

STUDENT TEACHER ABILITY TO APPLY PROGRESSIVE INTERVENTION IN BOTH THEIR MAJORS DURING TEACHING PRACTICE

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It has not been identified yet how prospective teachers perceive the reform of the education system and progressive teaching approaches. The aim of the study was to assess whether students of teaching are adequately prepared to apply the proposed approaches and to what extent they are able to carry them out in physical education and the other majors they study. During their teaching practice in 2002–2005, these students of teaching carried out two types of lessons (habitual and progressive) that were assessed with standardized questionnaires immediately upon the end of the lessons. We analyzed 314 questionnaires completed by students of teaching and 4350 questionnaires completed by pupils in physical education lessons; and 152 questionnaires completed by students of teaching and 3352 completed by pupils in other subjects. The students of teaching have assessed more positively the progressive lessons of physical education than the habitual ones ($p < 0.001$) as they also did in other subjects ($p < 0.001$). More than half of the students of teaching were able to increase the students' role in the lessons in both subjects they taught.

Keywords: Reform, education system, interdisciplinary integration, professional preparation, assessment, student's role, physical education.

INTRODUCTION

The reform of the education system, which is based on goals set by the Ministry of Education, Youth and Sports (2001) and the Výzkumný ústav pedagogický v Praze (The Research Institute of Teaching in Prague) (2005), is to react to the changing conditions in society. In compliance with Pasch, Gardner, Langer, Stark and Moody (1998) we can denote this as a transition from the essentialist concept of education to a progressivist one.

The reform of the education system needs to be reflected in the professional preparation of students of teaching so that they are well prepared for practice. Therefore, practice teaching is important since teacher education students can confront their theoretical knowledge and ideas with reality there.

A progressive teaching approach is considered to be "...a specific management of the education process that emphasizes creativity, individuality, cooperation, and open and active teaching so that independence, creativity, inner activity, self-realization, openness, emotionality and experience are enhanced in students" (Svozil, 2005). Francis and Grindle (1998) have identified the following major characteristics of progressive education: interdisciplinary integration; the teacher as a guide in the education process; an active students' role; student participation in the creation of the curriculum; learning mainly through discovery; inner motivation, external rewards and punishments are not necessary; there is

not much emphasis on traditional academic standards; limited testing; emphasis on cooperative group work; learning and teaching inside and outside classrooms; creative expression by students is stressed.

Students of teaching should become acquainted with the changes that the reform of the education system brings. Moreover, it is advisable that student teachers are educated in the proposed way themselves. A curriculum oriented at problem based learning, self-control and self-management can enhance the application of such approaches in students' future practice (Mayer-Smith & Mitchell, 1997). During practice teaching, student teachers should be given the opportunity to apply teaching approaches suggested by the reform. Student teachers need the opportunity to test various teaching approaches (Loughran & Russell, 1997). They need to be provided conditions that support discussion on and comparison of these approaches. Students of teaching are then more responsible when choosing and applying various teaching approaches during practice teaching (MacKinnon & Scarff-Seatter, 1997).

Due to the emphasis that the education reform puts on interdisciplinary integration, this topic needs to be addressed already in teachers' professional preparation. Frömel, Góna and Bartoszewicz (2003) point out the high level of the atomization of didactics of each major in the curricula for students of teaching. The integrating role of the curricula is not sufficiently fostered. Moreover, they argue for the important integrating role of

students' practice teaching, where the student teachers have the opportunity to solve the same teaching task in both their majors.

It has not been properly described yet how the student teachers undergoing the teaching practice perceive the education reform and the requirement to shift to progressive teaching approaches. We need to verify whether students of teaching are, within the framework of their professional preparation, adequately prepared to apply progressive teaching approaches and to what extent they are able to carry these out in physical education lessons and lessons of their other major.

RESEARCH QUESTIONS

- How do the student teachers assess progressive physical education lessons and lessons in the other subjects they are majoring in which they have carried out during their teaching practice periods?
- Are the student teachers successful in applying progressive teaching approaches in physical education lessons and lessons in the other subjects they are majoring in according to students' assessment of these lessons?
- How do the student teachers manage to increase students' role in physical education lessons and in lessons of the other subjects they study?

