

MANAGERIAL COMPETENCES OF PRE-SERVICE TEACHERS: LONGITUDINAL RESEARCH

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Abstract

The managerial competences of a contemporary teacher and their continuous improvement serve as the key factor, which ensures high quality of teachers' activities and their professional development. The goal of the research: to reveal development of pre-service teachers' managerial competences during their teaching practice. On the basis of the conducted longitudinal research, the attitudes of pre-service teachers towards teacher's managerial competences are compared and development of student's managerial competences is discussed.

Keywords: pre-service teachers, competence, managerial competences.

1. INTRODUCTION

Modern society is characterised by political, social, economic and organisational changes, development of information technologies as well as globalisation. This inevitably conditions emergent innovations in various fields including that of education. The key EU documents regulating education (Green Paper on Teacher Education in Europe. High Quality Teacher Education for High Quality Education and Training, 2000; Towards a knowledge-based Europe. The European Union and the information society, 2002; Key Data on Learning and Innovation through ICT at School in Europe 2011; Developing Key Competences at School in Europe: Challenges and Opportunities for Policy, 2012; Education and Training in Europe 2020, 2013; Key Data on Teachers and School Leaders in Europe, 2013, etc.) underline development of information society, a paradigm of lifelong learning, an ability to orientate in the context of changes, development of distant education, dissemination of latest research results, knowledge and others. Developing technologies, changes in working methods and new processes in production require abilities to flexibly and independently act in various professional spheres from a contemporary individual.

At present education is facing such challenges as globalisation, information explosion, rapid change and stratification of the society, which emphasise one of the main objectives of education: to assist an individual and society in answering the essential contemporary challenges and in extensively employing the opening new opportunities (Želvys, 1998; Hargreaves, 2005, Fullan, Cuttress, Kilcher, 2005). Change is an inevitable necessity in contemporary institutions of education, where not only the need of a leader but also that of teachers, who have mastered managerial competences, is obvious. Efficient management is an important factor under conditions of rapid changes. According to Želvys (2003), there exists an attitude that each pre-service teacher should acquire at least basics of management because all the teachers involve in managerial activities in their educational experiences. Hence, rapid changes in modern evolving society *challenge teachers and development of their managerial competence*. The mission of education is to provide an individual with basis for mature independent life and to assist him/her in lifelong development of own skills and abilities. Therefore, it is necessary "to achieve such level of pedagogical communities, when their critical mass consists of reflecting, constantly improving and efficiently working professional teachers and university teachers" (The State Education Strategy for 2013-2022). Thus, it is relevant to identify managerial competences of pre-service teachers improving education quality based on activity, responsibility and continuous improvement, focusing on initiative, creativity and ability to solve problems and to collaborate.

Pedagogical competency of pre-service teachers is developed and improved not only during pedagogical studies but also during their *teaching practice*. As it is outlined in 'The Teacher Training Regulations' (2012), the teaching practice is targeted at development of teachers' practical professional competence. Thus, the

teaching practice serves as a foundation for development of pre-service teachers' managerial competences. Therefore, it is important to clarify the attitude of pre-service teachers towards managerial competences in different years and how students' managerial competences are developed during their teaching practice.

Pedagogical competence of student teachers is formed and further developed not only during educational studies but also while conducting their *teaching practice*. As underlined in the Regulation of Teacher Training (Pedagogiyu rengimo reqlamentas, 2004), the process of studies, integral parts of the study programme and teaching practice are objectively oriented to development of teacher practical professional competence. In this way, the teaching practice serves as a basis for formation and further development of managerial competences of a student teacher. Therefore, it is particularly important to identify the attitude of pre-service teachers towards their managerial competences in different years and how student managerial competences are developed during their teaching practice.

The goal of the research: to investigate managerial competences of pre-service teachers.

The objectives of the research: 1) to theoretically substantiate the theoretical model of managerial competences of pre-service teachers; 2) to compare attitude of pre-service teachers towards their managerial competences in different years; 3) to highlight formation of students' managerial competences at different stages of teaching practice.

The object of the research: managerial competences of pre-service teachers.

The following **research methods** were applied: 1) analysis of scientific literature, 2) questionnaire surveys, 3) research on personal experience, 4) statistical analysis of research data.

