MOKSLINIS METODINIS CENTRAS
„SCIENTIA EDUCOLOGICA“

GAMTAMOKSLINIS UGDYMAS BENDROJO LAVINIMO MOKYKLOJE-2008

XIV nacionalinės mokslinės-praktinės konferencijos straipsnių rinkinys,
Utena, 2008 m. balandžio mėn. 25–26 d.

NATURAL SCIENCE EDUCATION AT A GENERAL SCHOOL-2008

Proceedings of the Fourteenth National Scientific-Practical Conference,
Utena, 25–26 April, 2008

2008

UDK 372.85(474.5)(06)
Ga311

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altogether, solve problems using their experience and choose problem-solving ways that they already know or think of new methods.

Children study while experimenting in nature, they can predict the outcomes of experiments, they get more experienced, they create and test various ways of experiments.

Researching helps children to intellectualise, express their ideas, cooperate, express and share their experience.

The first picture shows the amplitude of a child's performance. Every child performs in an individual way and it depends on a child's personality, interests, likings and experience.

The second picture presents the environment that stimulates nature study. It is based on basic didactic principles.

The third picture illustrates the development of nature study.

Key words: *Nature study, Research, Tests, Experiments, Active practise, Natural environment*

THE SELF ESTIMATION OF PEDAGOGICAL PRACTICE IN BIOLOGY OF PROSPECTIVE SPORT AND BIOLOGY TEACHERS

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Introduction

In Latvia the training of teachers is carried out in universities and higher educational institutions. One of the teacher training institutes in Latvia is Riga Teacher Training and Educational Management Academy – RTTEMA. Various teacher–training programs are carried out in this higher educational institution. Since 1997 the program "Sport and Biology Teacher in a Basic School" (SB) has been implemented and improved there. The program which combines the specialities of sports and biology is based on the development of the teacher's personality, the demands of labour market and economics foresees to train the teacher in 2 subjects – sports and biology. Our point of view is that it is essential for a sport teacher to acquire knowledge in natural sciences, including biology, because it helps to evaluate the subject – a child, his abilities and options of his development. Good understanding of child helps teacher to perform his mission because teacher must promote the development of student's personality and to develop himself together with his students (Pļaviņa, 2004).

SB is a complex program because students have to master subjects in various cycles: sports, biology, pedagogy and psychology. The training in SB speciality is organised by using methodological work of studies and research work. Methodological work of studies is realised in lecture rooms, outside and during pedagogical practical placements. During pedagogical practices in sports and biology students become proficient in the management of lessons. Pedagogical practice has exclusive place in the system of studies. It joins together academic knowledge with its practical use (Strode, 2004).

In order to manage pedagogical practice in good quality financial investments are necessary. Great help to higher education institutions in this field offer European Social Fund (ESF). ESF was established in order to combat all types of discrimination and inequality in the labour market, as well as to develop human resources and promote the creation of a knowledge society, thus supporting the reduction of economic and social disparity among the regions. The financing and supervision of ESF projects is carried out in

close contact with State Education Development Agency. State Education Development Agency is the second level intervention centre in the implementation and administration of social programs of European Union (EU). State Education Development Agency has been established in order to implement national policy in the area of initial and further education, undertake the implementation and monitoring of projects financed by European Union Structural Funds, as well as provide for the administration of EU Programmes and other financial instruments, projects and initiatives (Traidās, 2008).

Riga Teacher Training and Educational Management Academy concluded a treaty with State Education Development Agency about realization of project: "Provision of pedagogical practice of RTEMA professional bachelor study program Sport and Biology Teacher in a Basic School" in 2007. The aim of the project was to cause circumstances for the improvement of professional competences of prospective sport and biology speciality teacher, implementing corrections in pedagogical practice, with the purpose of raising educational quality of prospective teacher, in this way ensuring the training of competitive and high professional sport and biology speciality teacher.

