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# Lower primary school teacher trainees' and pupils' interactions on PE lessons

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## ABSTRACT

Kiss Z. Lower primary school teacher trainees' and pupils' interactions on PE lessons. *J. Hum. Sport Exerc.* Vol. 8, No. Proc2, pp. S1-S9, 2013. Teaching activities on PE lessons are quite different from the ones on other lessons because of the interactions while teaching activities. One of the main characteristic features is that pupils answer the teacher with motor activity, so lesson work is not based on dialogues. These reasons guided Svoboda to work out the category system of observing PE lessons. I used his interaction analysis method in our research to observe PE teacher trainees' lessons. The aim of the research was to know the most widely used teacher activities (out of 13) and pupil activities (out of 7) on PE lessons held by teacher trainees. **Key words:** PE LESSON, TEACHER TRAINEES'-PUPILS' INTERACTIONS, TYPES OF ACTIVITIES.



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## INTRODUCTION

Observation always has been one of the most important and most widely used research methods in the field of education. There are several techniques within this method including observation with the use of a certain category system. It became widely spread in the late 1960s/early 1970s however, it had already been used when researches needed exact, proper instrument for measuring educational processes (Falus, 1996).

For decades, education researchers have used various methods to observe lessons, directly or indirectly. Some were interested in teachers' activities, some in pupils' activities and of course some in the interactions between teachers and students. One of the most well known methods in these researches is Flanders' interaction model (Flanders Interaction Analysis Category system- FIAS). Flanders worked out a system to analyze the classroom interactions, which was used to observe and decode teacher-pupil verbal communication as he believed them the most important factors. His general idea was that most part of the teacher's function claims verbal communication. It is true on PE lessons as well but as for the peculiarity of this subject non verbal communication is very important, too.

PE lessons have their main characteristic feature in the pupils' motorist activity as answer to the teacher, instead of the usual dialogue (Svoboda, 1978). It means that teaching style on a PE lesson is essentially differs from the teaching style on other lessons, particularly because of the interactions during teaching an activity.

The process of teaching activities differs from the classroom based lessons basically because the curriculum is practice based (Piéron & Cheffers, 1984).

As for Bíróné et al. (1988) in the educational situations the participants make cognitive relation with the help of verbal communication but in teaching physical education corporal communication is present as the teacher has to demonstrate the curriculum. Correcting mistakes and giving help are also different from usual classroom based subjects.

That is why the Flanders method could only be used partly in observing PE lessons, so several researchers worked out their own category system, using Flanders's one as a base. The researchers focused on the observation of the interactions while creating their category systems adapting Flanders's one.

Cheffers (1969) emphasised the peculiarities of movement based activity teaching and categorized them, Dougherty (1970-71) added an extra category to the original FIAS, when non-verbal activities are a response to the teacher's direct action. Mancuso (1972) also categorized several non verbal messages to observe verbal and non verbal communication on PE lessons. Piéron (1984) added a special category: teacher's feedback and demonstration (Bíró, 2006).

Just like in the case of the above researchers these reasons motivated Bohumil Svoboda to work out an own category system, specially planned for observing PE lessons, in which he divided verbal and non verbal elements. Researchers have insisted on a reliable technique to monitor and posit the activities of teachers and sport instructors.

In Hungary Bíróné (1988), and Vass (1987) made researches with the help of a given category system, linked to PE lessons. Bíró (2007) used categorical observations on swimming trainings, while Simon (2010) used it partly on curative and partly on normal PE lesson.

It is evident that the teaching process is a very complex one and its success can be examined from several aspects. Teaching process is based on interactions therefore the examination of these interactions may help to understand this complex process itself.

The main aim of our research was to know the teaching activities our PE teacher trainees mostly use. On the other hand we analyse the quality of the lessons plans, evaluate the interactions, observe certain teaching skills such as organization, time management, communication and experience providing. I wanted to know how often certain teaching and learning activities occurred. I also tried to measure the rate of motorist activities on PE lessons and also to measure the time the pupils spend on motor activities.

## MATERIAL AND METHODS

### *Participants*

The observation was at the Kaposvár University Teacher Trainee Elementary and Secondary School (Kaposvári Egyetem Gyakorló Általános Iskola és Gimnázium) in the spring term of 2008/2009 school year and in both terms of 2009/2010 school year.

I observed 93 PE lessons held by 61 teacher trainees (female: 46; male: 15). Table1 shows their distribution according to their specializations. I involved those teacher trainees who were in their 6<sup>th</sup> and 7<sup>th</sup> semester as they are their usual trainee semesters.

