SOCIAL AND RELATIONAL INTERACTIONS IN DIFFERENT TYPES OF PE LESSONS DURING STUDENT TEACHERS' PRACTICE TEACHING

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The main goal of the study was to analyze social and relational characteristics of student PE teachers' practice teaching. The results should be used to increase the quality of pre-professional PE teachers' preparation from the interaction point of view and should allow the effective transfer of theoretical knowledge into school practice. The experiment included evaluations of student teachers from seven PE colleges in the Czech Republic and in Poland. The analysis was focused on the difference between habitual and progressive PE lessons evaluation. All main characteristics of education were observed. Special emphasis was placed on social and relational factor in pupils according to different types of leadership in PE lessons and to changing pupils' role in school PE. Progressive interventions were positively valuated in both the social [$H (1, 18489) = 107.18$; $p = .00$; $\eta^2 = .01$] and relational [$H (1, 18489) = 25.89$; $p = .00$; $\eta^2 = .00$] dimension. Student teachers valuated relational dimension more positively in habitual PE lessons [$H (1, 18489) = 25.89$; $p = .00$; $\eta^2 = .00$], but social dimension was evaluated by them more positively in progressive PE lessons [$H (1, 1270) = 48.94$; $p = .00$; $\eta^2 = .04$]. Although there is distinction between PE teachers' preparation in the Czech Republic and in Poland, the difference in PE lessons evaluation was not significantly different.

Keywords: Education, questionnaire, student teacher, pupil.

INTRODUCTION

Practice teaching in PE teachers' preparation programs is necessary for determination of absolvent model (Švec, 2000), professional standards and competencies (Bellz & Siegrist, 2001; Brooker, Miller, Mylonas, & Hansford, 1998; Hozman & Frömel, 2000; Knitt et al., 2000; Senne, 2002), pedagogical skills (Švec, Fialová, & Šimoník, 2000) and other professional requirements (including ethics which we still miss in our educational system). Current social tendencies depend on transformation of the educational system. For example in school PE we observe changing role of pupils in education, therefore it is necessary to change goals, adapt organizational and didactic forms, didactic progress and PE methods. All these should respect pupils' personality. Education in current school PE is more aimed at pupils, their independence, creativity, more freedom in decision making, self-diagnostics, self-regulation and at the highlighting of increasing pupils role on leading classes. It is expected that pupils are more motivated to activity that they can decide about (Cuddihy, Corbin, & Dale, 2002; Frömel et al., 2000; Mandigo & Holt, 2000; Zakrajsek & Carnes, 1986).

Innovative interventions into education depend on a spectrum of teaching styles. Mosston (1992) says, that teachers need more than their "personal" teaching style, they have to accept a variety of the spectrum of teaching styles. Byra (2000a, 2000b), Cai (1997), Dobrý (1998), Goldberger (1992) and Mareš (1998) expect that the spectrum of teaching styles allows for better understanding of educational reality and increase the possibilities for teachers' preparation.

A new conception of practice teaching is characterized by change of student teachers' role and can support and increase students' position during their pre-professional preparation at the university. The preferred conception of education in new educational programs requires more targeting the pupil, but requires that the feedback for student teachers would be superior (Coulon & Lorenzo, 2003; Hynes-Dusel, 1999; Knudson, 1998; Quezada, 2004).

Another serious problem in pre-professional PE teachers' preparation is searching for new approaches to changing "pupils' role" in education and with regard to change in interaction between teachers and pupils. For better understanding of the problem it is suitable to compare studies between different lesson types, a variety of conditions for teaching PE, different PE teachers and other didactic differences. The analysis of differences in pupils' and teachers' evaluation of PE classes in the Czech Republic and in Poland was set as one of the goals. This comparison can improve didactic predictions.

THE GOAL OF THE STUDY

The main goal of the study was to find out how student teachers and their pupils evaluate PE classes with regard to social and relational characteristics.

