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TRAINING MANAGERS IN THE FIELD OF EDUCATION IN KAZAKHSTAN: DEVELOPMENT OF MANAGERIAL COMPETENCE IN MASTER'S DEGREE PROGRAMS

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ABSTRACT

This article deals with the problem of training modern-type education managers in the Republic of Kazakhstan. Having gained independence, the country has consistently implemented a course for accelerated development and integration into the global community, which requires skilled managers in key sectors, especially in the field of education, since it is this sector that determines the quality of human capital and, therefore, the competitive position of the economy as a whole. Based on the analysis of international and local experience, it was concluded that there are seven main subcompetences (strategic, communicative, organizational, psychological, pedagogical, entrepreneurial, and political) that constitute the content of the managerial competence of a modern manager in the field of education. A conclusion was made that the formation of this competence should take place at the level of Master's programs, since holders of postgraduate degrees form the managerial staff of the education system. A modular educational program for Master's students majoring in Pedagogy and Psychology was developed and tested at S. Toraighyrov Pavlodar State University in 2016-2018. Before the start of this program, as well as after its completion, a survey was conducted among Master's students in this program (n = 27) to determine how they assess their level of the abovementioned subcompetences development. Analysis of the results was carried out using the paired sample t-test. The results confirmed the effectiveness of the developed program in six of the seven areas, but also indicated the need for further work in this direction.

Keywords: Managerial Competence, Management in Education, Postgraduate Education, Master's Degree Students, Republic of Kazakhstan

INTRODUCTION

After gaining independence in 1991, the Republic of Kazakhstan has set a policy of democratization, transition to a market economy, integration into the world economic space, accelerated industrial and innovative development, and the revival of the ancestors' cultural heritage. At the same time, special attention has always been paid to the development of the education system, since it largely determines the quality of human capital and the competitive position of the country as a whole.

Since 1991, there have been significant reforms in the field of education affecting both its content and organization. In the field of higher education, the country joined the Bologna process, which brought about significant changes in universities all over the republic

(Yergebekov & Temirbekova, 2012). In the sphere of primary and secondary education, introduction of new content is taking place (Decree of the President of the Republic of Kazakhstan, 2016). Work is underway to introduce English as one of the languages of instruction in high school and universities (Nazarbayev, 2015). These reforms require changes in the work of managers in the field of education, and, as a result, in the process of their professional training.

In order to understand what changes need to be made in the training programs, it is first necessary to identify the requirements for the head of an educational institution at the present stage and based on that, draw conclusions about the component composition of the managerial competence of the education manager.

Davis, Hides and Casey (2001) argued that manager's key duties include: 1) development of the mission, vision and values, being a role model of a culture of excellence; 2) personal involvement in the organization's management system development, implementation and continuous improvement; 3) personal participation in working with consumers, partners and the public; 4) motivating, supporting and recognizing the organization's people.

According to Bhatti et al. (2015), functions of a top manager in the field of education include planning, organizing, staffing, directing, controlling and guiding.

In general, over the past few decades, major changes have occurred in the management of educational institutions. Spendlove (2007) conducted a series of interviews with Pro-Vice-Chancellors at ten UK universities with the aim of identifying competencies required for effective leadership. A conclusion was made that academic credibility and experience of university life were perceived by most respondents as crucial, followed by people skills, including the ability to communicate and negotiate with others. However, it is evident from more recent publications that managerial skills, leadership and entrepreneurship are now much more in-demand than they have ever been in the sphere of education. According to Fullan & Scott (2009), educational institutions need to be “change-capable” to meet successfully the economic and societal challenges of the 21st century.

Even larger changes occurred in the countries of the former USSR after the collapse of the Union (Heyneman, 2010). The typical Soviet authoritarian and centralized style of management has been replaced with these countries' own management models. Sagintayeva (2013) noted that with the transition to a market economy, a top manager of an academic institution should be an effective manager with advanced financial and business management skills.

Research carried out by scholars in Kazakhstan show that the presence of managerial competence is required from a manager in education. Moldazhanova et al. (2018) proposed the following component composition of the managerial competence of the head of an educational institution (university): strategic (the ability to provide vision and devise development strategies), communicative (ability to effectively achieve goals through communication), organizational (the ability to organize joint activities in such a way that leads not only to the achievement of goals, but also to creation of comfortable conditions for employees), psychological (self-awareness, self-regulation, motivation, empathy, and social skills), pedagogical (a set of professional and personal qualities necessary for successful teaching), entrepreneurial (the ability to carry out effective economic activities in market conditions and gain profit for the university as a result of such activities), and political (the



ability to be a conductor of the state policy in education and also effectively influence this policy in the interests of one's own institution) subcompetences.