**Table 1.** Specializations of the teacher trainees.

Specialization	Number of persons
PE	35
Natural Sciences	11
Hungarian	13
Music – Art – Technical science	14
Foreign language	8
Mathematics – Informatics	12

### Method

I used observation with the help of Svoboda's (1977) category system. This category system consists of 13 teaching activities (Table 2) and 7 learning activities (Table 3)

**Table 2.** Teacher candidates' categories (Svoboda, 1977).

Categories of teaching activities:
1. Explanation
2. Demonstration
3. Organization I.
4. Organization II.
5. Correcting mistakes
6. Motivation I.
7. Motivation II.
8. Evaluation
9. Disciplining
10. Praising
11. Questions (feedback)
12. Observation
13. Other activities

**Table 3.** Pupils' categories (Svoboda, 1977).

Categories of pupils' activities:
1. Movement individually
2. Movement in pairs
3. Movement in teams
4. Movement in groups
5. Frontal class instruction
6. Gaining information
7. Interchanging information

The gist of such an interaction analysis is to collect data of spontaneous teaching and learning activities that give information. The given information can be paste into charts then we can interpret it. Decoding the data is an important criterion because it ensures the possibility of reconstructing the lesson. Any kind of hitch (technical devices, more people than necessary etc.) must be minimized in such researches and the observer is important, too (Flanders, 1968).

Our research fulfilled these requirements as it was a direct observation, we did not use any technical devices and the observers were known by the trainees and by the pupils as well. The fact that we used defined categories (see also: Appendix) minimized the number of committing errors.

During the 93 lessons the observers recorded the activities of the trainees and the pupils in every 30 seconds, using the category systems. With this method we had 15608 data, which mean 7804 data pairs. In this phase of the evaluation the rank and rate of the activities can be stated.

## RESULTS

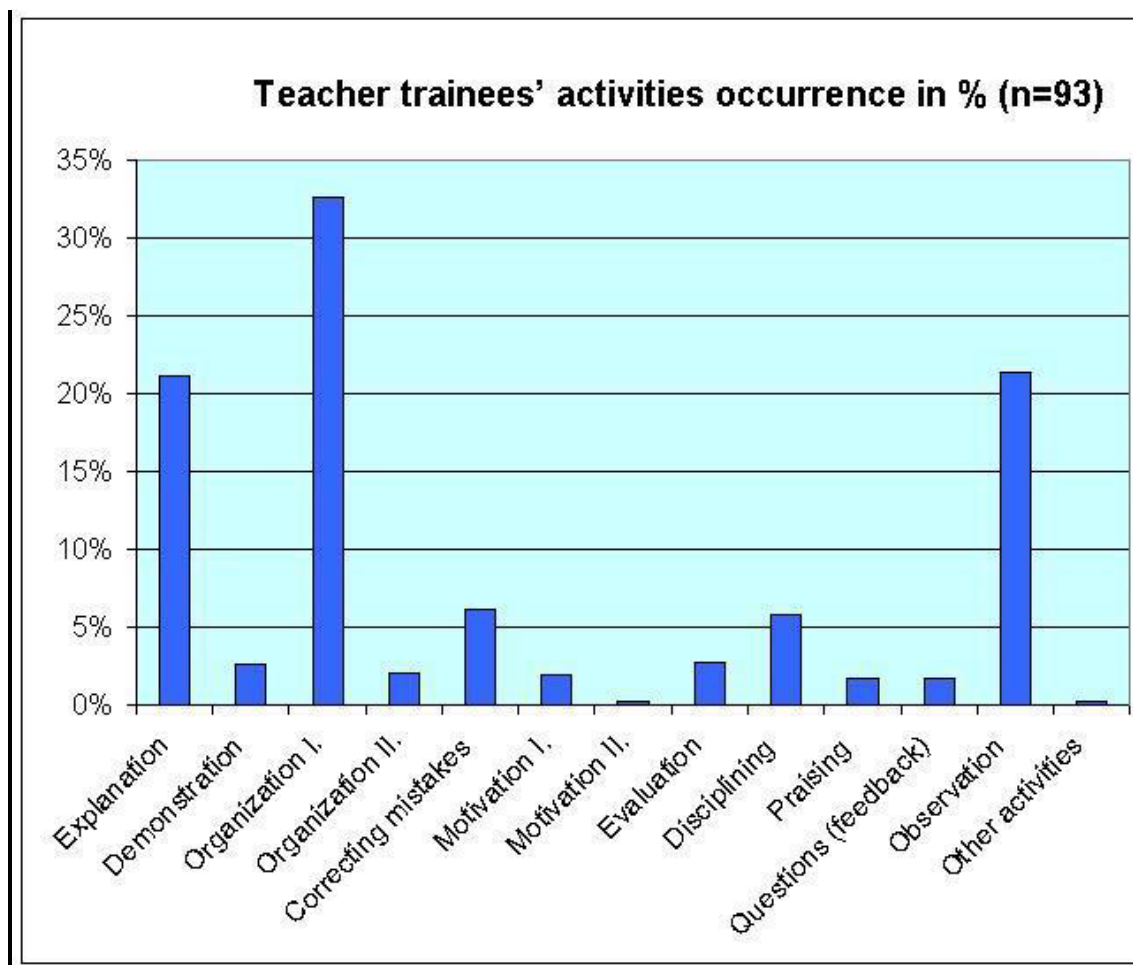
Analysing the data of the 93 PE lessons I could rank the activities of the teachers (Figure 1) and the activities of the pupils (Figure 2).

