate and a high teacher involvement (secondary level)». This episode was considered positive by 50% of the subjects and negative by the others.

Subjects of each groups identified more possible origins to the situation when it was considered to be positive in contrast to those who considered it to be negative (2.3 vs 1.2/ subject; $p = .002$; $t = -3.54$).

In both groups, positive assessment was mainly determined by the rate of corrective intervention (Table 2, left). Negative assessment was related rather to the inadequacy of the proposed task (classified here in the planning category) by beginning teachers and in contrast was related to an array of different aspects of the teaching process by the more experienced teachers (Table 2, right).

Whether the teachers assessed the event as a positive or negative teaching situation, 77.1 % of the solutions proposed by the subjects concerned various kind of task modification. Simplification of the task, modification of the organization, use of progression were the most frequent proposals.

Conclusions

Beginning and experienced teachers did not differ in their assessment of the character of teaching episodes. Both groups proposed the same number of items to explain the identification of the origin of the teaching event. Experienced teachers tended to propose a better balanced array of the origin of the events than beginning teachers. If both groups did not differ in their description of the number of alternative solutions proposed for the behaviours shown on the video-taped events, experienced teachers tended to focus less on class control than the beginning teachers.

The specificity of the solutions proposed by the subjects to the video-taped situation should be regarded as valuable information for teacher training. Future studies should investigate how the analysis of video-taped teaching events could help teachers to reflect thoughtfully on their teaching practice and behaviours in response to certain events.

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