

# Improving the Psychological Training of Education Managers in Master's Degree Programs in Kazakhstan

Engilika Zhumataeva<sup>a</sup>, Rymshash Kameshovna Toleubekova<sup>b</sup>, Artyom Sergeevich Dontsov<sup>c</sup>, Botagoz Gabdullovna Sarsenbayeva<sup>d</sup>, <sup>a,c</sup>S. Toraihyrov Pavlodar State University Republic of Kazakhstan, 140008, Pavlodar, Lomov Street, 64, <sup>b</sup>L.N. Gumilyov Eurasian National University, Republic of Kazakhstan, 010000, Nur-sultan, Satpayev Street, 2, <sup>d</sup>Pavlodar State Pedagogical University Republic of Kazakhstan, 140000, Pavlodar, Mira Street, 60,

This article discusses the issue of improving the training of education managers in the Republic of Kazakhstan. Based on the results of previous studies, 7 components (subcompetences) were distinguished in the structure of the managerial competence of a modern manager in the field of education. It was noted that the problem of psychological training of education managers had not yet been properly addressed by Kazakhstani researchers, although a number of studies indicated the existence of problems in this area. An experimental course in Management Psychology aimed at the development of the psychological subcompetence was developed and introduced. A research was conducted among Master's degree students of S. Toraihyrov Pavlodar State University (n = 32), who were offered to study this course. A survey designed to identify the level of development of the required subcompetence was conducted twice: before the start of the course and after its completion. The results showed the effectiveness of the course, and also indicated the need for further work in this direction.

**Key words:** *Managerial Competence, Psychological Training, Management In Education, Management Psychology, Postgraduate Education, Master's Degree Students, Republic Of Kazakhstan.*

## Introduction

After gaining independence, the Republic of Kazakhstan faced a number of new challenges, one of the most serious of which was the transition from centralised state planning to a market economy. The previously existing vertical management system in all sectors of the economy assumed that all key decisions were made in Moscow, while all other union republics (including Kazakhstan) could only execute the plans received from above.

Education was no exception: centralised control and planning helped solve the problem of eradicating illiteracy in a relatively short period of time, but at the same time, local specific conditions and cultural peculiarities were not taken into account, and local leaders were not able to exert any significant influence on the central policy. As a result, in 1991, new top managers of the Ministry of Education of independent Kazakhstan faced the need to develop and implement their own educational policies with a virtual absence of any prior experience. It is not surprising that initially the Soviet model was still used by inertia, but after that a deep and long-lasting reform process was launched, which continues to this day.

The most significant changes in the field of higher education include the country's accession to the Bologna process, which led to serious changes in all universities of the country (Yergebekov & Temirbekova, 2012). A phased transition to English as one of the languages of instruction is being carried out (Dontsov & Burdina, 2018). Concrete steps are being taken to increase the degree of universities' autonomy, both from a financial perspective and in terms of developing their own educational programs (Bilyalov, 2016).

It is obvious that all these reforms require changes in the work of managers in the field of education and, as a result, in the process of their training. Since the leading methodological approach used in modern Kazakhstan's higher education is the competency-based approach, the question should be formulated as follows: what should the managerial competence of a modern manager in the field of education include?

A study carried out by Kazakhstani researchers (Moldazhanova et al., 2018) revealed 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); organisational (the ability to organise 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. The first training programs aimed at the formation of managerial competence are being developed, taking into account all its components (Toleubekova et al., 2019).

However, this work is still largely in its infancy. The development problems of some subcompetences of the manager in the field of education have not yet been sufficiently studied. Among these components is the psychological subcompetence.

The international experience shows that the presence of knowledge in the field of psychology and the ability to use it when working with a team is a mandatory requirement for a manager in any field. For example, a study carried out by Kour et al. (2019) showed that the perceived levels of optimism, well-being and personal strength have a direct impact on employees' productivity, hence organisational productivity. In another research (Katz et al., 2019), it was proven that perceived climate is associated with improved worker behaviours, worker outcomes and employer (productivity) outcomes. Scafa et al. (2019) concluded that even in an Industry 4.0 manufacturing context with its focus on technologies and data, human factors continue to play a key role in company growth.