Given the specificity of the education system of the Republic of Kazakhstan, it can be concluded that the development of this competence is most appropriate to carry out at the level of postgraduate education programs, since the qualification requirements for administrative personnel specify the obligatory presence of a postgraduate degree. Some universities already offer Master's degree programs in management in education (for example, Almaty University of Management). However, there are still very few such programs.

Within this research, an attempt was made to create a Master's degree program aimed at developing the managerial competence on the basis of the already existing program in Pedagogy and Psychology. Table 1 shows the courses taught within this program, as well as the components (subcompetences) of the managerial competence, the development of which was expected to be achieved through studying each course.

Table 1. Courses taught in the proposed Master's program

Subcompetence	Name of the course
Strategic	- Topical problems of professional education; - Leadership in education.
Communicative	- Foreign language (professional); - Business Kazakh language; - Psychology of communication.
Organizational	- Organization and planning of research; - Basics of pedagogical process management.
Psychological	- Theoretical and methodological foundations of psychology; - Psychology of leadership; - Psychology of interpersonal relationships.
Pedagogical	- Pedagogy; - Topical problems of pedagogical science; - Deontological foundations of teaching.
Entrepreneurial	- Innovative entrepreneurship; - Economic models of start-up projects.
Political	- Legislation of the Republic of Kazakhstan in the field of education; - The policy of the Republic of Kazakhstan in the field of education.

The length of this program was two years. In addition to the abovementioned courses, the development of managerial competence also took place due to active participation of Master's students in extracurricular activities. For example, the university has established its own Start-up Academy where students get assistance with planning and implementing their own start-up projects. In the course of working on such a project, students acquired the knowledge and skills necessary for an entrepreneur (entrepreneurial subcompetence). Besides, Master's students also had compulsory teaching (pedagogical subcompetence) and research (organizational subcompetence) practice. During the traditional self-governance period, Master's students had a chance to take part in managing the university (strategic and organizational subcompetences).

This research aimed to answer two questions:



1. To what extent was the managerial competence developed among Master's students majoring in Pedagogy and Psychology at the beginning of the program?
2. What was the perceived level of the managerial competence development after the end of the program?

METHODOLOGY OF RESEARCH

General Information

This research utilized quantitative methodology, as its purpose was to determine the presence or absence of statistically significant changes in the perceived level of the managerial competence development among Master's students who took part in the research, and not to explain the cause or describe the nature of these changes. Quantitative methodology makes it possible to explain phenomena by collecting numerical data that are analyzed using mathematically based methods (in particular statistics) (Muijs, 2004). More specifically, the present research utilized the survey method. A survey was conducted twice: at the beginning of the program and at the end of it.

Research Sample

Master's students in teaching and research programs at S. Toraighyrov Pavlodar State University were selected as the target population. It needs to be explained here that in Kazakhstan, there are two types of Master's programs: field-specific programs and teaching and research programs. Field-specific programs are aimed at training specialists with postgraduate degrees for all key sectors of the national economy. The duration of such programs is usually one year. The purpose of teaching and research programs is training highly qualified staff for the fields of science and education. The duration is usually two years. The presence of a Master's degree is also a necessary condition for candidates aiming to take administrative positions in these fields. Thus, managers in education are individuals who have successfully completed a two-year teaching and research program, this is why this particular type of Master's programs is of interest for the present research. The sample of the research included Master's degree students who studied the teaching and research program in Pedagogy and Psychology developed by the authors of this article. The sample size was 27 people. The goals, content and procedure of the research were explained to the participants in detail beforehand. Participation was voluntary. All participants provided written consent to take part in the research.

Instruments and Procedures

The research was conducted with the use of the Questionnaire for Determining the Managerial Competence Development Level developed by the authors of the present article based on the results of their previous research in this field (Toleubekova & Zhumatayeva, 2015). The questionnaire contained 35 questions (statements) divided into 7 sections corresponding to the seven subcompetences described above. In each question, a 5-point Likert scale was used: research participants were asked to choose a number from one ('this skill or ability is absent') to five ('this skill or ability is developed at a very high level') for each of the 35 questions. The Questionnaire showed good psychometric properties (Cronbach's alpha of .84).