METHODS

The sample consisted of student teachers studying physical education at the Faculty of Physical Culture at Palacký University and students of elementary and secondary schools, where the PE student teachers carried out their teaching practice. We used data obtained from teaching practice carried out in 2002–2005. To collect the data, we applied the Assessment of physical education lesson questionnaire (Frömel, Novosad, & Svozil, 1999); a version for students and a version for student teachers. Furthermore, we applied a modified version of the former questionnaire for the other subjects – A lesson diagnostic questionnaire. In total, we have analyzed 314 questionnaires filled in by student teachers and 4350 questionnaires filled in by students in physical education; and 152 questionnaires for student teachers and 3352 questionnaires for students in lessons of other subjects.

Student teachers carried out one habitual and one progressive lesson of physical education and one habitual and one progressive lesson of the other major they studied. At the end of these lessons, both the student teachers and students filled in the relevant questionnaires.

The term "*habitual lesson*" (HL) was understood both by student teachers and students to indicate a lesson led intentionally in the most convenient way and as usual, in a lesson verified in practice.

A "*progressive lesson*" (PL) had a similar content and structure as its habitual counterpart, but involved more frequent participation of students in lesson management; increased students' role in the education process, giving them a bigger choice of exercise alternatives; encouraging a higher level of decision making role in students; a higher level of student independence, self-assessment, creativity and a higher level of students' responsibility for their own education.

Before the onset of their teaching practice, the student teachers obtained instructions on how to carry out this experiment, modifications of the commonly taught games and exercises, and model examples of lesson plans.

RESULTS AND DISCUSSION

Assessment of physical education lessons by student teachers

The student teachers assessed the progressive physical education lessons more positively than the habitual ones (TABLE 1). In some dimensions (social, creative, and the students' role), the student teachers assessed the progressive lessons more positively than habitual ones, too. The identified differences were both statistically and practically significant; the size effect was also significant.

Assessment of other lessons by student teachers

In the other subjects taught, the student teachers assessed the progressive lessons more positively than the habitual ones (TABLE 2). In the creative and student role dimensions, the student teachers assessed the progressive lessons of the other subject more positively than the habitual ones, too. The identified differences were both statistically and practically significant; the size effect was also significant.

The impact of progressive intervention carried out by student teachers on the total students' assessment of lessons and students' assessment of the student role dimension

In the experiment, only 67 student teachers (38%) managed to carry out the pair of habitual and progressive physical education lessons and the habitual and progressive lessons in the other subject they major in.

Based on the comparison of mean evaluation in each class for each student teacher, the students assessed both the progressive physical education lessons and progres-

TABLE 1

Assessment of physical education lessons by student teachers in relation to the lesson type

Dimension	HL				PL				p^a	d
	M	SD	Mdn	IQR	M	SD	Mdn	IQR		
Cognitive	3.49	0.74	4.0	1.0	3.51	0.69	4.0	1.0	0.786	0.031
Emotional	3.76	0.50	4.0	0.0	3.76	0.57	4.0	0.0	0.871	0.018
Health	2.43	0.85	2.0	1.0	2.57	0.87	3.0	1.0	0.137	0.168
Social	2.67	0.76	3.0	1.0	3.02	0.77	3.0	1.0	0.001*	0.467 ^x
Relational	2.62	0.63	3.0	1.0	2.62	0.64	3.0	1.0	0.979	0.003
Creative	2.31	1.15	2.0	2.0	3.45	0.67	4.0	1.0	0.001*	0.933 ^x
Student role	5.33	1.50	5.0	3.0	6.80	1.15	7.0	2.0	0.001*	0.897 ^x
Total 1-6	17.29	2.52	17.0	3.0	18.93	2.19	19.0	3.0	0.001*	0.728 ^x

Legend

HL = habitual lesson

PL = progressive lesson

 M = mean SD = standard deviation Mdn = median IQR = inter quartile range^a = Wilcoxon match pair test d = coefficient effect size* $p < 0.05$ ^x = significant effect size, practically significant differences in bold**TABLE 2**

Assessment of other lessons by student teachers in relation to the lesson type

Dimension	HL				PL				p^a	d
	M	SD	Mdn	IQR	M	SD	Mdn	IQR		
Cognitive	3.37	0.73	3.5	1.0	3.47	0.74	4.0	1.0	0.264	0.182
Emotional	3.58	0.66	4.0	1.0	3.63	0.81	4.0	0.0	0.050	0.102
Health	1.50	1.05	1.5	1.0	1.67	1.08	2.0	1.0	0.111	0.259 ^x
Social	2.84	0.75	3.0	1.0	3.03	0.73	3.0	1.5	0.083	0.283 ^x
Relational	2.63	0.69	3.0	1.0	2.75	0.49	3.0	0.0	0.172	0.223 ^x
Creative	2.43	1.09	2.5	1.0	3.38	0.82	4.0	1.0	0.001*	0.787 ^x
Student role	5.71	1.51	6.0	2.0	6.72	1.24	7.0	2.0	0.001*	0.693 ^x
Total 1-6	16.36	2.86	16.0	3.0	17.93	2.60	18.0	3.0	0.001*	0.756 ^x