Nevertheless, management in Kazakhstan (as in many other post-Soviet countries) is characterised by the emphasis on technology and processes, rather than on the "social aspect" (Burykhin, 2012). A number of studies clearly show that many managers do not have sufficient knowledge in the field of management psychology (Nurbayev, 2011). The same problem can be observed in education management. In the context of ongoing deep reforms, changes in management skills with an emphasis on ensuring a favourable psychological climate in the team are especially important.

Based on the results of previous studies in this area (Toleubekova & Zhumataeva, 2015), a number of components in the structure of the psychological subcompetence of a manager in education were singled out. These are knowledge and skills in the following areas:

- 1) personality psychology
- 2) motivation
- 3) leadership
- 4) stress, emotional burnout and their prevention
- 5) the psychological foundations of managerial decision making
- 6) interpersonal communication
- 7) conflicts, their resolution and prevention.

Taking into account the specificity of the education system in the Republic of Kazakhstan, it is most expedient to work on the development of the psychological subcompetence of managers in the field of education at the level of the Master's degree program, as the qualification requirements for managerial staff indicate the mandatory presence of a postgraduate degree. Therefore, it is the current Master's degree students that that will form the basis of the managerial staff of the education system in the future.

As a part of this research, an attempt was made to develop a course for Master's degree students aimed at the acquisition of the necessary knowledge and skills in each of the seven areas indicated above.

Therefore, the research questions were:

1. What is the initial level of the psychological subcompetence development?
2. Does the study of the developed course lead to statistically significant changes in the levels of the psychological subcompetence development?

## **Methodology of Research**

### ***General Information***

Since this research was aimed at determining the presence or absence of statistically significant changes in certain components of the psychological subcompetence, and not at identifying the causes or describing the nature of these changes, quantitative methodology was utilised. Quantitative methodology makes it possible to explain phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics) (Muijs, 2004). More specifically, a survey was conducted. This was done twice: before the beginning of the course in Management Psychology and after its completion. Thus, two sets of data were obtained, one illustrating the initial level of the psychological subcompetence development among study participants, and the other one showing if that initial level changed after the end of the course.

### ***Research Sample***

Master's degree students in teaching and research programs at S. Toraihyrov Pavlodar State University (Pavlodar, Kazakhstan) were selected as the target population. It should be explained here that there are two types of Master's degree programs in the Republic of Kazakhstan: field-specific programs and teaching and research programs. Field-specific programs ensure training of personnel with postgraduate degrees for various industries of the national economy. Teaching and research programs provide in-depth training for specialists working in the spheres of education and science. It is the latter, the teaching and research type



of Master's degree programs, that is of interest for this research, since future leaders in the field of education will be holders of degrees in this area. At the stage of the pilot study, the developed course was tested on Master's degree students of the Department of Psychology and Pedagogy. The sample size was 32 people. The purpose of this research, all its stages and procedures, were explained to the participants in advance. Participation in the research was voluntary.

### ***Instruments and Procedures***

Both measurements (before the beginning of the course and after its completion) were carried out with the use of the questionnaire for determining the level of the psychological subcompetence development designed by the authors of the present article and based on their previous experience in this field (Toleubekova & Zhumatayeva, 2015). There were 35 questions (statements) in the questionnaire divided into 7 sections based on the 7 components of the psychological subcompetence highlighted above. The participants were asked to evaluate each statement depending on how much they agreed with it on a scale from 1 (strongly disagree) to 5 (strongly agree). The obtained data reflected the degree of the perceived level of development of the corresponding section of the psychological subcompetence. The questionnaire showed good psychometric properties (Cronbach's alpha of .85).

The first measurement was made at the beginning of the first semester (September 16, 2019). Its goal was to determine the initial level of the psychological subcompetence development among the participants. Then, during the semester, Master's degree students who agreed to take part in this research studied a specially designed elective course in Management Psychology.

This course included lectures and seminars. Teaching and learning were carried out in accordance with the basic principles of the constructivist approach. The learning process was fully student-centred. Lectures were held in an interactive form through the lecturer's communication with students, during which they moved from already known information to joint formulation and discussion of new information. During seminars, conditions were created for independent, pair and group work; students prepared mini-projects and presentations. Students played an active role in the learning process throughout the course.