SB speciality students have their pedagogical practices in biology in the 3rd and 4th study years. The 3rd year students begin their pedagogical practice by visiting lessons. During the pedagogical practice students usually teach botany, zoology, human anatomy and physiology to the 7th, 8th and 9th grade students. During pedagogical practice every student must be a class teacher as well and organize one school event with his or her class. The prospective teacher must learn to develop student's life skills during pedagogical practice. Life skills of students become essential components in nowadays education. The baggage of life skills is the attitude against everything around us: environment, people, process and events (Rone, 2006). Personality of the teacher is a key factor in the process of pedagogical innovation. The task of teachers is to motivate, teaching their students how to learn and providing a model for life as well as incorporating their own subject of specialisation in the area of general knowledge (Körös–Mikis, 2008). The self estimation of pedagogical practice can help prospective teachers to develop their competence and skills in full value. The necessary competences and skills for well educated teacher are shown in profession standard of teacher (Profesiju standartu reģistrs, 2004).

The aim of the work was to ascertain the self estimation of skills and competences of SB speciality 3rd course students after pedagogical practice in biology.

Methods

The questionnaire of 3rd course SB speciality students (prospective teachers) just after pedagogical practice in biology was carried out. The questionnaire was realised in order to clarify how prospective teachers estimate their pedagogical skills and competences and their knowledge in biology subjects. The results of investigation gave ability to clarify the self estimation of prospective sport and biology teachers about their proficiency of choosing appropriate content of education material during lessons, about their skills of choosing appropriate teaching methods, about their skills of organizing education environment in class, about their proficiency in evaluating student's knowledge and about communicative competences of prospective teachers. The questionnaire gave ability to understand the main difficulties of prospective teachers during pedagogical practice in biology and to get to know their propositions how to improve the organization of pedagogical practices. Nineteen 3rd course SB speciality students took part in questionnaire. The results of questionnaire were summarized and analysed.

Results of investigation

The results of questionnaire about proficiency of prospective teachers in choosing appropriate content of education material during lessons are shown in Figures 1–2. The majority of prospective teachers (71%) have middle level but some of them (29%) high level in proficiency of choosing appropriate content of education material during lessons. The self estimation of prospective teachers about their orientation in new tendencies of biology is not very high: 79% of them think that they have middle level but 21% think that they have low level.

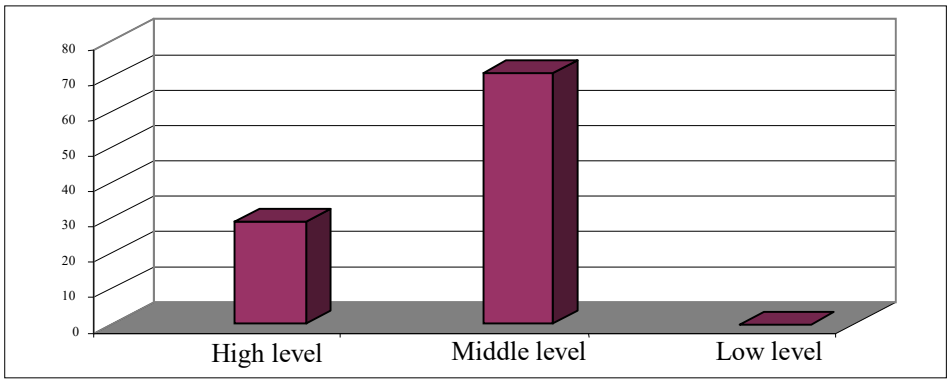

Figure 1. The self estimation of prospective teachers about proficiency of choosing appropriate content of education material during lessons (in % from questionnaire prospective teachers in the group).