METHODS

A fundamental experimental sample was made by all student teachers from selected universities and their pupils. Data were obtained during the student teachers' practice teaching from faculties preparing PE teachers in the Czech Republic (Pedagogical Faculty of University in Ostrava, Pedagogical Faculty of the Southern Bohemian University in České Budějovice and Pedagogical Faculty of the Western Bohemian University in Plzeň, Faculty of Physical Culture Palacký University in Olomouc and Faculty of PE and Sports, Charles University in Prague) and in Poland (Academy of Physical Education in Wroclaw and in Katowice) during the years 2002 and 2004. The current conception of practice teaching at the Faculty of Physical Culture in Olomouc makes for a close connection between the methodic leadership of PE lessons and didactic diagnostics. The main goal is to increase PE students' responsibility for pre-professional preparation and their independent access into practice teaching including results processing. Students get didactic tasks that they should perform during the lessons leading. After that they use standardized method for lesson evaluation by using the standardized questionnaire "Students' relation to PE lessons" (Frömel, Novosad, & Svozil, 1999). The questionnaire is used for finding out pupils' opinions of PE lessons they have just participated in. The questionnaire for teacher and other modifications have a similar structure and they differ only in modified questions. The purpose of the questionnaire use is to get information about PE lesson which is very difficult to get by observing, monitoring, etc. The questionnaire has 24 questions that characterize 6 dimensions (TABLE 1), is anonymous and universal for age groups 10–18. It means that its use is most suitable for pupils of basic and high schools. Data were processed by using special software "Dotazník 2002" (Chytil, 2002) and its output provides the feedback for student teachers. After the practice teaching is over, student teachers have a special seminar where they solve and discuss most serious pedagogical problems, differences between didactic theory and school practice and evaluate their work during practice teaching.

TABLE 1
Questionnaire structure

Nr.	Dimension:	Questions Nr.:
I.	Cognitive	1, 7, 13, 19
II.	Emotional	2, 8, 14, 20
III.	Health	3, 9, 15, 21
IV.	Social	4, 10, 16, 22
V.	Relational	5, 11, 17, 23
VI.	Creative	6, 12, 18, 24

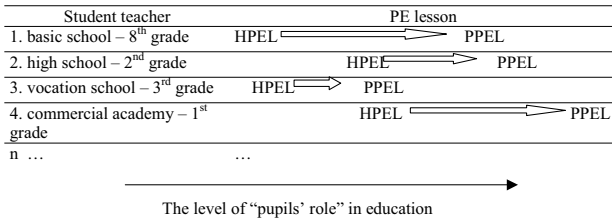
All student teachers and their pupils took part in two types of PE lessons:

Habitual PE lesson (further only HPEL) means a lesson which is, for student teacher and the given class, led in the best way, in the way most suitable, usual and already verified in practice. Every student teacher uses a different way of leading and each of them has the task of giving optimal lessons according to his/her personal or learned experience.

Progressive PE lesson with similar content and structure to habitual lesson was organized to more often involve pupils into leading of the lesson, with a variety of choices during exercising, offering the freedom in decision making and an orientation to independence, self-evaluation, creativity and other teaching interventions, according to the preferred conception of school physical education.

It is difficult to set the border between habitual and progressive lesson because we have to include individual differences among student teachers and their pupils (Fig. 1). Every student teacher starts on different level for teaching habitual or progressive lessons with the same content.

Fig. 1
Experiment scheme



Notes: HPEL habitual PE lesson
PPEL progressive PE lesson
⇨ quantity of "pupils' role" change
n number of student teachers

All participating university workplaces were able to progressively intervene in student teachers' practice teaching. Evaluation by student teachers and pupils during each practice teaching was requested. 9742 pupils and 655 student teachers took part in habitual PE lessons, while 8747 pupils and 615 student teachers took part in progressive PE lessons.

Data from questionnaires were further statistically processed by using the software Statistica 6.0 (StatSoft CR, 2002). To compare individual variables Kruskal-Wallis non-parametric test was used. Statistical significance was set by *p ≤ .05 and **p ≤ .01, with regard to the effect size. Kendal's coefficient η^2 (Morse, 1999) was used to find out the effect size and was set at low, middle and high level of significance with values of .01, .06 and .14.

RESULTS

The general evaluation of practice teaching by student teachers was more positive in progressive PE lessons [H (1, 1270) = 114.51; p = .00; η^2 = .09]. Positive evaluation was noted in progressive lessons in the following dimensions: cognitive [H (1, 1270) = 7.93; p = = .01; η^2 = .01]; emotional [H (1, 1270) = 3.66; p = .06; η^2 = .00]; further in dimensions: health [H (1, 1270) = = .18; p = .67; η^2 = .00]; social [H (1, 1270) = 48.94; p = = .00; η^2 = .04]; creative [H (1, 1270) = 300.18; p = .00; η^2 = .24] and in the supplementary dimension "pupils' role" [H (1, 1270) = 293.28; p = .00; η^2 = .23]. Only in the emotional and health dimensions was the difference in evaluation neither statistically nor subjectively significant. The relational dimension [H (1, 1270) = .08; p = = .87; η^2 = .00] was evaluated more positively in habitual lessons, but the difference was neither statistically nor subjectively significant (Fig. 2).

