2010, Vol. 2, No. 2

PHENex Journal/Revue phénEPS

Comparison of Student and Cooperating Teachers' Observations of a PE Lesson

Comparaison des points de centration d'étudiants et de formateurs de terrain sur une leçon d'EPS

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The purpose of this study was to compare what student teachers (STs) and cooperating teachers (CTs) in physical education observe when they watch a ST teach in an early field experience. Results show, on the one hand, that CTs choose more aspects related to matter management and attach more importance to these aspects than STs. On the other hand, interindividual variability is more important for CTs than for STs. In conclusion, peer assessment and supervision by CTs must be supported by specific training focusing on teachers' knowledge related to didactics.

Cette etude avait pour but de comparer ce que relèvent des étudiants (ETs) et des formateurs de terrain (FTs) en EPS lorsqu'ils visionnent l'une des premières leçons d'un stagiaire. Les résultats montrent d'une part que, comparativement aux ETs, les FTs relèvent plus d'aspects liés à la gestion de la matière et accordent davantage d'importance à ces aspects. D'autre part, les FTs se caractérisent par une variabilité interindividuelle supérieure à celle des ETs. En conclusion, l'évaluation formative par les pairs et la supervision par les FTs devraient être soutenues par un entraînement spécifique centré sur les aspects didactiques de l'intervention en EPS.

Introduction

Assessment of teaching performance is a continuing concern for educational researchers and teacher educators. During the last 15 years, assessment of teaching performance has moved beyond a concern about certification to a

concern about learning. To match this new function, new teaching methods have been developed such as peer tutoring/coaching/assessment (Sluijsmans, Brand-Gruwel, van Merriënboer & Martens, 2004; Topping, 2005) and school-based experience/mentoring programmes (Eick & Dias, 2005; Scharmann, 2007).

Peer tutoring, coaching and assessment are various forms of peer learning that can be defined as "the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions" (Topping, 2005, p. 631). Information technology is often now a major component in peer learning. At present, social and emotional gains attract as much interest as cognitive gains, and benefits to helpers are emphasised at least as much as benefits to those helped. The research evidence is clear that peer learning works if it is well organised and implemented, and peer learning has also been noted to be among the most cost-effective of learning strategies (Topping, 2005). Further, peer assessment is a skill that can be trained (Sluijsmans et al., 2004).

It is now understood that preparing effective new teachers cannot be done through university classes alone, but must also take place in the reality of school classrooms (Eick & Dias, 2005). Scharmann (2007) described the evolution of a traditional on-campus secondary science methods course into a dynamic field- and campus-based professional development school collaboration. Before the change, post-student-teacher surveys indicated the insufficiency of the programme to prepare candidates to handle classroom management. In the revised mode, student teachers (STs) were more satisfied with their preparation to enter the classroom. Nevertheless, Brucklacher (1998) raised a problem regarding assessment in school-based/mentoring programmes. Evaluations by cooperating teachers (CTs) of STs resulted in ratings that were above average on all items. One of the reasons suggested for systematic above-average evaluations is a rater bias due to the relationship between CT and ST.

So, the contribution of these new methods to the professional development of STs or preservice teachers (PTs) continues to raise several questions: e.g., what does a ST or PT observe when peer coaching in an early field experience? What does a CT observe when supervising in an early field experience? Are these observations complementary, contradictory, incomplete or redundant?

Curricular revisions in the physical education teacher training programme at the University of Geneva were initiated in 2005. In the field of teaching, they aimed at assisting STs to become "critically reflective practitioners", i.e., practitioners able to reflect upon their own practices for-action (before the practice), in-action (at the same time as the practice takes place) and on-action (afterwards) and to get a deeper understanding of themselves as a way to create opportunities for transformations (Brandenburg, 2004; McAlpine & Weston, 2000; Schön, 1983). Two other concerns guided these curricular revisions. First, it was concluded that the ability to interpret the work of colleagues and peers is a necessary prerequisite for professional development and for improving one's own functioning (Verloop & Wubbels, 2000). Secondly, it has been shown that peer coaching gives better results than traditional university supervision (Bowman & Mccormick, 2000; Bullough et al., 2003). In accordance with these concerns, curricular revisions in the field of teaching consisted of integrating (a) practicum experience in a school-based environment with a peer, and under the supervision of a CT, (b) theoretical seminars and practice analysis, and (c) systematic reflective practice and peer coaching through the use of an e-learning platform.