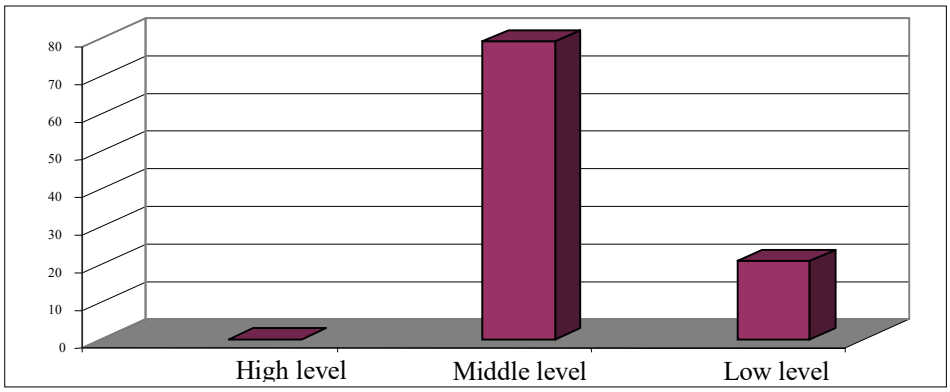

Figure 2. The self estimation of prospective teachers about their orientation in new tendencies of biology (in % from questionnaire prospective teachers in the group).

The results of questionnaire about skills of prospective teachers in choosing appropriate teaching methods are shown in Figures 3–5. 64% of prospective teachers think that they have middle level skills of using interactive teaching methods, 22% of them consider that they have high level sills but 14% – that they have low level skills in this field. The majority of students (57%) think that they have middle level skills in choosing adequate

teaching methods to the content of the lesson. 43% of prospective teachers consider that they have high level proficiency in using the methods of information technologies.

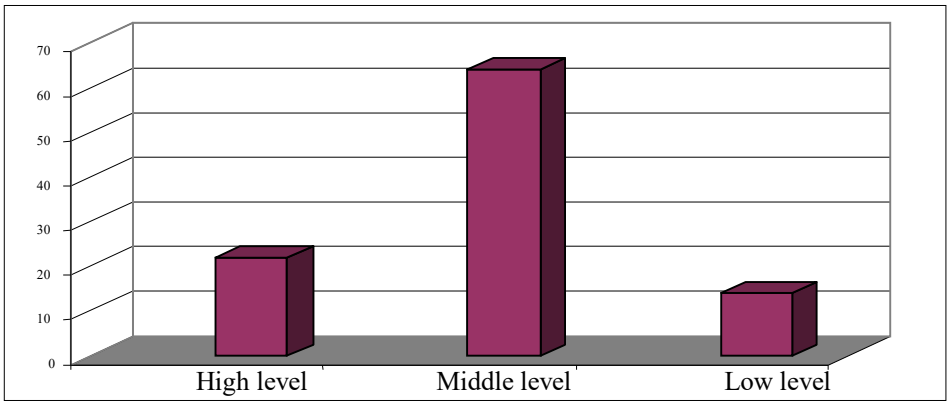

Figure 3. The self estimation of prospective teachers about skills of using interactive teaching methods (in % from questionnaire prospective teachers in the group).

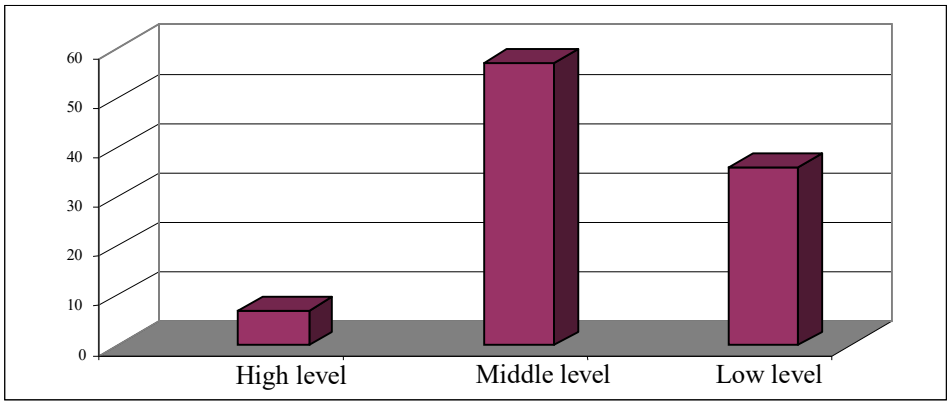

Figure 4. The self estimation of prospective teachers about adequacy of teaching methods to the content of the lesson (in % from questionnaire prospective teachers in the group).