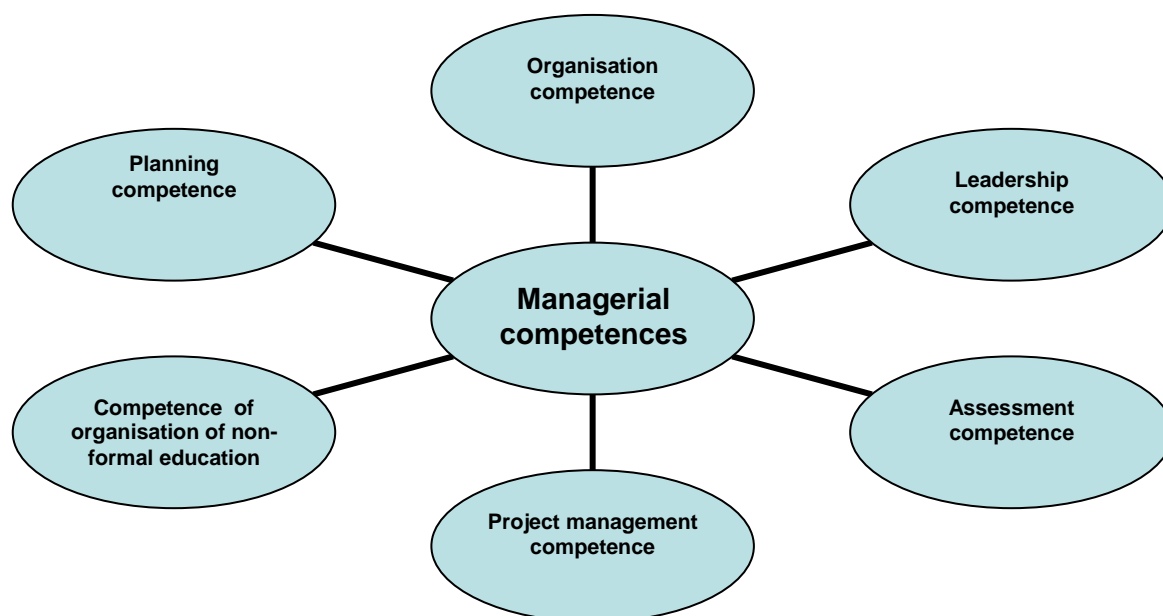
2. THEORETICAL SUBSTANTIATION OF PRE-SERVICE TEACHERS' MANAGERIAL COMPETENCES

The teacher plans, organises, manages, controls the process of education both during classroom and extracurricular activities. Therefore, the teacher performs the role of a manager as well. Education management is an activity, which enables attainment of the set goals of the educational system and separate educational organisations. Four main managerial functions may be singled out: planning, organisation, leadership and control (Želvys, 2003). Therefore it can be concluded that teachers' managerial competences embrace competences of planning, organisation, leadership, assessment, organisation of non-formal education and project management (Pic.1).

Planning is a continuous process, which considers the changes occurring within the organisation and outside it. The goals can hardly be attained without planning. The goal of education is nurturance of a well-rounded personality. Thus, teacher's ability to set specific, measurable and achievable educational goals acquires a crucial importance. Before setting such goals, a teacher has to evaluate the status quo (strengths, weaknesses, opportunities and threats). The teacher has to be open to changes and to accept the society as constantly evolving. Teacher's ability to integrate the content of education on the basis of innovation, creation of distinctive education strategy and its evaluation supplements the process of education with the shade of modernity. Thus, teacher's planning competence in the process of education is considered as a basis for educational activities because only properly planned activities may be successfully organised and managed.