Legend

HL = habitual lesson

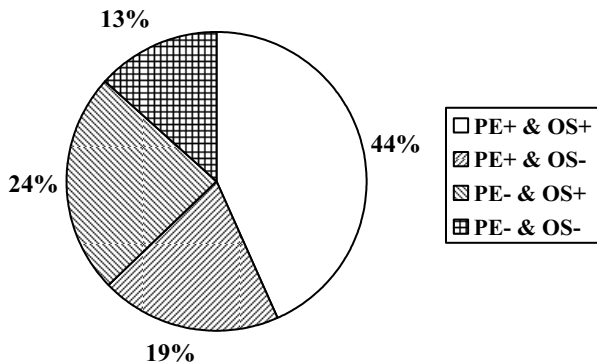
PL = progressive lesson

 M = mean SD = standard deviation Mdn = median IQR = inter quartile range^a = Wilcoxon match pair test d = coefficient effect size* $p < 0.05$ ^x = significant effect size, practically significant differences in bold

sive lessons of the other subjects more positively than the habitual counterparts in 29 student teachers. The habitual physical education lessons and habitual lessons of the other subjects were assessed more positively than progressive ones in 9 student teachers. In 13 student teachers, progressive physical education lessons and habitual lessons of the other subjects were assessed more

positively by students than their respective counterparts. In 16 student teachers, the students assessed more positively the progressive lessons of the other subjects than the habitual ones and habitual physical education lessons than the progressive ones. The results in percentage are shown in a graph (Fig. 1).

Fig. 1
Student teachers according to the total assessment of lessons by students



Legend

The statistical significance of differences in the assessment was not considered.

PE+ & OS+ = students assessed more positively the progressive physical education lessons and simultaneously, progressive lessons of the other subjects than their habitual counterparts.

PE+ & OS- = students assessed more positively the progressive physical education lessons than the habitual ones, and simultaneously, habitual lessons of the other subjects than the progressive ones.

PE- & OS+ = students assessed more positively habitual physical education lessons than progressive ones and simultaneously progressive lessons of the other subjects than habitual ones.

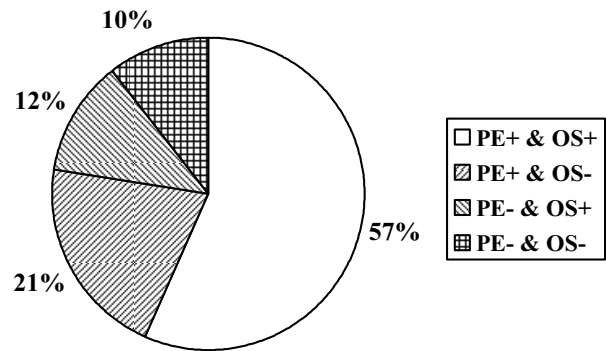
PE- & OS- = students assessed more positively habitual physical education lessons than progressive ones and simultaneously habitual lessons of the other subjects than progressive ones.

All the differences in the total assessment of lessons were considered without regarding their statistical significance.

Out of the total of 67, thirty-eight student teachers managed to carry out progressive lessons both in physical education and the other subject in such a way that students assessed them more positively in the student role dimension than the habitual ones. In 7 student teachers, the students assessed both the habitual physical education lesson and the habitual lesson of the other subject more positively in the student role dimension than in the progressive ones. In 14 student teachers, the students assessed the progressive physical education lesson and the habitual lesson of the other subject more positively in the student role dimension than their respective counterparts. Simultaneously, students assessed the progressive lessons of the other subject and habitual physical education lessons in the student role dimension more positively than their respective counterparts in 8 student teachers (Fig. 2).

The differences in the student role dimension were considered without regarding their statistical significance.

Fig. 2
Student teachers according to students' assessment in student role dimension



Legend

The statistical significance of differences in the assessment was not considered.