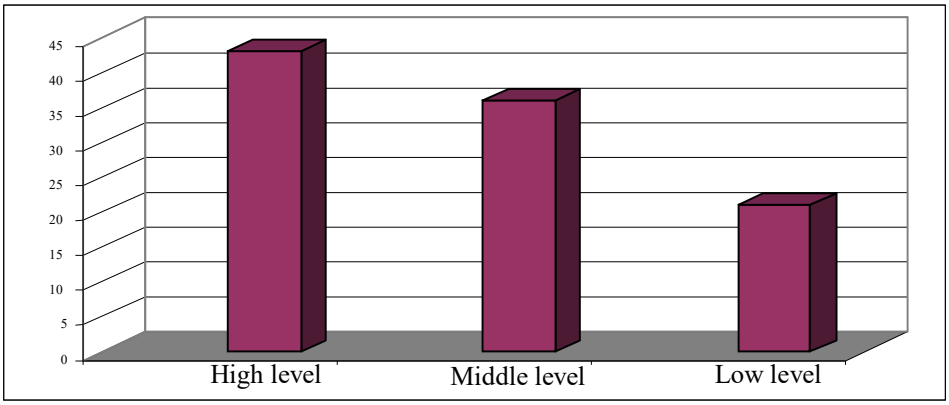

Figure 5. The self estimation of prospective teachers about proficiency of using the methods of information technologies (in % from questionnaire prospective teachers in the group).

The results of questionnaire about skills of prospective teachers of organizing education environment in class are shown in Figures 6–7. The majority of prospective teachers (71%) think that they have middle level in proficiency of motivating students to the work. 57% of prospective teachers consider that they have middle level proficiency in organizing the cooperation of students during work in groups but 36% of prospective teachers think that they have high level in this field.

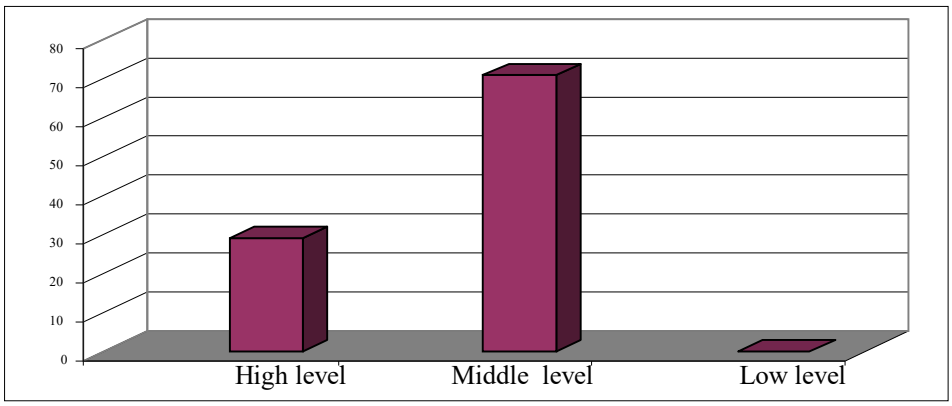

Figure 6. The self estimation of prospective teachers about their proficiency of motivating students to the work (in % from questionnaire prospective teachers in the group).