Consequently, the previously mentioned questions were of great interest for the implementation of these revisions. This study aimed to answer these questions. Three bodies of literature informed the study: teacher activity, student or preservice teacher's observations and cooperating teacher's observations.

Teacher activity

Analysis of teacher activity has been conducted within the framework of several research paradigms: process-product, teacher effectiveness, teacher thinking, course-of-action theory, and didactic. To determine a knowledge base for teaching Gauthier, Desbiens, Malo, Martineau and Simar (1997) first examined research on teaching. On that basis, they constructed a model for research on teaching from which they elaborated a reading grid of teacher activity. This grid displayed the following

- Two traditional functions, *matter management* (MM) and *class management* (CM) (Develay, 1996; Durand, 1996); and
- Three stages, *preactive* (PR), *interactive* (IN) and *postactive* (PO) (Clark & Peterson, 1986).

Table 1 presents this reading grid which was used for analyzing 42 research syntheses based on more than 4 700 primary studies on teaching (mainly process-product but also teacher effectiveness and teacher thinking).

Table 1:
Reading grid of teacher activity (Gauthier et al., 1997, translated by the authors)

Matter management (MM)		
Preactive (PR)	**Interactive (IN)**	**Postactive (PO)**
General terms **MM-PR-1**	General terms **MM-IN-1**	General terms **MM-PO-1**
Goals **MM-PR-2**		
Contents **MM-PR-3**		
Learning activities **MM-PR-4**	Learning activities **MM-IN-2**	
Teaching strategies **MM-PR-5**	Explicit teaching **MM-IN-3**	
	Teacher's questioning **MM-IN-4**	
Evaluation **MM-PR-6**		Sommative evaluation **MM-PO-2**
		Formative evaluation **MM-PO-3**
		Reflexivity **MM-PO-4**
	Amount of instruction **MM-IN-5**	
Environment **MM-PR-7**		
Other terms **MM-PR-8**	Other terms **MM-IN-6**	Other terms **MM-PO-5**
Class management (CM)		
Preactive (PR)	**Interactive (IN)**	**Postactive (PO)**
General terms **CM-PR-1**	General terms **CM-IN-1**	General terms **CM-PO-1**
Disciplinary sanctions **CM-PR-2**	Disciplinary sanctions **CM-IN-2**	Disciplinary sanctions **CM-PO-2**
Rules and procedures **CM-PR-3**	Rules and procedures **CM-IN-3**	Feedback on rules & procedures**CM-PO-3**
Representations & teacher's expectations **CM-PR-4**	Teacher's posture **CM-IN-4**	
	Monitoring of task accomplishment **CM-IN-5**	
		Reflexivity **CM-PO-4**
		Relation with the parents **CM-PO-5**
Other terms **CM-PR-5**	Other terms **CM-IN-6**	Other terms **CM-PO-6**

Here are some examples of Gauthier et al.'s (1997) results: teaching to the whole class is positively related to students' learning (Cruickshank, 1990; Waxman & Walberg, 1982); the use of an effective questioning technique is positively related to students' performance (Reynolds, 1992; Roy, 1991; Wang, Haertel & Walberg, 1993). These results are sometimes contradictory, and the status and usefulness of such a knowledge base for teaching has been questioned by researchers who analyze teacher activity within the framework of the course-of-action theory (Theureau, 1992). This theory models the level of activity that is meaningful to the teacher (Casalfiore, Bertone & Durand, 2003; Ria, Sève, Durand & Bertone, 2004). Casalfiore (2000) observes, "Considered as a set of situated actions, teaching may hardly rely on a definition that establishes behaviours, knowledge and general attitudes without considering underlying intentions of action and particular situations in which they occur" (p. 13, translated by the authors). According to Durand (2000), "a teacher's action amounts to selecting elements of the context he/she feels are relevant and then organizing them" (p. 245).