To encourage participants to return honest answers, the survey was anonymous. Participants were not asked to provide any personal data, the only information that was processed in this research was their answers given in the form of numbers from one to five.



The first measurement was conducted shortly after the start of the first semester (September 20, 2016). It was aimed to determine the initial state of the managerial competence development among the participants. Then, the Master's students studied the developed program for 2 years. This program included not only the courses listed above, but also abundant extracurricular activities. Upon completion of the program (May 15, 2018), a second measurement was conducted using the same questionnaire in order to identify the presence of changes compared with the results of the first measurement.

Data Analysis

The score for each answer was in the range from one to five points. Each section of the questionnaire consisted of five questions (statements). Mean scores were calculated for each section and for all 35 questions in total. According to the key to the Questionnaire, the results from one to three indicated a low level of the managerial competence development. Scores from three to four points showed the medium level, while results in the range from four to five points were the evidence of the high level.

To identify the presence (or absence) of statistically significant differences between results of the first and the second measurement, a paired-sample Student's t-test was carried out. The results (mean scores) for each of the seven sections of the questionnaire obtained before the beginning of the program and after its completion were compared. The null hypothesis was that there were no significant differences between each pair of means. The calculated t-value was compared to the critical t-value with the degree of freedom of 26 ($df = n - 1$). The critical t-values were taken from the t-distribution table. The confidence level was 95% ($p \leq .05$). If the calculated t-value exceeded the critical t-value, it was concluded that the null hypothesis must be rejected and that the means were significantly different.



RESULTS OF RESEARCH

Results of the First Measurement

Figure 1 shows mean scores from the first measurement in each of the seven sections.

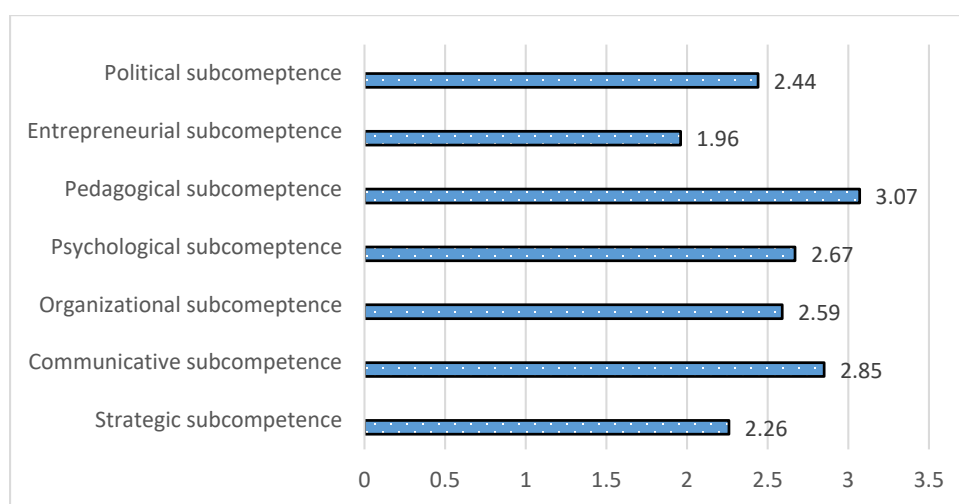


Figure 1. Mean scores for each of the seven sections of the questionnaire after the first measurement.

Note: in points, the possible interval: from one to five.

All results obtained from the first measurement were in the range from 1.96 (entrepreneurial subcompetence) to 3.07 (pedagogical subcompetence). It is noteworthy that at the time of the first measurement, only one subcompetence was developed at a medium level (from three to four points) - the pedagogical subcompetence. The results for the remaining six sections indicated a low level (from one to three points) of the corresponding subcompetences development. The overall mean score for the entire sample (2.55 points) also corresponded to a low overall level of the managerial competence development.

Thus, at the beginning of the program, the managerial competence was clearly at a low level of development, which was evidenced not only by the overall mean score, but by the results in six of the seven sections as well.

Results of the Second Measurement

Figure 2 shows mean scores from the second measurement in each of the seven sections.

