

METHODOLOGY FOR THE FORMATION OF MANAGEMENT COMPETENCIES IN THE TRAINING OF FAMILY DOCTORS

Yusupova Shakhnoza Kadirjanovna

Doctor of Historical Sciences, Associate Professor. Head of the Department of Hospital Therapy and Endocrinology of Andijan State Medical Institute.

dr-shahnoza@mail.ru

Abduvakhobova Nozima Rakhmanovna

Senior Lecturer of the Department of Hospital Therapy and Endocrinology, Andijan State Medical Institute

Abduvahobovanozima74@gmail.com

Abstract: This article examines the methodology for developing managerial competencies in the training of family doctors. To assess and observe the development of managerial competencies in future family doctors, the authors applied the COC methodology (communicative and organizational Competence). In this method, 40 questions were used to assess the competencies of the future family doctor. Based on the analysis of the results from the experiment, the authors conclude that the students in the experimental group, who participated in the research process, have effectively developed communicative and managerial competencies when compared to the students in the control group.

Keywords: family doctor, management, competence, formation.

Relevance. Research on the development of managerial competencies in the training of family doctors has been reviewed by several international organizations and scientific publications. Global competency models and educational strategies for healthcare workers developed by the World Health Organization (WHO) play an important role in this area. WHO's Global Competence Model aims to enhance the leadership and managerial potential of family doctors. This model focuses on developing key skills such as leadership, communication, teamwork, decision-making, and strategic planning [3, 5, 7, 8, 10].

Various programs aimed at improving qualifications and skills for healthcare specialists have been established. These strategies, developed by WHO, incorporate both social and practical aspects of personnel training. Within these strategies, attention is paid to accrediting educational institutions, improving the mechanisms for advanced training of medical workers, and ensuring continuous knowledge updates through digital education.

The use of digital technologies in healthcare management and administration is critical, particularly for continuous professional development and advanced training of doctors. WHO is working on special manuals for digital education, which can also be applied to the training of family doctors [6, 9]. Additionally, other countries have gained valuable experience in training family doctors in management. For example, European countries organize special courses and internships to improve management and leadership skills in medical education. In the USA and Canada, programs such as Healthcare Leadership Programs are available for doctors [2, 4, 8].

At the present stage of the higher education system in our country, the organization of the educational process aimed at developing the creative thinking of a future family doctor, designing their abilities, and developing medical activity is a priority task. Modern conditions of society's development are increasing the requirements for future family doctor specialists. The formation of a personality with a high level of managerial competence capable of adapting to rapidly changing socio-economic conditions is becoming one of the priorities of higher medical education [1].

Purpose of the research. It consists of determining, theoretically substantiating, and experimentally verifying the effectiveness of the organizational and pedagogical conditions and technology for the formation of managerial competencies of graduates of the Andijan State Medical Institute.

Research material. Order No. 124 of the Ministry of Health of the Republic of Uzbekistan dated April 9, 2024, "On Improving the System of Personnel Support for State Medical Institutions," has been issued. In accordance with this order, tasks have been defined for improving the personnel system of state medical institutions, creating additional conditions for students of medical higher educational institutions to engage in labor activity and receive decent income during their studies, developing their practical skills and effectively organizing their free time from studies, and further improving the quality of medical services provided to the population.

According to paragraph 3 of this order, "starting from the 2024/2025 academic year, in all regions of the republic, graduating undergraduate students, masters, and clinical residents will be employed in vacant positions on a contractual basis; graduating undergraduate students of all medical higher educational institutions in the areas of "General Medicine" and "Pediatrics" are authorized to work full-time in primary health care institutions as a family doctor and in emergency medical care institutions as a doctor on the basis of an employment contract.

In the 2024-2025 academic year, 1,283 graduates from Andijan, Fergana, and Namangan regions will be enrolled at the Andijan State Medical Institute in the fields of "General Medicine," "Pediatrics," and "Vocational Education." The distribution of graduates of this field of study by region is presented in Table 1.