Pupils' valuation of the social dimension [H (1, 18489) = 107.18; p = .00; η^2 = .01] was more positive in progressive lessons and the difference was statistically and subjectively significant.

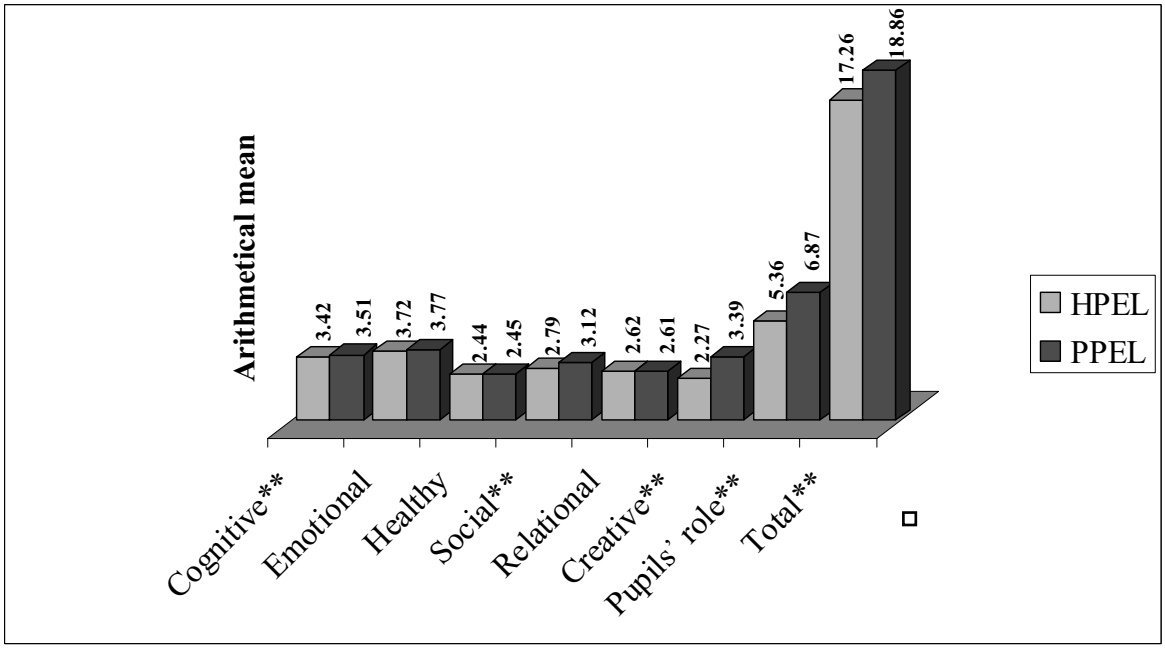
All four questions that characterize the social dimension were valuated by pupils more positively in progressive lessons (TABLE 2): Q. 1 [H (1, 18489) = 22.10; p = .00; η^2 = .00]; Q. 2 [H (1, 18489) = 42.10; p = .00; η^2 = .00]; Q. 3 [H (1, 18489) = 7.52; p = .01; η^2 = .0] a Q. 4 [H (1, 18489) = 72.16; p = .00; η^2 = .00]. The difference in valuation was statistically, but was not subjectively significant.

TABLE 2
Pupils' evaluation of social dimension

Question	*M*		*SD*		*H*	η^2
	HPEL	PPEL	HPEL	PPEL		
Q. 1	.76	.78	.43	.41	22.10**	.00
Q. 2	.66	.71	.48	.46	42.10**	.00
Q. 3	.51	.53	.50	.50	7.52**	.00
Q. 4	.30	.36	.46	.48	72.16**	.00
Dimension	2.22	2.38	.97	.99	107.18**	.01

Notes: Q. 1 Did you see the teacher as an adviser or friend?
Q. 2 Did people misbehave during the class?
Q. 3 Did you ask any questions during the class?
Q. 4 Did you correct any mistake made by your classmate or did a classmate correct your mistake?

Fig. 2
Student teachers evaluation of PE lessons



Statistically significant differences are highlighted by **p ≤ .01 (if they are subjectively significant by at least $\eta^2 \geq .01$).

Pupils evaluation of the relational dimension [H (1, 18489) = 25.89; p = .00; η^2 = .00] was more positive in progressive lessons and the difference was statistically, but was not subjectively significant.