After the end of the course (December 16, 2019), a second measurement was carried out in order to identify changes in comparison with the results of the first survey.

The survey was anonymous to ensure honest answers. Respondents did not need to provide any personal data. The only information that was processed within this research was their answers in the form of numbers from 1 to 5.



### ***Data Analysis***

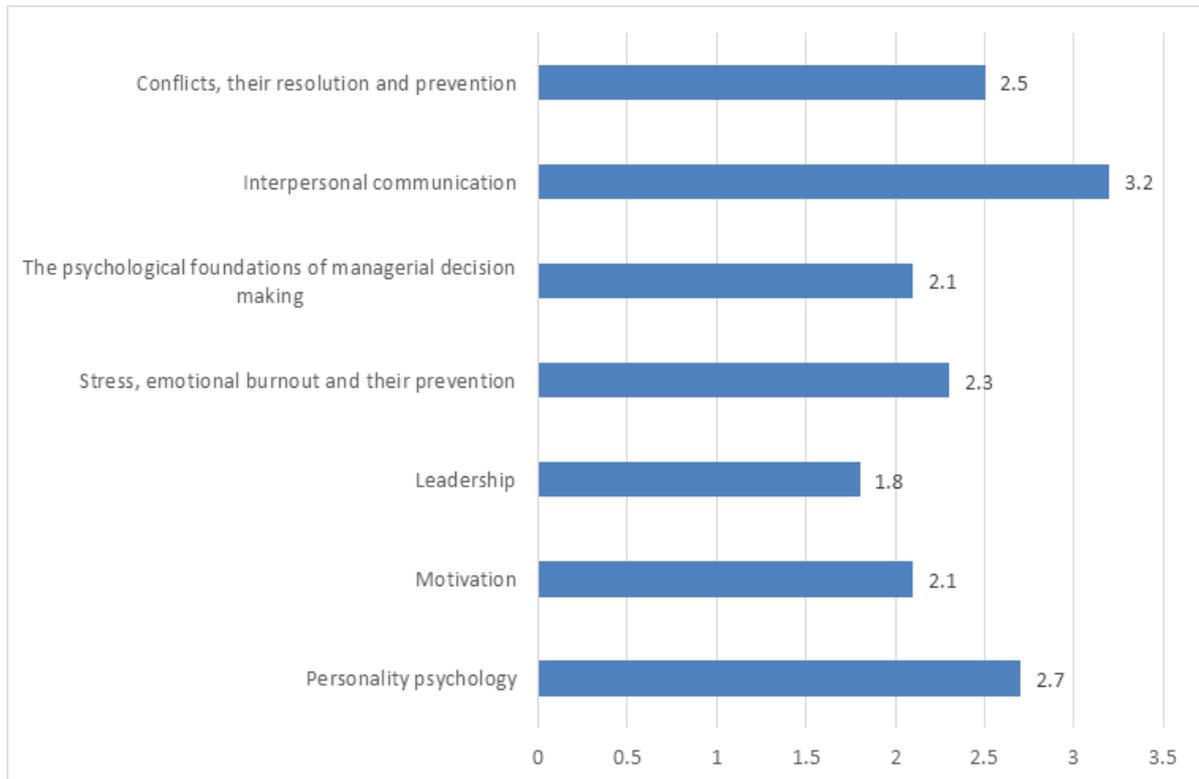
Each section of the questionnaire contained 5 questions (statements). The number of points for each question ranged from 1 to 5. Mean scores were calculated for each section and for the entire sample in general. Mean scores were rounded to the nearest tenths. According to the key to the questionnaire, results from 1 to 2.99 indicate a low level of the psychological subcompetence development. The number of points from 3 to 3.99 shows a medium level. Finally, a result in the range of 4 to 5 means a high level.

To determine the presence (or absence) of statistically significant differences between the results of the first and second measurements, a paired-sample Student's t-test was used. The means scores for each of the seven sections were compared before the course was studied and after its completion. According to the null hypothesis, there were no significant differences between the pairs of mean scores. The calculated t-value was compared with the critical t-value with a degree of freedom of 31 ( $df = n - 1$ ). 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 should be rejected, and the mean scores were significantly different.