In physical education, these elements include the spatial arrangement, the instructional materials, the sports equipment, the use of time, the establishment of student groups, the format and content of teacher-student communication and the different ways of assessing scholastic achievements. Recent analyses of teacher activity indicate that teaching is more an activity of negotiation than of prescription (Casalfiore et al., 2003; Magendie & Bouthier, 2008), and confirm that planning is a resource for action rather than a determinant for teaching (Suchman, 1987).

Beside the two traditional functions of teacher activity (matter management and class management), Casalfiore and De Ketele (2002) identified a third one: management of students' commitment to the task, by valuing the sense of the task and arousing students' motivation. This function also appeared in didactic and clinical analyses of teacher activity. For the physical education teacher, it consisted in justifying the interest of the motor task for the students, relying on leaders, proposing play and attractive tasks and challenging the students (Magendie & Bouthier, 2008). In other respects, research in didactics gave more precise details about the function of matter management, introducing the concepts of *devolution* and *institutionalization* (Brousseau, 1997). The term devolution labels a situation wherein the teacher gives the students the responsibility to solve a problem. In problem solving tasks, students are expected to progressively adapt and refine their models and solutions thanks to the potential offered by the environment, without relying on the teacher's guidance. The role of the teacher is here to encourage students, to focus them on the target problem and to help them to avoid dispersion in too many strategies. The term institutionalization labels a situation wherein the teacher validates the knowledge produced by the students. The role of the teacher is here to give information, to help students to recognize the knowledge gained in the task and to transform it in knowledge usable to solve other problems.

Student or preservice teacher's observations

Research on ST or PT's observations can be distinguished depending on whether participants are provided with standardized assessment tools or not, and whether participants observe their peers, their CTs and/or a videotape of themselves. Most studies used guided observation, in which STs or PTs observed preidentified types of teacher and pupil behaviours (Bowman & Mccormick, 2000; Hasbrouck, 1997; Wynn & Kromrey, 2000). In a study by Jenkins, Garn and Jenkins' (2005), 37 PTs were first provided training and practiced coding using the following systematic observation data forms: Teacher Position and Function; Hamrick Demonstration System; and Feedback Forms (Jenkins, Hamrick & Todorovic, 2002). Then, while observing peers teach, they completed two of the three systematic observational data forms as well as a peer coaching form which used an open-ended format. Not surprisingly, most of the 947 observation statements collected from 169 peer coaching forms fell into categories that reflected coding instruments the undergraduates were required to complete for both peer coaching and course analysis (safety, number of skill cues, equipment distribution/collection,…).

From a training point of view, it may be efficient to prepare PTs to observe by using guided approaches (Artzt & Armour-Thomas, 2002; Florio-Ruane, 1990). From a research point of view however, studies using guided approaches do not provide enough breadth of detail to enable researchers to learn about the foci of attention of PTs when observing a lesson; or by extension, about their representation of teacher activity and their capability to summon up course contents for observing their peers, their CTs or themselves. Several studies rather used unguided approaches. In an early study, Barrett, Allison and Bell (1985) attempted to identify what a group of 21 preservice physical education teachers reported seeing in a 15-minute games lesson with fourth-grade students. Results indicated that as a group, the PTs recorded statements about a broad range of teacher and student behaviours and lesson elements but as individuals, they recorded statements about the students only or the students and the teacher. In a follow up study, Barrett, Allison and Bell (1987) examined what a group of eight preservice physical education majors at the end of their professional preparation reported seeing in a 15-minute games lesson with fifth-grade students. Results indicated that as individuals, they recorded statements about the teacher, the students and the lesson in combination. Comparison of the results of both studies shows that PTs at the end of their professional preparation reported more observations (224 in contrast with 89), including more statements about the movement responses of the children (66.1% in contrast with 10%) but approximately the same percentage of statements recorded for the teaching techniques subcategory (21.9% in contrast with 25.9%).