Among the teacher trainees' activities, organization was the most frequent (32.57%). Organization has a key role in the lessons as this category ensures the start and pause of the steps, the formation of figures, the allocation and installation of the sport equipments. It means that a PE lesson requires very good organizational skills. Even if we consider its necessity we think that its appearance rate is too high. Biróné at al. (1988) observed PE lessons of full time teachers where the occurrence rate of organization activities was 10%. This significant difference between the two rates can be generated by the lack of routine on the

behalf of the trainees, while full time teachers must have had more experience in organization. If we take the 3 part lesson (introduction, major part and final part) as a starting point we realize that trainees waste most of the time after the introductory part but before the major part. The reason for this is that they had to allocate and install the sport equipments and form the figures and it took 6-8 minutes. As in this period pupils did not make any motorist activities, it was waste of time.

Observation became second in rank (21.36%) as teachers, apart from motorist activities, have to take care about the general behaviour and the playing habits of the pupils as well. Vass (1987) observed the lessons of full time teachers and realized that observation was not a common activity. However, in the research of Biróné et al. (1988), this teaching activity was used in 17% of the lesson. We assume that trainees tried to find out the next steps of the lessons during the passive observation and did not encroach in the pupils' activities even if they realized its necessity.

Explanation was third in rank (21.09 %), it might be seen as dominant activity, too. It is not surprising as it is significantly present in the work of full time teachers as well. These 3 categories completed one third of the whole lesson, which presents their emphasis correlate to the others.



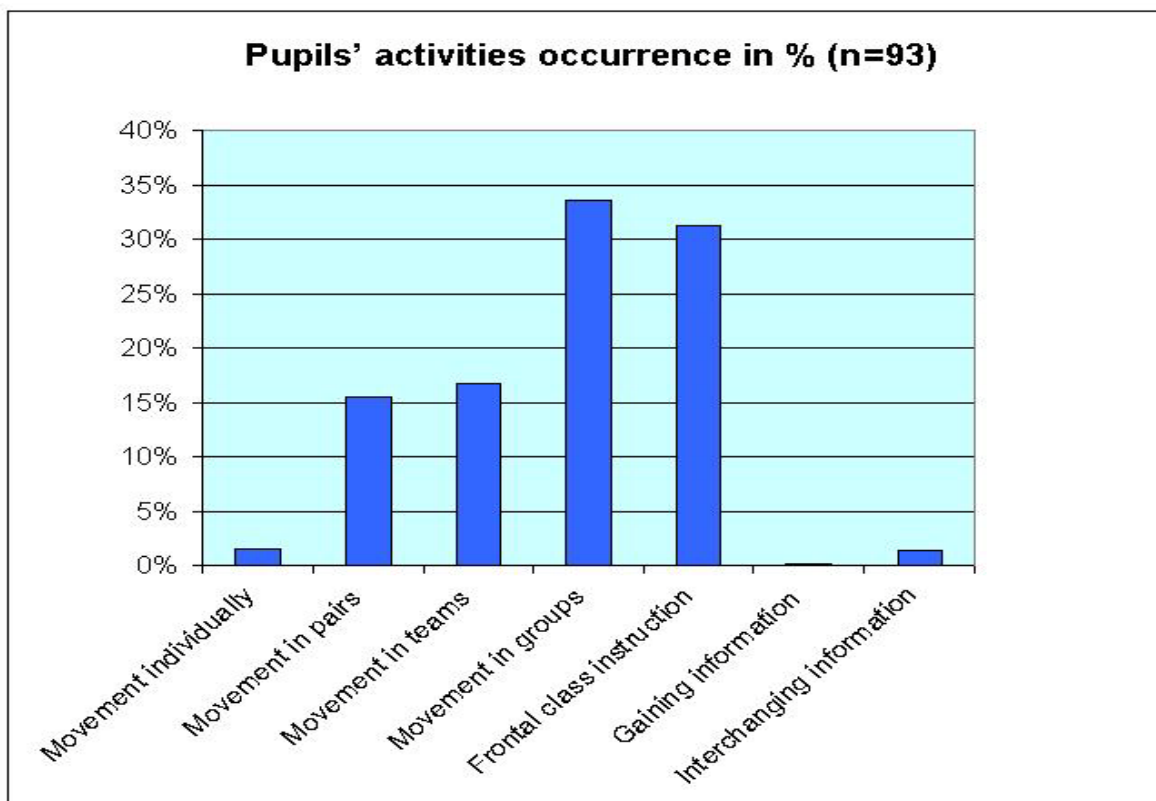
**Figure 1.** Teacher trainees' activities: rank and occurrence (n=93).