## Results of Research

### *Results of the First Measurement*

**Figure 1.** Mean scores for each of the seven sections of the questionnaire after the first measurement (in points, possible interval: from 1 to 5)



The results obtained in the first measurement showed that the least developed component of the psychological subcompetence was knowledge and skills in the field of leadership (1.8). On the contrary, the highest result was shown in the Interpersonal Communication section (3.2). The remaining results ranged from 2.1 (Psychological Foundations of Management Decision Making and Motivation) to 2.7 (Personality Psychology).

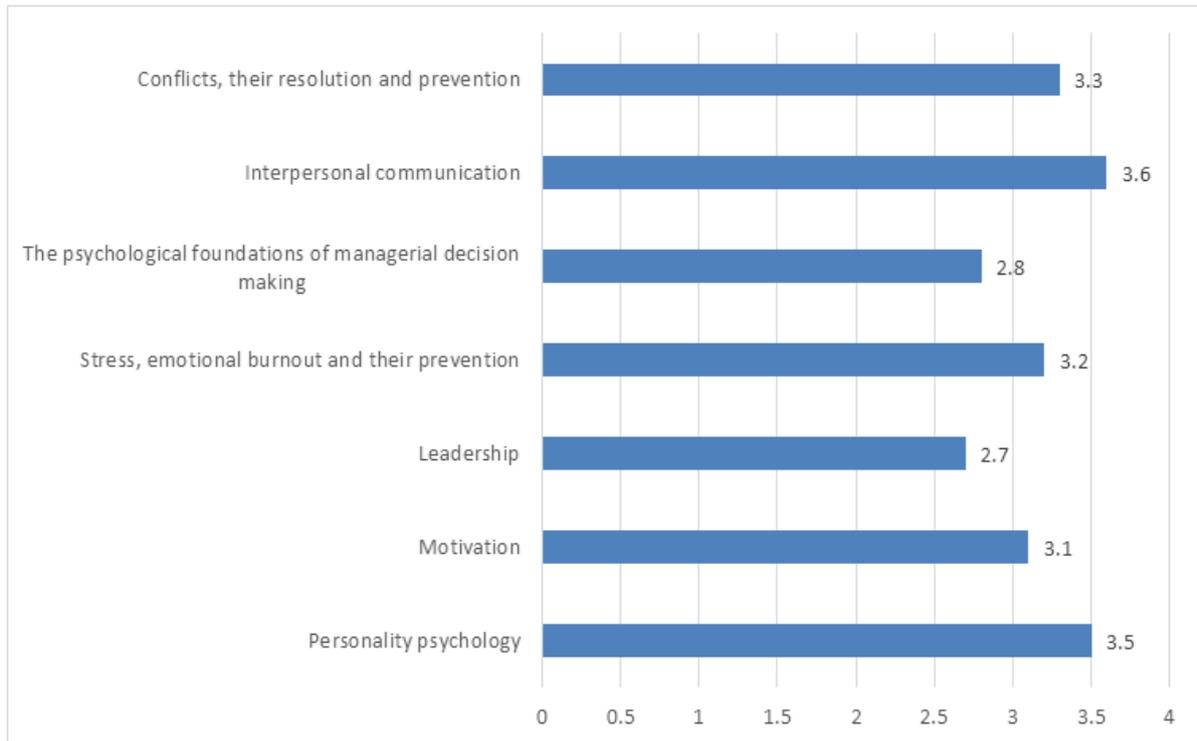
It is noteworthy that the results of the first survey showed that only one result (Interpersonal Communication) was within the range corresponding to the medium level (from 3 to 3.99). For the remaining six sections of the questionnaire, the obtained results corresponded to a low level (from 1 to 2.99). The overall mean score (2.4) also corresponds to a low level.

Thus, the results of the first measurement showed that the initial level of the psychological subcompetence development was low, which was evidenced by both the overall mean score and the results in six of the seven sections of the questionnaire.

### *Results of the Second Measurement*

The second measurement was carried out after the completion of the elective course in Management Psychology. Its results are presented in Figure 2.