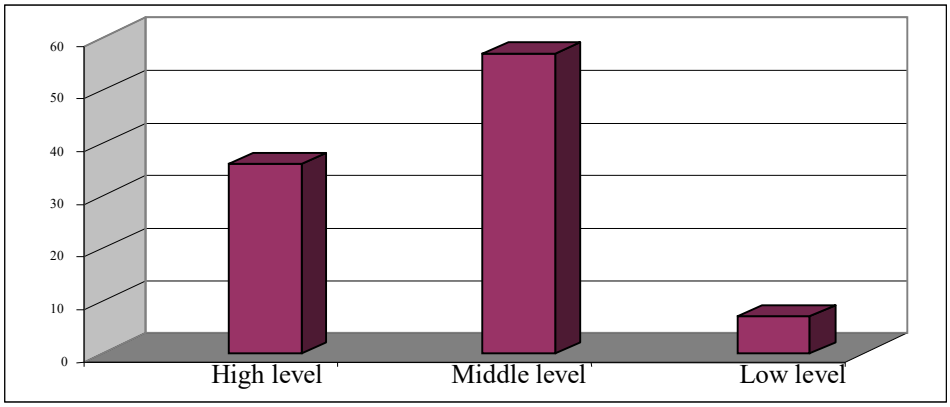

Figure 7. The self estimation of prospective teachers about their proficiency of organizing the cooperation of students during work in groups (in % from questionnaire prospective teachers in the group).

The results of questionnaire about proficiency of prospective teachers in evaluating student's knowledge are shown in Figure 8. The majority of prospective teachers think that they have high (43%) or middle level (43%) proficiency in evaluating student's knowledge. At the same time some of them (14%) have come to the decision that they have low level proficiency in evaluating student's knowledge.

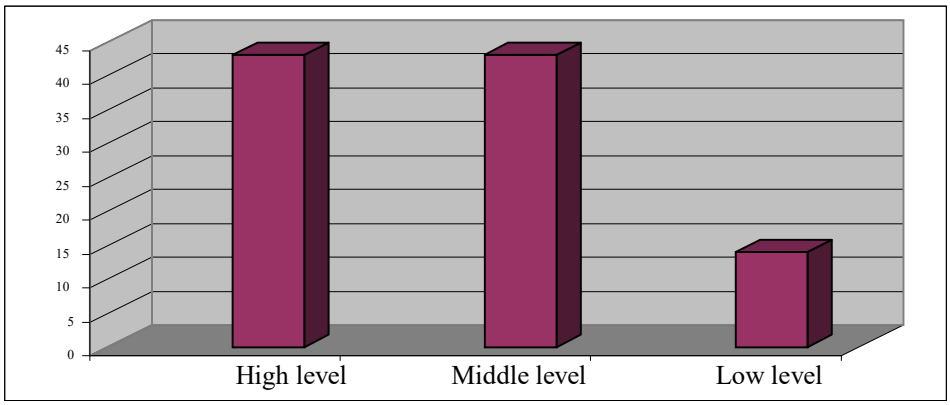

Figure 8. The self estimation of prospective teachers about their proficiency in evaluating student's knowledge (in % from questionnaire prospective teachers in the group).

The results of questionnaire about communicative competences of prospective teachers are shown in Figures 9–10. The majority of prospective teachers (64%) esteem that they have good communicative competences and that they have high level of cooperation with their colleagues.

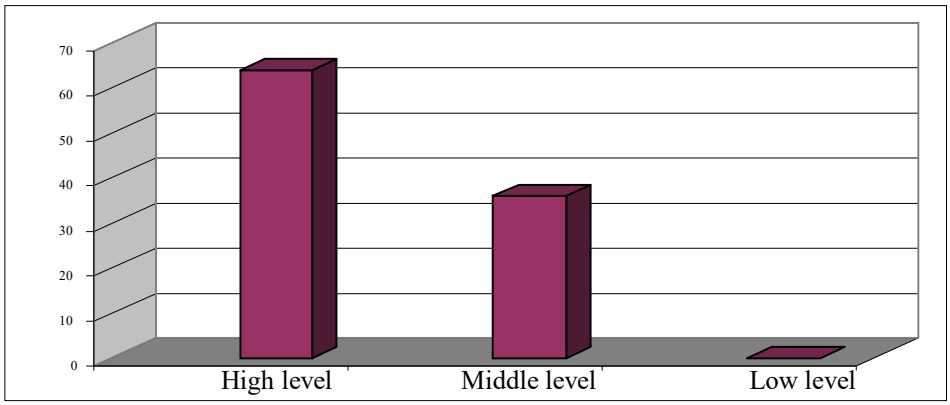

Figure 9. The self estimation of prospective teachers about their communicative competences (in % from questionnaire prospective teachers in the group).