Appropriate *organisation* of the process of education predetermines successful implementation of educational goals. While organising the process of education, a significant place is occupied by establishment of favourable educational environment, which promotes learners' positive attitude towards learning, stimulates their thinking, creativity, increases self-confidence and self-respect as well as enhances learners' responsibility and a sense of justice. Smooth pedagogical becoming depends on teacher's ability to create safe and favourable educational environment, creating equal conditions and opportunities of education, coherence of learners' needs, interests and skills, organisation of self-dependent students' learning and group work as well as combining of these forms, which adds dynamics to the process of education: such process of education is not monotonous and a learner is active, encouraged and his/her learning motivation is strengthened. Thus, learners are taught to learn self-dependently as well as in groups. Another significant ability of teacher's organisation competence includes delegation of assignments and responsibilities. Considering the peculiarities of learner's individuality, a teacher has to distribute responsibilities in such a way, which ensures that each learner is interested and feels responsibility for their implementation. Expression of professional orientation is a responsibility for results of own activity, which stimulates continuous improvement of a teacher, enables a teacher to apply the best techniques of pedagogical activities and to optimise pedagogical activities. A teacher has to be able to develop not only

own responsibility but also that of his/her students as well as a joint responsibility for implementation of personal and group goals and intergroup support. Interaction may be strengthened learning, working together as well as spending leisure time or taking part in festivals, etc. (Želvys, 2003). While organising the process of education both in classroom and extracurricular activities, the learners themselves have to be involved, what would contribute to development of their organisational abilities. Then, school learners feel full-members of the process of education, their learning motivation is strengthened, their positive attitude towards learning is promoted and skills of collaboration are developed.



Picture 1. The structure of teacher's managerial competences

Leading the process of education, a teacher assumes the role of a leader. A. Jacikevičius (1995) highlights the following personal features of good leaders: an interest to act, a sense of duty and responsibility, attitudes towards a sense of community, ability to perceive individuals' spiritual features fast and precisely, democratic leadership, self-confidence, strictness and toughness, politeness and sincerity, etc. The following abilities of leadership competences are characteristic of a competent teacher: smooth educational processes and promotion of environment favourable for efficient learning, democratic relations with learners, their parents and teachers, orientation of learners' efforts towards desirable outcomes, instructing learners what, how and why should be done, solutions to emerging conflicts and teaching learners to cope with them.

Teacher's *assessment competence* is significant in the process of education because it contributes to improvement of the quality of education process. Assessment of quality of educational activities, assessment of activities of individual learners and the whole class, evaluation of external factors, which change the process of education, application of various forms of assessment, identification of results of set goals make up the key abilities of assessment competence. Assessment is an important part of any managed processes because it allows to identify the level of attainment of goals. This, in its turn, encourages modelling of further leadership better taking into account the current circumstances.

Organisation of non-formal education integrating it into general education is one of the objectives of a school. Therefore, the purpose of the competence of non-formal education organisation is to enable learners to purposefully use their extracurricular time.

Competence of management of educational and cultural projects occupies an important role in the process of education because education projects are one of the most important methods of active teaching and learning. According to D. Šiaulytienė (2001, p. 29), "the method of projects is a method of learning to learn". A student makes attempts to perceive what s/he should learn, what knowledge is not sufficient, how and what should be done to attain the established goal. A new relation between a teacher and a student has a positive influence on the process of education. Having encountered specific life problems, school learners acquire abilities and skills to search for appropriate solutions. Thus, school students are actively prepared for

life. Therefore, teacher's competence of management of educational and cultural projects is of particular significance in a rapidly changing society.

It can be concluded that the quality of education are predetermined by teacher's managerial competences that embrace planning, organisation, leadership, assessment and management of educational and cultural projects as well as organisation of non-formal education.

3. RESEARCH METHODOLOGY OF PRE-SERVICE TEACHERS' COMPETENCES

The research is based on the following theoretical and methodological approaches:

- *paradigm of contemporary (self-)education*, which emphasises the multi-faceted nature of teachers' activities, i. e. , ability to work in various (self-)educational environments, to link educational processes with daily activities of individuals, to disseminate new scientific knowledge and ideas as well as to constantly involve in self-development;

- *paradigm of continuous improvement*, which emphasises need for personal, professional and social lifelong improvement;