In a similar context, i.e., unguided early field-based experience, Manouchehri (2002) gathered information about two teacher candidates in Secondary Mathematics Education and their interactions with one another. The two students were required (a) to observe together their CTs' instruction, (b) to observe each other's instruction, and (c) to write a reflective journal. Although both students were placed in classrooms where traditional teaching practices occurred, only one of them raised issues with this type of practice. Their observations were first centered around the organizational ritual of each class, then around the two teaching approaches they saw, the pupils' social and

mathematical behaviours and the pupils' performance relative to the curricular topics taught by both CTs. During their post-observation discussion meetings, the two teacher candidates' reactions to one another's teaching focused on specific students' behaviours and on instances from the instructional period on which they disagreed (teaching style, interactions with the students, mathematics curriculum). Napper-Owen and McCallister (2005) captured eight PTs' reflections while viewing a videotape of a lesson they just taught. Three themes emerged from the data: (a) student response to instruction (statements regarding instructional tasks, organizational tasks and student social interaction); (b) teacher behaviour (statements regarding instructional techniques, establishing the learning climate and teacher process behaviour); and (c) the lesson (statements regarding the goals and objectives of the lesson and the organizational structure of the lesson). Of the 728 coded interview reflection items, 44% concerned teacher behaviour, 40% concerned student response to instruction and 16% concerned the lesson. Finally, in Anderson, Barksdale and Hite's (2005) study, 34 PTs were required to observe CTs and peers. PTs were prolific in writing journal comments about observations of their CTs. Three major themes emerged from analysis of the journal entries: (a) classroom discipline/management (statements regarding providing positive feedback to on-task pupils, circulating around the classroom, having "eyes on all sides of your head", calling on pupils who are not paying attention, staying calm, correcting off-task behaviours, changing activities to handle behaviour problems, using wait time after questions, asking pupils to raise their hands to reduce calling out, keeping pupils busy, and carefully monitoring pupils in the back of the room); (b) pedagogy (statements regarding voice in teaching, confidence and enthusiasm, providing clear instructions to pupils, and ideas for teaching including teaching specific content); and (c) general positive influence. Although comments about teachers' negative behaviours were relatively few, they did reveal some significant concerns such as a contrast between the way the CT was teaching and what the PTs were learning in their courses. PTs were less prolific in writing comments in the same journal about observations of their peers. The themes included (a) praise for the experience, (b) specific pedagogical learning and (c) specific management skills learned.

In short, when STs or PTs are required to observe a lesson, they spontaneously focus on (a) teacher behaviours, (b) student behaviours and (c) lesson elements, in various proportions depending on their personality and the more or less advanced stage of their teacher training programme. When they are more specifically required to observe the teacher, their observations fall into categories that reflect the traditional distinction between class management and matter management (Develay, 1996; Durand, 1996; Gauthier et al., 1997).

Cooperating teacher's observations

Numerous studies have found that one of the valued aspects of the work undertaken by CTs is lesson observation (for a review, see Hobson, Ashby, Malderez & Tomlinson, 2009). But what do CTs actually observe when the STs or PTs teach? The answer to this question can be obtained indirectly through several studies which have dealt with what happens between the CT and the ST or PT during the post-lesson sessions. The topics in mentoring dialogues have been shown by Hennissen, Crasborn, Brouwer, Korthagen and Bergen (2008) to

fall mostly into three categories: (a) instruction and organization (planning, approach, material, maintaining order, classroom management); (b) the pupils and the class (behaviour, learning styles, aptitudes, reactions, learning process); and (c) the subject matter. In most of the post-lesson conferences observed by Borko and Mayfield (1995), four domains of teacher knowledge were addressed: (a) pedagogy (general pedagogical issues, classroom management); (b) students (factors that affected the flow of the lesson, student understanding of subject matter content); (c) mathematics-specific pedagogy (strategies and techniques for teaching mathematical content); and (d) mathematics (treatment of mathematical content).