All four questions that characterize the relational dimension evaluated pupils more positively in progressive lessons (TABLE 3): Q. 1 [H (1, 18489) = 26.05; p = .00; η^2 = .00]; Q. 2 [H (1, 18489) = 22.80; p = .00; η^2 = .00]; Q. 3 [H (1, 18489) = 0.28; p = .60; η^2 = .00] a Q. 4 [H (1, 18489) = 6.58; p = .01; η^2 = .00]. The difference in evaluation was not subjectively significant and in Q. 3 the difference was neither statistically nor subjectively significant.

TABLE 3
Pupils' evaluation of relational dimension

Question	*M*		*SD*		*H*	η^2
	HPEL	PPEL	HPEL	PPEL		
Q. 1	.78	.81	.41	.39	26.05**	.00
Q. 2	.65	.68	.48	.47	22.80**	.00
Q. 3	.83	.84	.37	.37	0.28	.00
Q. 4	.70	.72	.46	.45	6.58**	.00
Dimension	2.96	3.05	1.18	1.15	25.89**	.00

Notes: Q. 1 Would you like to have the same or similar class next time?
Q. 2 Would an extra curricular activity be better than participating in this class?
Q. 3 I would have preferred attending another class.
Q. 4 If you have been allowed to leave the class and go home, would you have done so?

M Arithmetical mean
SD Standard deviation
H Value of Kruskal-Wallis ANOVA
η^2 Value of Kendal coefficient

Statistically significant values **p ≤ .01

DISCUSION

Student teachers indicate the biggest change in the creative dimension which is, with the supplementary dimension "pupils' role", one of the main indicators of the level and size of experimental intervention by increasing the pupils' role in education. Didactic skills were changed; it means that student teachers are able to realize different types of leading and organizing in education. Pre-professional preparation and experiences are shown in results by each student teacher. Although the level of student teacher teaching skills varies, we can observe that student teachers are able to solve the tasks we set them for their practice teaching.

Student teachers evaluate practice teaching positively with regard to innovations and are oriented at their pupils and their individuality, independence, creativity, self-evaluation and responsibility (Brown, 2000; Frömel, Novosad, & Svozil, 1999; Penney & Chandler, 2000). Results are similar to those found earlier (Mitáš, Frömel, Svozil, & Górna, 2003) in practice teaching evaluation. Our opinion that pupils like to have more influence on the leading and organizing of PE lessons was verified. It is a way how to develop the personality of each pupil and provide conditions for the development of social-relational norms and characteristics. Therefore it is necessary to modify all teachers' activities and curriculum which should respond to pupils' needs.

Evaluation of innovative interventions was characterized by pupils' more positive approach to progressive PE lessons. Girls' evaluation of the interventions was significantly higher. The comparison of all workplaces showed that girls evaluated habitual and progressive PE lessons more positively than boys.

Social dimension is characterized by interaction and social sensation of each pupil. Pupils valuated the dimension more positively in progressive PE lessons. They thought that the student teacher behaved as their friend and they thought that misbehaving in progressive PE lessons decreased. Further, pupils mentioned that they could ask more in the lesson and they had closer contact with classmates and with the teacher. The difference in the evaluation of all questions that characterize the dimension was not subjectively significant, but was statistically significant in progressive PE lessons. Therefore we say that the dimension was evaluated more positively in progressive PE lessons. Although pupils had more freedom in progressive PE lessons, they found more time in progressive lessons to correct classmates' mistakes or evaluated success in physical activities more than in habitual PE lessons.

The relational dimension was valuated more positively in progressive PE lessons by both girls and boys. They had more freedom and independence, but also responsibility and higher leading role in their education. It opened for them larger spaces for creating relations inside the lesson. All questions that characterize the dimension were evaluated by pupils more positively in progressive PE lessons. The difference in evaluation of all questions that characterize the dimension was not subjectively significant, but was statistically significant in evaluation of three questions in progressive PE lessons. Therefore we say that the relational dimension was evaluated more positively in progressive PE lessons too. Pupils noted that progressive PE lessons are more suited to the creating positive relationships between pupils in education. Pupils would like to participate in similar lessons and they don't think that an extra curricular activity would be better than participating in this class and they wouldn't like to leave the class if they could.