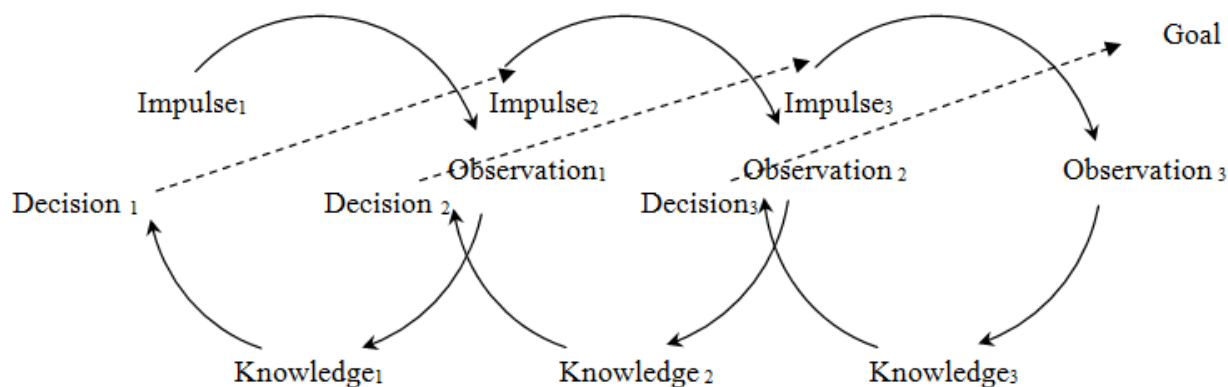
- *constructivist theory*, which points out that a teacher becomes a manager, who plans, organises, establishes and evaluates conditions, supervises learners and is in charge of school students' motivation to learn. (Self-)education is a process of constructing meanings as mental activities and social exchange. Each student is active in the process of self-education and each of them may create different perceptions of the same objects.

The sample of the research embraced 735 pre-service teachers (students of Lithuanian University of Educational Sciences): 306 students in the period of 2005-2006 and 429 respondents in the period of 2012-2014.

The questionnaire survey aimed to reveal attitudes of pre-service teachers towards teachers' managerial competences (the sample of the research conducted in 2005 included 248 students and in 2012 312 students were surveyed).

The method of personal experience targeted at identification of pre-service teachers' attitude towards building up of managerial competences during their teaching practice. The research on students' personal experience allowed to identify how pre-service teachers evaluate own managerial competences at different stages of their teaching practice: After observation of the process of education, after organisation of pedagogical activities (delivery of demo lessons) and accounting period (after delivery of assessed lessons) in 2005-2006 (teaching practice lasted for one year); after practice of teacher assistant, teaching practice under supervision of mentor and independent teaching practice in 2012-2014 (teaching practice was organised in three different years of studies).

The research in personal experience is based on J.Dewey's model of experiential learning (Kolb, 1984). It discusses all the concerned experiential aspects. As it can be seen from Picture 2, impulses of experience during observation, having employed knowledge, stimulate decision making, which consequently prompts emergence of new impulses on the basis of which new decisions are made. The cycles repeat until the set goal is achieved. The scheme presented in the picture reflects this process.



Picture 2. J. Dewey's model of experiential learning (Kolb, 1984)

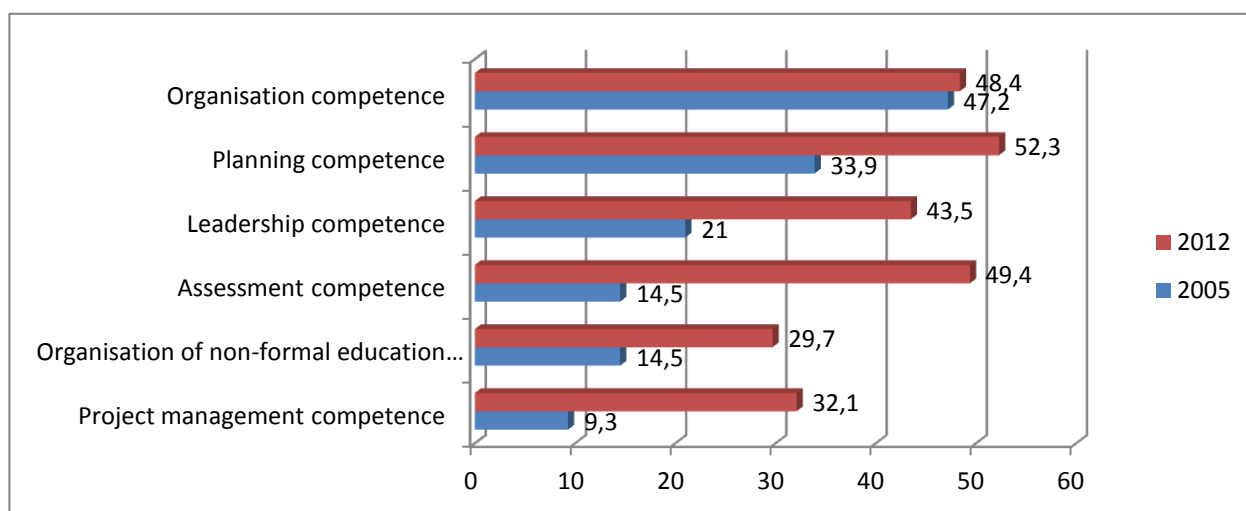
On the basis of experiential model, the managerial competence is analysed through the students' own experience. The respondents reflecting their own experience were able to better perceive their managerial competence and its development during pedagogical practice. The research in personal experience is substantiated by profound understanding of individual behaviour through prompted revelation of own experience. The sample of this research embraced 117 pre-service teachers: 58 students in the period of 2005-2006 and 59 students in the period of 2012-2014. Written essay was the instrument employed in the research on personal experience. The respondents were asked to evaluate the experienced managerial competences through identification of their own managerial competences at different phases of teaching practice. The research in personal experience based on the model of experiential learning suggested by J.Dewey aimed to analyse managerial competences of pre-service teachers through their own experience. Reflecting on their own experiences, the respondents were able to deeper perceive own managerial competences and their formation during teaching practice.