As a general rule, CTs tended to focus mainly on organizational and relational dimensions of ST or PT activity to the detriment of the didactic (or content) dimension (Dugal & Amade-Escot, 2004; Hennissen et al.; Smagorinsky, Cook, Moore, Jackson & Fry, 2004; Strong & Baron, 2004). This can be related to studies focusing on expectations of teachers, CTs and STs, which show that (a) many teachers and CTs find the pedagogical aspects of their profession more important than the didactical or the subject matter aspects (Beijaard & De Vries, 1997; Rajuan, Beijaard & Verloop, 2007) and (b) both STs and their CTs expect students to learn disciplinary knowledge in the academic institution (Williams & Soares, 2000).

Several case studies revealed the variability of what CTs observe during STs or PTs' lessons and communicate to them during post-lesson conferences (Durand, Ria & Flavier, 2002; Hawkey, 1998; Martin, 1997). Rather than reflecting the needs of the individual STs or PTs, this difference may point to the CTs' different levels of experience and associated concerns (Hawkey, 1998). Although the field of teacher education has undergone considerable changes in the past 50 years, some experienced CTs still refuse to use new methods of knowledge transmission (e.g., socioconstructivism) that are more prevalent in programmes today (Clarke & Jarvis-Selinger, 2005). Feedback from the CTs often reflects their own teaching styles, and their own teaching model is applied to their students (Samaras & Gismondi, 1998). That is, CTs often want STs or PTs to further their own pedagogy (Martin, 1997). The cultural context may also play a role in the variability of CT observations. Comparing two U.S. and two Chinese cases, Wang, Strong and Odell (2004) demonstrated that the Chinese mentors were more concerned about lesson content than their American counterparts.

Thus, some physical education researchers have investigated what STs or PTs observe when they watch a peer teach in an early field experience, while others have investigated what CTs observe when they watch a ST or a PT teach in the same conditions. However, to our knowledge physical education researchers have not compared what STs or PTs and CTs observe when they watch the former teach in an early field experience. The purpose of this study therefore, was to compare what STs and CTs observe when they watch a ST teach in an early field experience.

Method

Setting and participants

The setting for this investigation involved the STs' first field experience, labelled Intervention 1. This course module is a year-long theoretical and

practicum course occurring in the second or third year (choice of STs) of the teacher training programme in physical education and a subsidiary subject at the University of Geneva, which has a duration of six years. It involves the cooperation of three participants: (a) student teachers; (b) cooperating teachers; and (c) university supervisors.

Data collection was conducted by three university supervisors (first, second and fourth authors) at the beginning of an academic year, during a theoretical course for STs and a training session for CTs.

Student teachers. The 18 STs enrolled in Intervention 1 participated in the study. They ranged in age from 20 to 33 (M = 24.6; SD = 3.4) and there were 12 males and 6 females.

Cooperating teachers. Eleven of the 13 CTs enrolled for supervising STs in Intervention 1 participated in the study. They ranged in age from 28 to 44 (M = 35.3; SD = 5.6) and there were 6 males and 5 females. They benefited from at least two years of teaching experience in physical education, while at most two years of supervision experience. They had received no specific supervision training before the investigation, which constituted the first step of a systematic supervision training programme for the CTs enrolled in Intervention 1.

Using participants from only one university was a limitation of the study. Although STs and CTs volunteered for the study and were assured that their participation or nonparticipation would not affect their grade or their enrolment in Intervention 1, this connection between the researchers and course work is also considered a limitation of the study.

Data collection

Data were collected from Student Teacher Observation Forms completed by the STs and the CTs while observing a video recording of a lesson taught by a ST from a former year.

Video recording. The video recording had a duration of 34 min 27 sec. It was about a volleyball lesson taught to a coed class of 7th grade students (12-13 year olds) by Mike, a ST in his first field experience. From our point of view, this lesson was an unsuccessful one, with many errors in terms of class management as well as matter management. It was selected because it was quite characteristic of PE lessons taught by STs in an early field experience. In that way, this lesson corresponded to what STs and CTs were likely to actually observe in Intervention 1. Mike's written agreement was obtained before using the video recording for the purpose of the study.