Table 1

Information about graduates of Andijan State Medical Institute from Andijan, Fergana and Namangan regions in the 2024-2025 academic year

Provinces	Graduates of the educational direction						General	
	General Medicine		Pediatrics		Profession education			
	abc	%	abc	%	abc	%	abc	%
Andijan	417	32,5	211	16,5	102	7,9	730	56,9
Fergana	154	12,0	94	7,3	26	2,1	274	21,4
Namangan	217	16,9	44	3,4	18	1,4	279	21,7
Total:	788	61,4	349	27,2	146	11,4	1 283	100

As can be seen from the table, out of 1283 graduates, 730 (56.9%) are graduates of the Andijan region, 247 (21.4%) are graduates of the Fergana region, and 279 (21.7%) are graduates of the Namangan region. Of these, 788 (61.4%) are graduates of the medical education program, 349 (27.2%) are graduates of the pediatric education program, and 146 (11.4%) are graduates of the vocational education program.

Of the 730 graduates of Andijan region, 417 (57.2%) are in the field of medical work, 211 (28.9%) are in the field of pediatrics, and 102 (13.9%) are in the field of vocational education. The largest number of graduates are 112 (15.4%) graduates of the city of Andijan, 94 (12.8%) graduates of the Andijan district, and 65 (8.9%) graduates of the Asaka district.

Of the 274 graduates of the Fergana region, 154 (56.2%) are in the field of medical work, 94 (34.3%) are in the field of pediatrics, and 26 (9.5%) are in the field of vocational education. As can be seen from Table 2.3, when comparing graduates in cities and districts, the majority of students are from rural areas.

Of the 279 graduates of Namangan region, 217 (77.7%) are in the field of medical work, 44 (15.7%) are in the field of pediatrics, and 18 (6.5%) are in the field of vocational education. The largest number of graduates are from the Chartak district - 31 (11.1%), the city of Namangan - 29 (10.4%), and the Chust district - 25 (8.9%).

In order to ensure the implementation of Order No. 124 of the Ministry of Health of the Republic of Uzbekistan dated April 9, 2024, "On Improving the System of Personnel Provision of State Medical Institutions," the main part of the graduates of the Andijan State Medical Institute in the 2024-2025 academic year were employed in the position of "Family Doctor" for vacant positions for family doctors, received on the basis of orders from the health departments (employers) of Andijan, Fergana, and Namangan regions, with a paid monthly salary.

It should be noted that online practical classes and lectures were held daily at 14:00 on a schedule through ZOOM, Telegram, and other social networks for all graduating students who received a monthly salary and were in practice.

For the purpose of expert assessment and observation of the development of managerial competencies of future family doctors in the primary healthcare system, we used the COC methodology (communicative and organizational skills). In this case, 40 questions are asked to determine the competence of the future family doctor. If the answer is positive, the "+" sign is used; if negative, the "-" sign is used.

The key to the methodology is as follows: 20 questions of the method allow us to assess the presence or absence of communicative abilities (their high, medium, or low level of development).

One point is awarded if you answer "yes" to questions 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and "no" to questions 3, 7, 11, 15, 19, 23, 27, 31, 35, 39.

20 questions assess organizational skills and the level of their development. One point is awarded for answering "yes" to questions 2, 6, 10, 14, 18, 22, 26, 34, 38, 40, and "no" to questions 4, 8, 12, 16, 20, 24, 28, 30, 32, 36.

The coefficient (K) is calculated separately for communication and organizational skills.

$K = m/20$, m - number of corresponding answers;

$K_k (K_o) = M_k (M_o) / 20$, where K_k is the communication capacity coefficient;

C_o - coefficient of organizational abilities.