4. EMPIRIC SUBSTANTIATION OF PRE-SERVICE TEACHERS' MANAGERIAL COMPETENCES

4.1. Attitude of pre-service teachers towards teacher's managerial competences

Two stages of research were organised to reveal the conception and development of managerial competency of pre-service teachers. During the first stages the respondents were requested to express their attitudes towards teacher's managerial competences (planning, organisation, leadership, assessment, organisation of non-formal education and project management) before their teaching practice. Each of them was evaluated in terms of their significance, i.e., highly significant, significant or insignificant. The research data revealed (Picture 3) that teacher's managerial competences were ranked differently in different years: some received more favourable evaluation compared to others.

In 2005 pre-service teachers ranked competences of organisation (47.2%) and planning (33.9%) highest. In 2012 the respondents pointed out that planning (52.3%), assessment (49.4%) and organisation (48.4%) competences are the most significant. Thus, pre-service teachers emphasise the importance of planning and organisation skills in the process of education. Planning serves as basis for the process of education, because only having set the goals and foreseen appropriate activities, a teacher will be able to successfully organise it. Organisation of the process of education by teachers, creating as favourable conditions as possible, is an important factor of implementation of the established goals. It is important to properly organise the process of education creating favourable atmosphere, taking into account interests and needs of learners' personality, combining self-dependent work with collaboration, promoting own and learners' responsibility for the set goals of education because the quality of education depends on the aforesaid factors. According to the research results, in 2012 significantly higher priority is ascribed to assessment of the process of education (49.4%) compared too the respondents of the research in 2005 (14.5%) ($\chi^2=20.575$; $df=4$; $p<0.0001$). It can be concluded that pre-service teachers perceive the importance of assessment more and more frequently. Actually, the process of education may contribute to the improvement of the process of education.



Picture 3. Attitudes of students towards teachers' managerial competences in different years (percentage frequencies)

The research data revealed that in 2012 the respondents ranked the teacher's competence of leadership (43.5%) compared to 2005 (21%) ($\chi^2=23.886$; $df=4$; $p<0.001$). Thus, pre-service teachers more frequently perceive the importance of leadership because without leadership smooth educational processes are impossible.

It should be pointed out that the same competences, i.e., organisation of non-formal education and project-management, were ranked as least important in different academic years.

Generalising, it can be pointed out that students ascribe the highest significance to planning, organisation of the process of education and its implementation.

4.2. Formation of managerial competences of pre-service teachers

Teaching practice plays an important role in pre-service teacher training because students are exposed to real educational activity. Therefore, the research in personal experience aimed at identifying students' attitude to formation of managerial competence during teaching practice. Namely during the teaching practice, pre-service teachers become active participants in the educational process for the first time. It is the time when they are encouraged to penetrate into the process of education developing their managerial competences, evoking their need for pedagogical self-development and testing their aptitude for pedagogical work. Naturally, the second phase of the research focused on formation of managerial competence of pre-service teachers at different stages of the teaching practice.