Student Teacher Observation Form. The Student Teacher Observation Form used an open-ended format. It began with the following notice: Imagine that you are Mike's cooperating teacher and that you have to conduct a 45 min post-lesson conference with him, based on the video recording you are going to watch. Which aspects of his teaching would you focus on, during the post-lesson conference? For every identified aspect, participants were required to transfer to the Student Teacher Observation Form: (a) the corresponding video time code; (b) a brief description of what they observed; (c) the positive (+) or negative (-) valence that they attached to this aspect; and (d) the importance that they attached to this aspect, on a scale from 1 to 3 (1 = not very important; 2 = important; 3 = very important). Participants were asked to rate the level of importance of each of their observations after they had watched the entire video recording.

Using one single lesson was also a limitation of the study. It does no harm to compare STs and CTs' observations, because both STs and CTs watched the same lesson. Consequently potential differences between their respective observations may not be attributable to the lesson. Instead, it thwarted generalization of STs and CTs' observations, because these would probably have been different if STs and CTs had watched another lesson.

Data analysis

Statements transferred onto Student Teacher Observation Forms were categorized with the aid of Gauthier et al.'s (1997) reading grid of teacher activity (see table 1). Indeed, despite its previously noted limitations for describing teacher activity, it seemed to us that this instrument was the most operational and reliable for analyzing and comparing what STs and CTs observed while watching the video recording of the lesson taught by Mike. Since participants did not have access to Mike's lesson plan, we only considered categories related to the interactive stage. However, it was obvious that some aspects of Mike's teaching were the result of the preactive stage. Two researchers independently classified statements from four Student Teacher Observation Forms, resulting in an interanalyst reliability coefficient of 84.7%.

Means and standard deviation of means were calculated according to standard methods for statements related to class management versus matter management, as well as for statements related to each subcategory. The significance of the differences between means values was tested with the Student's t-test, or Fisher test following an analysis of variance when several factors were taken into account.

Results and Discussion

A total of 18 Student Teacher Observation Forms containing 245 statements were collected and analyzed for STs. A total of 11 Student Teacher Observation Forms containing 157 statements were collected and analyzed for CTs. The number of statements transferred to each individual Student Teacher Observation Form ranged from 6 to 25 for STs (M = 13.6; SD = 4.9) and from 11 to 18 for CTs (M = 14.3; SD = 2.1).

As indicated in Table 2, STs chose, on the one hand, significantly more aspects related to CM than to MM ($p = 0.015$*), while CTs selected approximately the same proportion of aspects related to CM and MM. On the other hand, interindividual variability was more important for CTs than for STs. There is weak evidence ($p = 0.192$) that more experienced CTs' observations were characterized by a higher ratio CM/MM (M = 2.6; SD = 2.0) than less experienced CTs' ones (M = 1.1; SD = 1.7).

Table 2
Average number of statements

	MM	CM
Student teachers	6.1 ± 2.3	7.6 ± 3.0*
Cooperating teachers	7.4 ± 4.1	6.9 ± 3.4

The lower proportion of statements related to MM resulting from the STs' observations suggests that detecting matter management problems and strong

points in a physical education lesson requires specific knowledge that STs have not yet acquired. Among the seven categories of teachers' knowledge identified by Shulman (1986), five may be related to matter management: (a) content knowledge, (b) curriculum knowledge, (c) pedagogical content knowledge, (d) knowledge of learners and their characteristics, and (g) knowledge of educational ends, purposes and values. In this study most STs were lacking knowledge regarding volleyball (content knowledge) insofar as among the 18 STs, only three had completed the volleyball course the previous year. Thirteen were enrolled in this course at the moment of the investigation while two intended to take it the next year. However, on average, the three STs who were supposed to possess knowledge regarding volleyball identified fewer aspects related to learning activities, i.e., lesson content (MM-IN-2) than their counterparts. This finding reinforces the concept that teachers' knowledge categories do not develop in isolation and teacher preparation programmes need to adopt an integrative approach to teacher knowledge development (Cochran, DeRuiter & King, 1993; Grossman, 1990; Marks, 1990).Unfortunately, in the renewed physical education teacher training programme at the University of Geneva, there is still little collaboration between teachers teaching intervention and those teaching physical activity courses such as volleyball. Their didactical conceptions are rarely shared. Consequently, STs may acquire content knowledge which is incompatible with other kinds of knowledge - for example, knowledge of educational ends, purposes and values. This is a situation which must be improved in the future.