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Students' relation to PE lesson

School, class, sex: _____

Date: _____

	(sign X) YES	NO
1. Could you identity the aim of the lesson and what the teacher was attempting to do?		
2. Was the physical activity satisfying?		
3. Were you relaxed after the class?		
4. Did you see the teacher as an adviser or friend?		
5. Would you like to have the same or similar class next time?		
6. Did you have the chance to solve a problem on your own?		
7. Did you learn anything new?		
8. Was there a good feeling about the class?		
9. Was there a good feeling after the class?		
10. Did people misbehave during the class?		
11. Would an extra curricular activity be better than participating in this class?		
12. Did you have a chance to make a decision in the class to do something on your own and in your own way?		
13. Did you learn any new skills or improve old ones?		
14. Was the class fun?		
15. Do you think that the class improved your fitness?		
16. Did you ask any questions during the class?		
17. I would have preferred attending another class.		
18. Did you feel that you were always "directed" by the teacher?		
19. Did you give any demonstration in the lesson?		
20. Were you praised by the teacher or a classmate?		
21. Did you think about your posture during the lesson? Did you do any stretching?		
22. Did you correct any mistake made by your classmate or did a classmate correct your mistake?		
23. If you have been allowed to leave the class and go home, would you have done so?		
24. Were there any surprises or new things in the class?		

LIMITS

One basic limit that we can not always avoid is the "effect of newness" that appears in these types of experiments. Here it is necessary for pupils to adapt to new approaches, but the "effect of newness" can be represented by student teacher, too. With regard to the character and level of student teachers' knowledge and experience it is not possible to set exactly the progress of habitual lesson. Therefore we can not exactly find out the size of change and the displacement of student teachers' didactic skills with progressive intervention. The study doesn't attempt to describe exactly two lesson types. We wanted to look for relationships between them in terms of changed approaches to education. Every educator is influenced with any form of teaching styles (Mosston, 1992; Mosston & Ashworth, 2002). Pupils' evaluations are not sorted by age, but are characterized by an adolescent's view of current school PE.

CONSLUSIONS

Results showed that in general student teachers evaluated more positively progressive PE lessons. Student teachers evaluated the social dimension more positively in progressive lessons, relational dimension they evaluated more positively in habitual lessons, but the difference in valuation was not significant.

Pupils evaluated, as did student teachers, more positively progressive PE lessons. All observed dimensions were evaluated by pupils more positively in progressive lessons.

Girls evaluated in general and in each dimension more positively than boys in both habitual and progressive PE lessons.

The comparison of results from lesson evaluation by pupils in the Czech Republic and in Poland shows that the difference in evaluation was not significant.

Educational interventions influenced positively the evaluation of PE lessons by pupils and student teachers in all main didactical aspects. International comparison of results allowed for a better understanding the practice teaching problems and pre-professional teachers' preparation and verified the accuracy of educational considerations.

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SOCIÁLNÍ A VZTAHOVÉ INTERAKCE V RŮZNÝCH TYPECH VYUČOVACÍCH JEDNOTEK TĚLESNÉ VÝCHOVY NA PEDAGOGICKÝCH PRAXÍCH

(Souhrn anglického textu)

Hlavním cílem práce bylo analyzovat sociální a vztahové charakteristiky pedagogické praxe studentů učitelství tělesné výchovy a výsledky analýzy využít ke zkvalitnění profesní přípravy učitelů tělesné výchovy z interakčních hledisek a k účinnějšímu přenosu teoretických poznatků do školské praxe. V práci jsou zahrnuty výsledky hodnocení praktikantů sedmi vysokoškolských pracovišť v České republice a v Polsku. Analýza byla zaměřena na posouzení rozdílu v hodnocení habituálních a progresivních vyučovacích jednotek. Sledovány byly všechny základní charakteristiky edukačního procesu. Zvláštní důraz byl u žáků kladen na sociální a vztahovou složku s ohledem na různý typ řízení vyučovacích jednotek a měnící se roli žáků v edukačním procesu. Progresivní zásahy se pozitivně odrazily v hodnocení sociální [$H (1, 18489) = 107.18$; $p = .00$; $\eta^2 = .01$] i vztahové [$H (1, 18489) = 25.89$; $p = .00$; $\eta^2 = .00$] dimenze u žáků, praktikující studenti hodnotili míru změny vztahových ukazatelů pozitivněji v habituálních vyučovacích jednotkách [$H (1, 1270) = .08$; $p = .87$; $\eta^2 = .00$], sociální dimenze [$H (1, 1270) = 48.94$; $p = .00$; $\eta^2 = .04$] však byla rovněž hodnocena pozitivněji v progresivních vyučovacích jednotkách. I přes rozdíly v profesní přípravě učitelů v České republice a v Polsku nebyl rozdíl v jejich hodnocení výrazně odlišný.

Klíčová slova: edukační proces, dotazník, praktikující student, žák.

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