4.2.1. Development of managerial competences of pre-service teachers in 2005-2006

In 2005-2006 a model of one-year pedagogical practice was used in the university, therefore, the research was conducted taking into account different stages of teaching practice: observation of the process of education, organisation of pedagogical activities (demo lessons) and assessment period (assessed lessons).

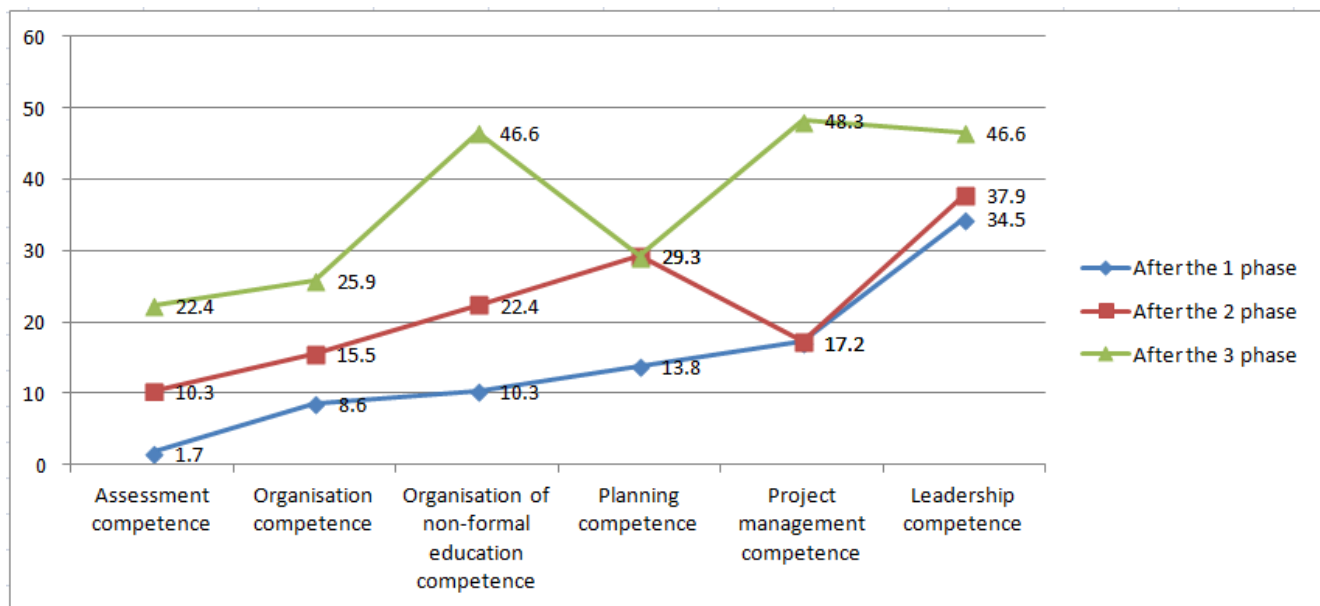
The analysis of the data acquired during the research in personal experience revealed that after the first stage of their teaching practice (observation of education process), the students ranked leadership competence (34.5%) highest, whereas organisation of non-formal education (10.3%), organisation (8.6%) and assessment (1.7%) competences received lowest evaluations.

More than half of the respondents stated that teacher's job requires pedagogical vocation. In their opinion, hard work is needed to achieve such level. When asked about their own well-being, more than one fifth (22.4%) of the students emphasised lack of self-confidence and one tenth (12.1%) referred to fear of public speaking. Thus, organisation of teacher training needs methods that would create favourable conditions for a pre-service teacher to test herself or himself at the maximum during pedagogical studies strengthening future specialists' confidence in own managerial abilities.

After the second phase of teaching practice (trial lessons) all the students emphasised insufficient level of their practical skills and experience (63.4%). The majority of the respondents (85.6%) agreed that high managerial competence requires constant development. The research results revealed that after the trial lessons the students evaluated their managerial competence higher. The most favourably evaluated managerial competence retained their positions: leadership (37.9%) planning (29.3%) and organisation of non-formal education (22.4%) competence. Project management (17.2%), organisation (15.5%) and assessment (10.3%) competences were evaluated lowest.