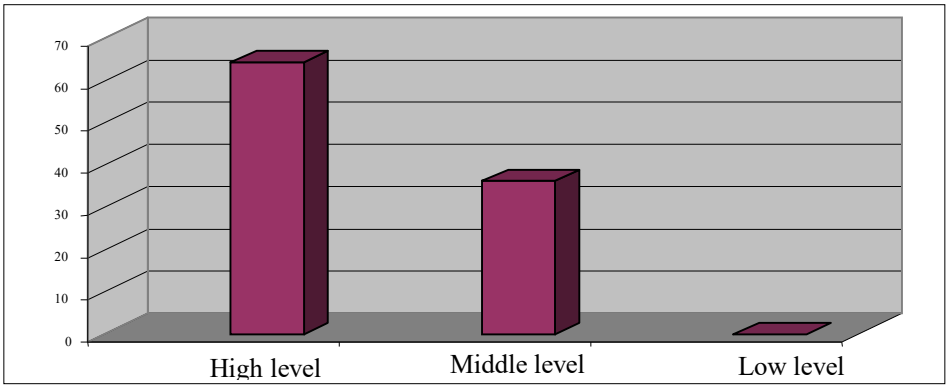

Figure 10. The self estimation of prospective teachers about their competence to cooperate with colleague (in % from questionnaire prospective teachers in the group).

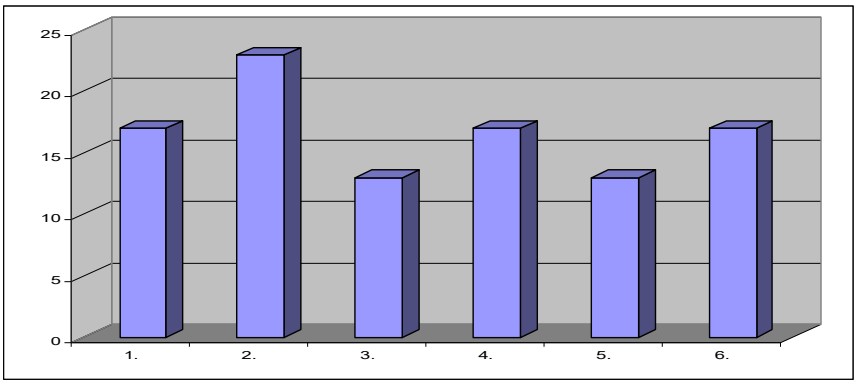

Figure 11. The self estimation of prospective teachers about their competence to manage student's group (in % from questionnaire prospective teachers in the group).

1. Lack of organizing abilities.
2. Difficulties in choice of appropriate teaching material.
3. The level of student's knowledge is two different.
4. Difficulties in choice of appropriate teaching methods.
5. Difficulties in choice of appropriate type of lesson.
6. Difficulties to keep discipline in class.

The results of questionnaire about the main difficulties of prospective teachers during pedagogical practice are shown in Figure 11. The greatest difficulty for majority of prospective teachers is to make a good choice of appropriate teaching material. Some of trainees have lack of organizing abilities, difficulties in choice of appropriate teaching methods or difficulties to keep discipline in class.

The results of questionnaire about the propositions of prospective teachers how to improve the organization of pedagogical practices is shown in Figure 12. Many of prospective teachers (40%) think that pedagogical practice must be every study year. The other suggestions of prospective teachers to improve the level of pedagogical practices are to elongate the period of pedagogical practice and to implement course "Pedagogical practice in school" before beginning of the practice.