The Interindividual variability of CTs' observations may be seen to be the result of the considerable change in teacher education in the past 50 years, implying that more experienced CTs may view teaching differently from the way it is perceived in current teacher training programmes (Clarke & Jarvis-Selinger, 2005). A difference existed between STs' and CTs' observations related to the category MM-IN-2 (Figure 1). STs' observations ranged from 0 to 3 ($M = 0.8$; $SD = 0.9$) while CTs' observations ranged from 0 to 9 ($M = 2.0$, $SD = 2.8$). However, this difference was not significant ($p = 0.201$) due to the important interindividual variability of CTs' observations. As Mike's lesson corresponded to a "skill-nonlearning progression", i.e., "an isolated skill-focus approach that emphasizes covering content over student learning" (Hopper, 2002, p. 46), it means that some CTs considered that there was nothing wrong. This finding reveals a need for long life education for CTs focusing on their knowledge of content as well as teaching methods. Since the investigation, a systematic but limited supervision training programme has been organized with that in mind for the CTs enrolled in the successive field experiences of the teacher training programme in physical education at the University of Geneva. It would be interesting to assess the effects of this programme on the CTs' ability to observe STs' lessons, as well as the effects of STs' participation in Intervention 1 on their ability to observe their peers.

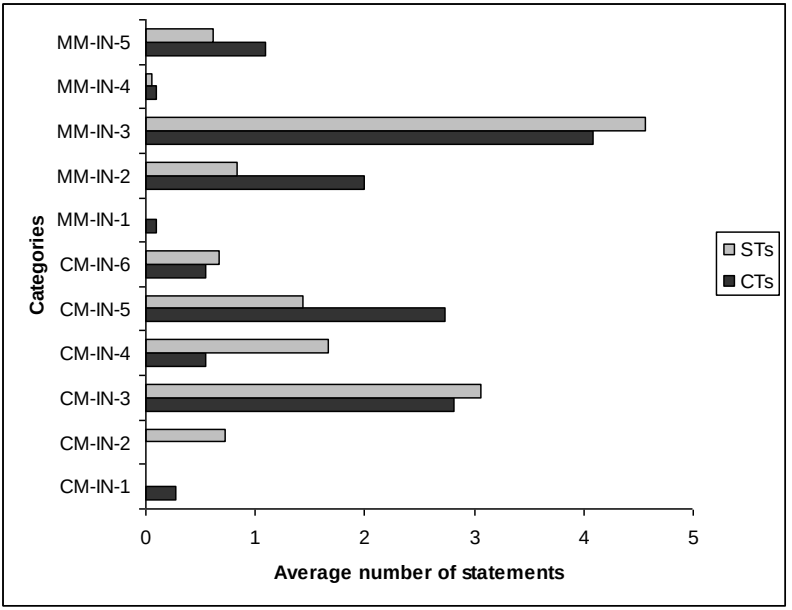

Figure 1 Average number of statements

On the other hand, as indicated in Figure 1, STs' observations related to disciplinary measures (CM-IN-2), teacher's attitude (CM-IN-4) and monitoring of task accomplishment (CM-IN-5) were significantly more numerous than CTs' observations related to CM-IN-2 ($p = 0.008$), CM-IN-4 ($p = 0.025$) and CM-IN-5 ($p = 0.050$). This finding refers to representations of teacher activity mostly shared by student and preservice teachers, according to which (a) the role of teacher is first to maintain order in the classroom, then to teach (Van Zanten, 2001) and (b) the teacher is first of all an animator with specific qualities, whose priority is to motivate children and to create positive relationships with them (Roux-Pérez, 2006). The importance that STs and CTs respectively attached to aspects related to CM and MM (Table 3) refers more specifically to their representations of teacher activity, insofar as this component of the Student Teacher Observation Form, contrary to the other ones, did not call for their knowledge and their ability to detect pedagogical and didactical problems and strong points in Mike's lesson, but only to what they felt was important for Mike's professional development.