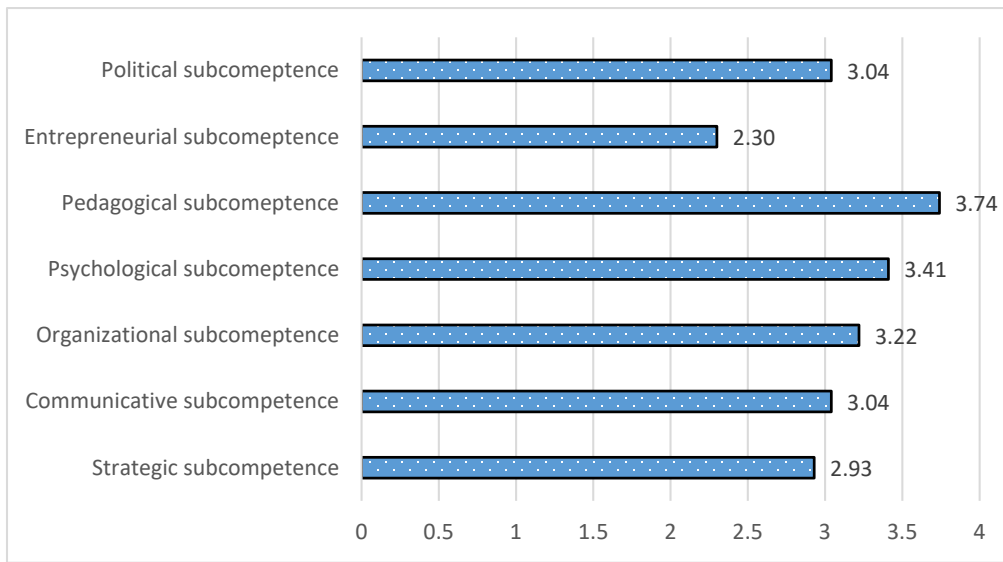


Figure 2. Mean scores for each of the seven sections of the questionnaire after the second measurement.

Note: in points, the possible interval: from one to five.

The mean scores from the second measurement were in the range from 2.30 (entrepreneurial subcompetence) to 3.74 (pedagogical subcompetence). The results in two sections (entrepreneurial and strategic subcompetences) corresponded to a low level of these subcompetences development (from one to three points). In five other sections (political, pedagogical, psychological, organizational, and communicative subcompetencies) the results indicated the medium level (from three to four points). The total mean score for the entire sample (3.1 points) also corresponded to the medium level of the managerial competence development.

Even though the entrepreneurial and pedagogical subcompetences still remained the areas with the lowest and the highest results correspondingly while all other results were distributed more or less evenly, the second measurement showed considerably better results. This is evidenced not only by a notable growth in the overall mean score (from 2.55 to 3.1), but also

by the fact that results in the majority of the sections corresponded to the medium level, not the low level, while the opposite was true with the results of the first measurement.

Thus, the results of the second measurement were significantly different from the data obtained from the first measurement, which is clearly shown by the results of the t-test presented in Table 2.

Table 2. The difference between mean scores from the first and second measurements (in points).

Subcompetence	Result of the first measurement	Result of the second measurement	Calculated <i>t</i> -value	Critical <i>t</i> -value ($p \leq .05$)
Strategic	2.26	2.93	2,1	2,06
Communicative	2.85	3.04	0,8	2,06
Organizational	2.59	3.22	2,7	2,06
Psychological	2.67	3.41	4,1	2,06
Pedagogical	3.07	3.74	3,7	2,06
Entrepreneurial	1.96	2.30	2,1	2,06
Political	2.44	3.04	4	2,06

There were no statistically significant changes only in one of the seven sections of the questionnaire (the one measuring the level of the communicative subcompetence development). In the remaining six sections, the calculated *t*-value exceeded the critical value, which indicated the presence of statistically significant changes.



DISCUSSION

The results of the first measurement clearly indicated that at the beginning of the Master's program, the research participants had a low level of the managerial competence development, despite the fact that by that time, they all had already earned their bachelor's degree in education, and some of them had already had practical experience of working in educational institutions. This confirms the conclusion made by Kubeyev et al. (2017) that the existing programs in Education (including those at the bachelor's level) do not prepare students for carrying out managerial duties at all. Zhelvis et al. (2014) came to a similar conclusion, emphasizing that such training should take place at the level of postgraduate education, as today's Master's degree students in Kazakhstan are tomorrow's leaders in the field of education. Speaking of specific components of the managerial competence, it is necessary to note, first of all, the entrepreneurial subcompetence, since it was the section where the lowest results were obtained, both after the first and after the second measurement. Moreover, this subcompetence was the only one with the level well below the medium (the result obtained was 2.3 points, the medium level was from three to four points) after the end of the program.