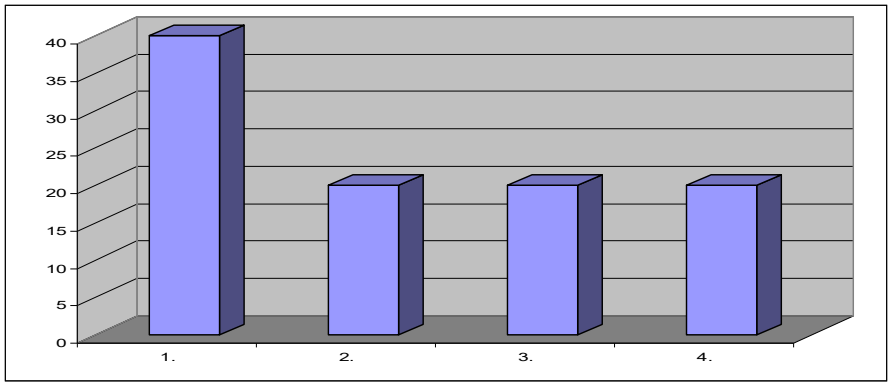

Figure 12. Propositions of prospective teacher how to improve the organization of pedagogical practices (in % from questionnaire prospective teachers in the group):
1) Pedagogical practice must be every study year, 2) To elongate the period of pedagogical practice, 3) To implement course "Pedagogical practice in school" before beginning of the practice, 4) The other answers.

Conclusions

1. The majority of prospective teachers consider that they have middle proficiency level in choosing appropriate content of education material during lessons, middle level in orientation in new tendencies of biology, middle level skills in choosing adequate teaching methods to the content of the lesson and middle level skills of using interactive teaching methods.
2. Many of prospective teachers consider that they have high level proficiency in using the methods of information technologies.
3. The majority of prospective teachers think that they have middle level in proficiency of motivating students to the work and in organizing the cooperation of students during work in groups but they have high or middle level proficiency in evaluating student's knowledge.

4. The majority of prospective teachers consider that they have good communicative competences and that they have high level of cooperation with their colleagues.
5. The main difficulties during pedagogical practice for majority of prospective teachers are to make a good choice of appropriate teaching material, lack of organizing abilities, difficulties in choice of appropriate teaching methods and difficulties to keep discipline in class.
6. Important suggestive of prospective teachers for improvement the quality of education is to organize pedagogical practices every study year.

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Summary

THE SELF ESTIMATION OF PEDAGOGICAL PRACTICE IN BIOLOGY OF PROSPECTIVE SPORT AND BIOLOGY TEACHERS

Juris Porozovs, Gunita Praulite

The study program "Sport and Biology Teacher in a Basic School" (SB) is realised in Riga Teacher Training and Educational Management Academy. Important place in the system of mastering prospective teachers have pedagogical practices. SB speciality students have their pedagogical practices in biology in the 3rd and 4th study years. The aim of the investigation was to ascertain the self estimation of skills and competences of SB speciality 3rd course students after pedagogical practice in biology. The questionnaire of prospective teachers was carried out. The results of questionnaire showed that the majority of prospective teachers consider that they have middle proficiency level in choosing appropriate content of education material during lessons, in orientation in new tendencies of biology, in choosing adequate teaching methods to the content of the lesson, in using interactive teaching methods, in proficiency of motivating students to the work and in organizing the cooperation of students during work in groups. Many of prospective teachers consider that they have high level proficiency in using the methods of information technologies and they have good communicative competences. The main difficulties during pedagogical practice for majority of prospective teachers are to make a good choice of appropriate teaching material, lack of organizing abilities, difficulties in choice of appropriate teaching methods and difficulties to keep discipline in class. Many of prospective teachers think that pedagogical practice must be every study year. The other suggestions of prospective teachers to improve the level of pedagogical practices are to elongate the period of pedagogical practice and to implement course "Pedagogical practice in school" before beginning of the practice.

Key words: *prospective teachers, pedagogical practice, skills, competences.*