PE+ & OS+ = students assessed more positively the progressive physical education lessons and simultaneously, progressive lessons of the other subjects than their habitual counterparts.

PE+ & OS- = students assessed more positively the progressive physical education lessons than the habitual ones, and simultaneously, habitual lessons of the other subjects than the progressive ones.

PE- & OS+ = students assessed more positively habitual physical education lessons than progressive ones and simultaneously progressive lessons of the other subjects than habitual ones.

PE- & OS- = students assessed more positively habitual physical education lessons than progressive ones and simultaneously habitual lessons of the other subjects than progressive ones.

We have found that student teachers assessed progressive lessons more positively than habitual ones both in the total and in the student role dimension. The assessment was positive for both physical education and the other major they taught, which confirms the results of previous studies (Svozil et al., 2004).

Based on the total assessment of lessons by students, the student teachers managed to carry out progressive teaching approaches and to increase students' role in the education process and hence to positively influence students' assessment in at least one of the subjects they taught. However, in 13% of student teachers the progressive intervention was reflected negatively in students' assessment in both subjects they taught and 10% of student teachers did not manage to increase students' role in either of the subjects. It was not possible to explain the negative reflection exactly due to the fact that only the shift in the assessment of the student role dimension was evaluated; not the objective level of the student role in the educational process. Hence the negative reflection in some student teachers could be interpreted as their incapacity to apply the progressive approach as well as the result of an excessive application of such an approach.

Although the instructions for student teachers on how to carry out the progressive intervention were mainly applicable to physical education, most of the student teachers (69%) managed to carry out the intervention successfully and increase the assessment of student role dimension by students also in other subjects they taught. It indicates that student teachers are able to apply knowledge gained in one major also in their other major and it confirms the effectiveness and advantages of double major study programs for teachers.

The impact of progressive intervention carried out by student teachers on the total students' assessment of lessons and students' assessment of the student role dimension needs to be verified on a larger sample in the future. In that case, the differences in students' assessment of lessons should be considered regarding their statistical significance.

CONCLUSIONS

- Student teachers assessed in total more positively progressive lessons than habitual ones in both physical education and their other major.
- More than half of the student teachers were able to increase their students' role in the education process in both subjects they taught.
- The reason why some student teachers were able to increase students' role in the education process and the students' assessment by applying progressive intervention only in one subject needs to be further examined. We recommend doing a comparative analysis of study programs focusing on didactics.

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ÚSPĚŠNOST PRAKTIKANTŮ NA PEDAGOGICKÉ PRAXI PŘI APLIKACI PROGRESIVNÍHO PŘÍSTUPU V OBOU APROBAČNÍCH PŘEDMĚTECH (Souhrn anglického textu)

V současnosti není dostatečně známo, jak problematiku reformy edukačního systému a z ní vyplývající směřování k progresivnímu pojetí vzdělávání vnímají praktikanti na pedagogických praxích. Cílem studie bylo ověřit, zda jsou studenti učitelství v rámci profesní přípravy adekvátně připravováni na aplikaci prosazovaného progresivního přístupu a do jaké míry jsou schopni jej realizovat v tělesné výchově i v druhém předmětu své studijní aprobace.

Praktikanti dle instrukcí a modelových příkladů realizovali mezi roky 2002 a 2005 dvojice habituálních a progresivních vyučovacích jednotek, které byly

bezprostředně hodnoceny pomocí standardizovaných dotazníků.

Analyzováno bylo 314 dotazníků praktikantů a 4350 dotazníků žáků z vyučovacích jednotek tělesné výchovy a 152 dotazníků praktikantů a 3352 dotazníků žáků z vyučovacích jednotek jiných vyučovacích předmětů.

Praktikanti celkově hodnotili pozitivněji progresivní vyučovací jednotky než habituální v tělesné výchově ($p < 0,001$) i v jiných vyučovacích předmětech ($p < 0,001$). Více než polovina praktikantů (57 %) byla schopna zvýšit roli žáka v edukačním procesu v obou aprobačních předmětech. V dalších studiích bude třeba ověřit příčiny toho, proč je velká část praktikantů schopna progresivní

intervencí zvýšit roli žáka v edukačním procesu a zvýšit žakovské hodnocení vyučovacích jednotek pouze v jednom z předmětů své aprobační.

Klíčová slova: reforma, edukační systém, mezipředmětová integrace, profesní příprava, hodnocení, role žáka, tělesná výchova.

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