Table 3
Average importance of statements

	MM	**CM**
Student teachers	2.3 ± 0.9	2.3 ± 0.8
Cooperating teachers	2.5 ± 1.1**	2.3 ± 1.3

STs attached the same importance to aspects related to CM and MM ($p = 0.942$) while CTs attached more importance to aspects related to MM than to CM ($p = 0.003$**). However, this difference was not significant compared to interindividual variability ($p = 0.246$). Compared to STs, CTs attached the same importance to CM ($p = 0.404$) but they attached more importance to MM ($P = 0.004$**). Again, this difference was not significant compared to interindividual variability ($p = 0.114$).

Thus, representation of what is a good physical education lesson or a good physical education teacher appears to be rather a matter of personality than of teaching experience. It has been shown to be not only influenced by student, student teacher and teaching experiences but also by gender, personal sports practice, geographical localisation, motivation for teaching and difficulties in teaching (Malet, 2007; Roux-Pérez, 2003; Van Zanten). It has also been shown to change with the passing years according to the circumstances and various life events such as the interruption of personal sports practice, visits of school inspectorate, and meetings with colleagues (Korthagen, 2004; Roux-Pérez, 2005). Considering that a good teacher is a teacher whose behaviour, competencies, beliefs, identity and mission together form one coherent whole matching the environment and that this situation can take a lifetime to attain, if attained at all (Korthagen, 2004), one has to ask oneself how teacher training programmes can introduce student teachers to professional development toward becoming such good teachers. More specifically within the framework of this study, one has to ask oneself how CTs' supervision and peer tutoring/coaching/assessment can efficiently contribute to STs' introduction to such professional development.

Our findings show that STs at the beginning of their first early field experience are more able and inclined to provide their peers with information about how the latter manage the class than with information about how they manage content. On the other hand, our findings show that CTs vary in their ability and disposition to provide STs with information about how student teachers manage the matter. It means that depending on the CTs who supervise them, STs may be provided with redundant but incomplete information by both CTs and peers after having taught a lesson in their early field experience. In the teacher training programme in physical education at the University of Geneva, university supervisors are also required to provide STs with information about some of their lessons. Since they do not have access to comments provided by CTs and peers, the result may be that STs lack information about important aspects of their teaching, i.e., what they need to do so that their students learn.

Conclusions

This study aimed to compare what STs and CTs observe when they watch a ST teach in an early field experience. Based on our findings, three conclusions are offered.

First, novice CTs and peers may become rapidly efficient in providing STs with information about the organizational and relational part of teacher activity. Specific training focusing on teachers' knowledge related to didactics (content knowledge) seems, at this stage, necessary for helping peers and CTs to become efficient in providing STs with information about the instructional part of teacher activity.

Second, CTs' knowledge about class management seems to be less sensitive to individual difference than their content knowledge. So that means that more experienced teachers do not necessarily make the best CTs in terms of ability and disposition to supervise STs or PTs regarding the didactical or the subject matter aspects of the latter's beginning teacher activity. When recruiting CTs, we should be particularly attentive to the applicants' manners of conceiving matter management.

Third, findings revealed that teachers' knowledge does not develop in isolation. Consequently, teacher preparation programmes need to adopt an integrative approach to teacher knowledge development. At the University of Geneva, collaboration between teachers teaching intervention and those teaching physical activity courses must be improved in the future.

We acknowledge the limitations of using participants from only one university and asking them to observe a single lesson, as well as the limitations of playing simultaneously the roles of researchers and instructors. Therefore, we cannot generalize our conclusions to other teaching contexts or CTs and STs because each teaching context is unique. However, according to the principle of transferability (Lincoln & Guba, 1985), readers may compare our results and conclusions with those obtained in their own context.

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