**Figure 2.** Mean scores for each of the seven sections of the questionnaire after the second measurement (in points, possible interval: from 1 to 5)



According to the results of the second measurement, the least developed component of the psychological subcompetence was still Leadership: despite an increase from 1.8 points after the first measurement to 2.7 after the second one, this result was still the lowest. The section of the questionnaire where the highest result was shown did not change – it was still Interpersonal Communication. Here, there was a growth from 3.2 to 3.6 points. The remaining results ranged from 2.8 (Psychological Foundations of Managerial Decision-making) to 3.5 (Personality Psychology).

It should be noted that five of the seven results obtained in the second measurement corresponded to the medium level, while after the first survey there was only one such result. However, in two of the seven sections, the mean scores were still low (Leadership and Psychological Foundations of Managerial Decision Making). The overall mean score (3.2) corresponded to the medium level.

Thus, the results of the second measurement showed that after studying the Management Psychology course, the level of the psychological subcompetence development was medium, which was evidenced by both the overall mean score and the results for five (out of seven) sections of the questionnaire.

In order to prove that the differences between the results of the first and second measurements were statistically significant, a paired-sample student's t-test was conducted. The results are presented in table 2.

**Table 1:** The difference between the results of the first and second measurements (in points)

Component	Result of the first measurement	Result of the second measurement	Calculated <i>t</i> -value	Critical <i>t</i> -value ( $p \leq .05$ )
Personality psychology	2.7	3.5	4.1	2.04
Motivation	2.1	3.1	4.8	2.04
Leadership	1.8	2.7	2.8	2.04
Stress, emotional burnout and their prevention	2.3	3.2	3.4	2.04
The psychological foundations of managerial decision making	2.1	2.8	2.8	2.04
Interpersonal communication	3.2	3.6	1.4	2.04
Conflicts, their resolution and prevention	2.5	3.3	2.6	2.04

In six cases out of seven, the calculated t-value exceeded the critical t-value, which indicated the presence of statistically significant changes. The only component of the psychological subcompetence where no statistically significant changes took place was Interpersonal Communication.

## Discussion

The results of the first measurement clearly showed that before the start of the Management Psychology course, the level of the psychological subcompetence development was low. This is consistent with the conclusion made by Kubeyev et al. (2017) that, generally speaking, modern university-level degree programs in Kazakhstan are not sufficient for preparing students to carry out managerial activities.

The lowest result was obtained in the Leadership section. This may be due to historical reasons. In the Soviet period of the history of Kazakhstan, management was centralised. Determining the strategic directions of development, drawing up plans, setting long-term goals were the prerogative of the centre, not the periphery. Consequently, the local managers' role was reduced to administrators who supervised the implementation of the tasks received from above. The degree of their independence was minimal, the need to take initiative was virtually absent, which cannot be called favourable conditions for the development of leadership potential (Rudman, 1964). The consequences of this are felt to this day, although it has been almost 30 years since Kazakhstan gained independence. Burakanova (2016) also came to the conclusion that there are serious problems in leadership training at the present stage.

A low result was also obtained for the Psychological Foundations of Managerial Decision Making. Along with Leadership, this was the result that remained low even after completion of the course. On the one hand, this indicates that the developed course was not sufficiently effective in terms of the development of this component. On the other hand, available studies indicate that the scale of the problem is much wider. Research by Knisarina and Zhunusbekova (2015) conducted among current managerial staff in schools showed that 43% of them made decisions relying only on the experience gained in everyday practice, which evidences a rather superficial (empirical) level of decision making.

A relatively low result was obtained in the Motivation section. It should be noted here that it is consistent with the conclusion made by Aryzgulov (2014), who noted that the lack of the ability to competently motivate staff is one of the problems of managers in Kazakhstan.

On the contrary, the highest result was obtained in the field of Interpersonal Communication. This may be due to national, cultural and historical features. Kazakhs are historically a very open people who have always lived in large families, maintaining close ties with all relatives; oral communication remained the main form of communication until the beginning of the 20th century (Tokhtabaeva, 2017). It can be said that an understanding of the crucial role of interpersonal communication in general and oral communication in particular has been preserved in people's memory to this day.

The results of the second measurement showed a significant increase in the level of the psychological subcompetence development among the participants of this research.