Correcting mistakes (6.14%) and disciplining (5.77%) is also considerable. The first one is matched with the pupils' motorist activities, while the latter is present during the whole lesson. Unfortunately important teaching activities like evaluation (2.68%), praising (1.73%) or motivation (1.88%+0,19%) is missing. Occurrence rate of these 3 categories is very low that is why we claim that they should have more emphasis in teacher trainings. They have evident role in the pupils' school time period. If we praise a less talented child it may have motivating force towards sports.

Analysing the pupils' categories the first in rank became movement in groups (33.5%) that is very good as the main aim of the PE lessons is motorist activity. It is mostly present in the introductory period as warm up is always a collective exercise. In later parts of the lesson it depends on the curriculum itself.

Not so good news that second in rank was frontal class instruction (31.25%) that does not contain any motorist activities. It might be caused by the long time the pupils spend on allocation and installation of sport equipments, unnecessary explanations and too difficult figures. Third and fourth categories in rank were team movement (16.71%) and individual movement (15.44%). They are typical during the major part of the lesson and depend on the curriculum and the movement in connection with it. Individual movement is very rare (1.56%), pupils fortunately do not use this uneconomical activity. Its presence can be explained with pupils' exercise demonstration. 6<sup>th</sup> and 7<sup>th</sup> categories have no significant role.

Observation by Biróné et al. (1988) shows that group movement is very significant (54%) then come frontal class instructions (19%) while team movement is also present with 17%. It is important that the rank of the movement is the same in both researches although there is difference in their occurrence rate. It might be stated that interactions on the peculiar PE lessons are similar.



**Figure 2.** Pupils' activities: rank and occurrence (N=93).



## DISCUSSION AND CONCLUSION

Interaction analysis is a system to observe and code the verbal communication among teacher and pupils, which has vital role in the analysis of spontaneous teacher behaviour. Researches on this give information to the teachers of their own behaviour (Flanders, 1968). Such quantitative analysis of PE lessons results in important information on typical interaction forms of the trainees during the certain teaching periods. The results show their frequency and their correlation to each other as well.

The research ended with useful information. I have to state that the trainees' attitude towards teaching is positive. The results show that they spend too much time on organization on observation due to their lack of experience. This might be the reason for the rare occurrence of such important teaching activities like motivation, praising or evaluation.

Pupils' most frequent activity is in harmony with the general aim – to spend most of the time with motor activity however it is not gratifying that they also spend much time on non motor activity. If we add all the motor activities it is noticeable that on the two third part of the lesson (65.65%) they move. As our research focused on non experienced trainees, this result is acceptable.

Summarizing the results I claim that more emphasis must be put on several points in their trainings. My opinion is that the results can support the theoretical and practical background of the teacher training to make the teaching-educating work more effective in children's sensitive period in their activity learning.

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## APPENDIX:

### Teacher's verbal activities and their definition

1. **Demonstration:** information on the tasks, the curriculum, the realization of the exercise, professional statements and evaluations.
2. **Organization I.:** start and pause the pupils' activity, ensure the transition between the exercises (allocation and installation of sport equipments, forming figures).
3. **Organization II.:** this is like the previous one but this time the teacher is also an active part of the movement (do the exercise, help in installation and allocation, ensures the safety work).
4. **Correcting mistakes:** raise attention on the mistakes; help to correct them verbally (and also non-verbally).
5. **Motivation I.:** emphasis the farseeing aims of the individual or the whole group.
6. **Motivation II.:** emphasis is on the given exercises.
7. **Education:** statements that have general educational role (ethic, moral, public etc.)
8. **Discipline:** all the negative evaluation in connection with the pupil's behaviour (intensity of movement, its continuity etc.)
9. **Praise:** positive evaluation to motivate individuals or the group.
10. **Questions:** feedback of information, correction, discipline with the help of teacher's questions.

### Non verbal activities and their definitions

11. **Demonstration:** giving information or correcting mistakes with activity, demonstration of a step as for the requirements of the activity system. (Verbally explained activity imitation is not included here)
12. **Observation:** inactivity of the teacher, watching the pupils, getting reports.
13. **Other activities:** indifferent activities in teaching (arriving to the pitch, going to the sport storage room etc.)

Source: Vass (1987)