A considerable number of pre-service teachers in the research pointed out that after trial lessons, when they were provided with a possibility to realise themselves as teachers, their self-confidence increased. It is obvious, that during pedagogical studies the student need assignments that would connect contact studies with pedagogical activity at school.

The analysis of the research results showed that after the phase of assessed lessons, all the managerial competences – project management ($\chi^2=23.623$; $df=4$; $p<0.0001$), leadership ($\chi^2=17.414$; $df=4$; $p<0.05$), organisation of non-formal education ($\chi^2=20.947$; $df=4$; $p<0.0001$), planning ($\chi^2=15.276$; $df=4$; $p<0.01$), organisation ($\chi^2=10.191$; $df=4$; $p<0.05$), assessment ($\chi^2=16.233$; $df=4$; $p<0.01$) improved and received more favourable evaluations compared to the data acquired during the previous phases. This can be seen from Picture 4 where development of pre-service teachers' managerial competences is presented. The percentage frequencies are presented according to the highest evaluation given to student managerial competences.



Picture 4. The distribution (percentage frequencies) of development of managerial competences of pre-service teachers in 2005-2006

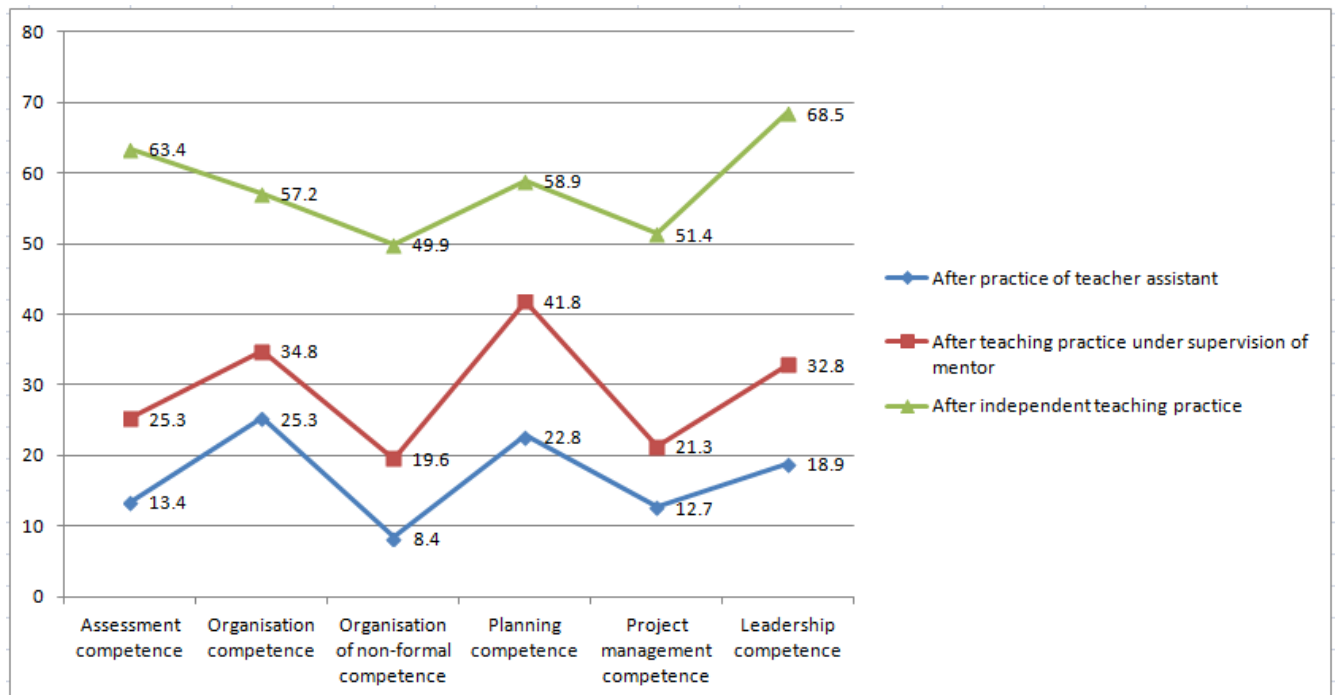
The research on development of managerial competences of pre-service teachers obviously reveals that they need more experience in adopting managerial competences. Thus, it is particularly important to consider this during pedagogical studies.