Compared with the results of the first measurement, a considerable increase was achieved in the field of motivation. Significant attention in the framework of the Management Psychology course was paid to motivation-related problems. It was noted that each employee feels the need to be proud of his or her work and get recognition of achievements from managers and colleagues. If this need is not satisfied, then this worker's productivity will inevitably decline,



as there will be no internal impetus to perform at a maximum level. Therefore, one of the topics within the course was the role of employees' intrinsic motivation and the mechanisms of its gradual development. A similar idea was expressed by Shalbayeva and Maoshen (2011) who described a mechanism of motivation development similar to those used by teachers at schools, when results do not appear immediately but have a long-lasting effect.

A significant improvement also took place in the Personality Psychology component. This was achieved due to the fact that the Management Psychology course paid great attention to issues related to personality, including individual psychological characteristics and their manifestation in behaviour, activity, communication, etc. Particularly emphasised was the need to take into account individual personality traits in order to create a favourable psychological climate and, as a result, increase the effectiveness of the organisation. Silin and Kolunin (2011) wrote that countries of the former USSR needed a transition to the humanistic paradigm in management, according to which an employee cannot be considered simply as a “resource”.

The smallest growth was achieved in the field of interpersonal communication, but it is important to note here that this area was initially developed at a fairly high level, so the knowledge and skills acquired in the framework of this course were not perceived as a significant addition to the existing ones. It should be emphasised that of all seven components under consideration, the highest mean score was shown here, both after the first survey and after the second one. The high level of development of skills in the field of interpersonal communication is certainly important for any manager. According to R. Marr (1987), managers spend 70% of their time on communication. Consequently, the success of the organisation's activities largely depends on the ability of the manager to communicate with people inside and outside the team. Only communication with people makes it possible to achieve a clear understanding of goals, thereby creating the basis for employee motivation. At the same time, informal communication should be given no less attention than formal. The importance of verbal communication for a manager is hard to underestimate, whether it is a briefing with subordinates, public speaking at a meeting, setting goals and tasks for the team, a friendly conversation, analysis of the mistakes made by subordinates, talking on the phone, business negotiations, etc.

Overall, a significant growth was achieved in six of the seven components of the psychological subcompetence of a manager in education. Such high results were obtained largely due to the fact that the course in Management Psychology was developed and taught on the basis of the constructivist approach. Unlike the traditional (instructivist) approach (which assumes the central role of the teacher, strict regulation of what should be studied and how, as well as the role of the student as a passive recipient of a ready-made information), the approach based on the philosophy of constructivism has a number of important features. Firstly, the learning objectives are formulated by students themselves and are perceived by them as significant for



them personally. Secondly, students take an active role in learning, new information is discovered by them independently through personal experience, reflection, collaboration and discussion. Thirdly, a comfortable and safe learning environment is created and maintained, in which everyone feels confident, freely expresses his or her opinion, does not criticise the opinions of others, while initiative, non-standard ideas and experiments are encouraged. Fourth, individual learning styles are taken into account when working with new material.

A number of studies confirmed that teaching and learning based on the use of the constructivist approach lead to the formation of a positive attitude and, consequently, an improvement in learning outcomes, as well as an increase in the perceived level of readiness for the practical use of the knowledge gained (e.g., Latchman, 2000; Christianson & Fisher, 1999; Polak, 2008).

## **Conclusion**

Results of the research showed that, firstly, the initial level of the psychological subcompetence development was low, which was evidenced by both the overall mean score and the results in six out of seven sections; secondly, the developed course in Management Psychology showed its effectiveness, since its study led to statistically significant changes in the level of psychological subcompetence development: such changes took place in six of the seven components considered.

It is important to note some limitations of this research. Firstly, the sample size was small, as it was the first (pilot) test of the developed course. Therefore, at this stage, only very general intermediate conclusions can be made regarding how effective the proposed course was for the development of the psychological subcompetence of managers in education. Secondly, the tool used in this research was based on the self-assessment procedure, therefore, it provided subjective data (the perceived level of development of the psychological subcompetence components). However, for an objective assessment of each component, it is also necessary to take into account external evaluation results.

Nevertheless, even intermediate results obtained from a small sample show that further work in this direction is promising. It is planned to make certain improvements to the developed course taking into account the results obtained, then test it on a much larger sample, including Master's degree students from not one but several universities, and subsequently introduce this course into the curriculum on an ongoing basis.



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