It should be noted that business education in general in Kazakhstan is developed rather weakly, since it began to emerge only in the 1990s after the collapse of the Soviet Union. Direct evidence of this is the position held by Kazakhstan in the Global Competitiveness Report published by the World Economic Forum in the category "quality of management schools" - 100th position among 137 countries (WEF, 2017).

Analyzing the main problems in this area, Monobayeva (2014) noted the imperfection of the existing legislation and the lack of well-trained and experienced practitioners among teachers. Improving the situation in this area will require time and a lot of effort. A major problem here is the development of a positive attitude and interest in entrepreneurial activities among students. It is noteworthy that even the Start-up Academy specially created for these purposes within the university could not significantly change the situation, since many students simply did not show any interest in attending additional classes or events held by the Academy.

The most significant difference between the results of the first and second measurements was in the sections “psychological subcompetence” and “pedagogical subcompetence”. This can be explained by the fact that, firstly, since the name of the Master's program was Pedagogy and Psychology, it is not surprising that these two subcompetences were perceived by the participants as the most important; secondly, the majority of the courses studied within the program were related to those two fields; thirdly, the program also included obligatory teaching and research practice, where Master's students needed to apply what they had learned; fourthly, the writing of a master's thesis, traditionally perceived by students as the main result of learning and an indicator of its effectiveness (Demb & Funk, 1999), required substantial knowledge in the field of pedagogy and psychology.

Significant growth was also noted in the “political subcompetence” section, which was a rather unexpected result given the traditional apolitical nature of the Kazakhs (Takizhbaeva, 2016). Apparently, after gaining independence, people really want to take a more active part in the political life of their country (Kulzhanova, 2012), including in the field of education.

Communicative subcompetence was the section where the difference between the results of the first and second measurements was the smallest (only 0.19 points). However, it should be noted that this subcompetence was developed quite well initially (the second best result after the first measurement). This may be due to several reasons. First of all, the majority of the population of the Republic of Kazakhstan is characterized by a high level of bilingualism (the Kazakh and Russian languages), and in recent years, there has been an active popularization of the English language and its large-scale introduction into the education system as one of the languages of instruction (Nation's Plan, 2015). Therefore, many people were likely to be used to communicating in more than one language before the beginning of the program, and the content of the language courses offered within the program may not have been challenging enough to lead to a more pronounced growth. Secondly, the high level of perceived communicative competence can also be due to cultural background of the people (Croucher, 2013). The everyday life of Kazakhs in the past (living in large families, collective nature of economic life, and almost total illiteracy until the beginning of the 20th century) has made the role of effective verbal communication exceptionally important (Tokhtabaeva, 2017). This is why the initial level of the communicative subcompetence development was quite high compared to other results, but apparently, not enough was done to improve it even more within the Master's program.

Finally, results in the sections corresponding to the strategic and organizational subcompetences showed moderate growth. Strategic competence implies, above all, strategic thinking (Norzailan et al., 2016), the development of which requires time and personal experience. The same applies to organizational skills that underlie the organizational subcompetence. Those were the areas in which Master's students could get only a general idea



during their studies, and real development of this subcompetences will come with professional experience.

CONCLUSIONS

Results of the research showed that, firstly, the initial level of the managerial competence development among Master's students majoring in Pedagogy and Psychology was low, which applied to six of the seven subcompetences; secondly, in general, the proposed program showed its effectiveness: statistically significant changes took place in all the sections of the questionnaire except one, which indicates that the development of the corresponding subcompetences and the managerial competence as a whole was achieved. The only truly problematic area where the results were noticeably below the medium level even after the second measurement was the entrepreneurial subcompetence. The problem of its development requires in-depth and large-scale research.

Speaking of the most important limitations of this research, it is necessary to note, first of all, an extremely small sample size, since this was the first (pilot) test of the developed program. Consequently, at this stage, it is possible to make only interim conclusions as to how effective the program is for the development of managerial competence. Secondly, the instrument used in this research is based on self-assessment, and is therefore capable of detecting changes in participants' subjective perception of the degree of certain qualities development. However, for an objective assessment of the level of each subcompetence development, it is also necessary to take into account external evaluation results (marks for exams in corresponding courses), as well as the opinion of teachers (interviewing).

It is important to note that this article presents only the first (interim) conclusions based on the results of the analysis of quantitative data obtained through a survey. A comprehensive assessment of the effectiveness of the presented program is the next step in the authors' plans. Based on the analysis of the results obtained from such assessment, conclusions will be made about the need to make certain changes to the developed program before testing it on a significantly larger sample.

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