When asked about possible changes in the teaching practice to ensure successful prerequisites for successful formation of pre-service teachers' managerial competences, the students pointed out to an increase in the length of the teaching practice or introduction of several periods of the teaching practice within the study period. The respondents emphasised their insufficient practice and stated that to better form and develop their managerial competence, the practice has to be prolonged.

4.2.2. Development of managerial competences of pre-service teachers in 2012-2014

Taking into account the expectations of pre-service teachers and the targeted higher quality of education, since 2010 the teaching practice in Lithuanian University of Educational Sciences has been carried out in different years of studies starting with the second year. Students have the teacher assistant's practice in the second year of studies, teachers go on the teaching practice under supervision of mentor in the third year of studies and in the final year they complete their independent teaching practice.

The research on personal experience carried out in 2012-2014 disclosed that pre-service teachers' managerial competences improved at different practices. After completion of practice of teacher assistant, the competence of organisation (25.3%) and planning (22.8%) was evaluated highest, after teaching practice under supervision of mentor, the respondents ranked the competences of planning (41.8%), organisation (34.8%) and leadership (32.8%) highest, whereas after independent teaching practice the students gave the most favourable evaluations to the competences of leadership (68.5%), assessment (63.4%) and planning (58.9%). According to the research data, a significant improvement of all the elements of managerial competences of pre-school teachers, i.e., planning ($\chi^2=11.972$; $df=2$; $p<0.001$), leadership ($\chi^2=23.623$; $df=4$; $p<0.0001$), assessment ($\chi^2=17.414$; $df=4$; $p<0.05$), organisation ($\chi^2=20.947$; $df=4$; $p<0.0001$), project management ($\chi^2=16.233$; $df=4$; $p<0.01$) and organisation of non-formal education ($\chi^2=15.276$; $df=4$; $p<0.01$) was observed comparing different teaching practices (teacher assistant's practice, practice under mentor's supervision and independent teaching practice). The results of the research also disclose correlation of components of managerial practises developed during different practices. Therefore, it can be concluded that improving one component, all the managerial competences are also developed.



Picture. 5. The distribution (percentage frequencies) of development of managerial competences of pre-service teachers in 2012-2014

The prolonged teaching practice received favourable evaluation from students, who also pointed out that such practice is particularly significant to improvement of managerial competences. The students also indicated that a teacher involved in pedagogical work, has to be motivated. Some teacher students think that this job requires vocation. According to the respondents, a teacher has to assume responsibility for own activities and intended outcomes. In students' opinion, to achieve high managerial competences, it is important to continuously improve them.

Thus, comparing the one-year teaching practice with the three-year teaching practice model, it can be stated that the longer period of practice had influence on higher expression of pre-service teachers' managerial competences. Moreover, more focus should be allocated to theoretical and practical coherence to enable a pre-service teacher to self-develop own managerial competences.

5. CONCLUSIONS

The analysis of the research on pre-service teachers' managerial competences revealed that:

1. The theoretically and empirically substantiated model of the structure of teacher's managerial competences consists of the following managerial competences: planning, organisation, leadership, assessment, organisation of non-formal education and project management.
2. In 2005-2006 the students ranked leadership and organisation competences highest, whereas the ones of planning, organisation and assessment received the highest evaluations in 2012-2014.
3. Obvious increase in expression of pre-service teachers' managerial competences in different years of teaching practice reveals that prolonged time of teaching practices establishes more favourable conditions for development of managerial competences of pre-service teachers.
4. The correlation is observed among separate components of student teacher *managerial* competence as well as at separate phases of the teaching practice. It can be concluded that improvement of separate components of the *managerial* competences conditions a positive effect on the total level of *managerial* competency. It is recommended to organise teacher training in a way to ensure that the applied methods served for the development of managerial competences.
5. The managerial competences of a contemporary teacher and their continuous improvement serve as the key factor, which ensures high quality of teachers' activities and their professional development. Therefore, a teacher has to be continuously learning personality in today's fast changing world.

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