Skill levels

Communicative		Organizing
0,10 - 0, 45	Lower	0,20 - 0,55
0,46 - 0, 55	Below average	0,56 - 0,65
0,56 - 0,65	Average	0,66 - 0,70
0,66 - 0,75	High	0,71 - 0,80
0,76 - 1,00	Very high	0,81 - 1,00

Evaluation sheet

Full Name	M - number of corresponding answers		Level of abilities (K - coefficient)	
	Mk	Mo	Kk	Ko

By analyzing the results of experimental work on the development of management competencies in the training of family doctors in primary health care institutions, it will be possible to determine the effectiveness of the educational model and technology. The reliability of the results of pedagogical experimental work depends on the quality of data measurement and the correctness of theoretical conclusions. When measuring and analyzing data, information reliability criteria are used.

In order to obtain comparable data results, graduates of the 2024-2025 academic year (1283 people) were identified as the main experimental group, and graduates of the 2022-2023 academic year (619 people) were identified as the comparison and control group. The students of the control group are presented in Table 2.

Table 2.

**Andijan State Medical Institute in the 2022-2023 academic year
Information about graduates from Andijan, Fergana, and Namangan regions**

Provinces	Graduates of the educational direction						General	
	General Medicine		Pediatrics		Profession education			
	abc	%	abc	%	abc	%	abc	%
Andijan	144	23,3	67	10,8	13	2,1	224	36,2
Fergana	133	21,5	101	16,3	15	2,4	249	40,2
Namangan	98	15,8	45	7,3	3	0,5	146	23,6
Total:	375	60,6	213	34,4	31	5,0	619	100

It should be noted that graduates of the Andijan State Medical Institute in the 2022-2023 academic year and subsequent years have been granted the right to work in primary treatment and prevention institutions at their place of residence after full graduation from the higher educational institution.

Comparative analysis of the results of experimental work on the development of management competencies in the training of family doctors in primary health care institutions is presented in Table 3.

Table 3

Distribution of students who participated in the experimental work to the experimental and control groups by areas of study.

Fields of Study	Control Group (2022-2023 graduates)	Experimental group (2024-2025 graduates)	Total number of students
General Medicine	375	788	1163
Pediatric Care	213	349	562
Vocational Education	31	146	177
Total	619	1283	1902

As can be seen from Table 3, out of a total of 1,163 graduates of the medical education program, 375 completed their studies in the 2022-2023 academic year and 788 in the 2024-2025 academic year. Of the 562 graduates of the pediatric work program, 213 completed their studies in the 2022-2023 academic year and 349 in the 2024-2025 academic year. Of the 177 graduates of vocational education, 31 completed their studies in the 2022-2023 academic year and 146 in the 2024-2025 academic year.

The groups of comparative analysis of the results of experimental work on the development of management competencies in the training of family doctors in primary health care institutions are presented in Table 4.

Table 4

Distribution of students who participated in the experimental work to the experimental and control groups by region.

Provinces	Control Group (2022-2023 graduates)	Experimental group (2024-2025 graduates)	Total number of students
Andijan	224	730	954
Fergana	249	274	523
Namangan	146	279	425
Total:	619	1283	1902

As can be seen from Table 4, out of a total of 954 graduates of the Andijan region, 324 completed their studies in the 2022-2023 academic year and 730 - in the 2024-2025 academic year. Of the 523 graduates of the Fergana region, 249 completed their studies in the 2022-2023 academic year and 274 in the 2024-2025 academic year. Of the 425 graduates of Namangan region, 146 completed their studies in the 2022-2023 academic year and 279 in the 2024-2025 academic year.

Research results. In order to objectively assess the effectiveness of the study, respondents were randomly selected for the control and experimental groups, and the results of the survey conducted on them are presented in Table 5.

Table 5

Results of the survey conducted among respondents.

№	Questions for the results of the experimental work	Control group	Experimental group
1.	Do you have many friends with whom you communicate constantly?	+	+
2.	How often can you convince most of your friends to make decisions?	-	+
3.	If one of your friends offends you, will it bother you for a long time?	+	-
4.	Do you always feel uncomfortable in difficult situations?	+	-
5.	Do you have a desire to make new acquaintances with different people?	+	+
6.	Do you enjoy engaging in public works?	-	+
7.	Do you like spending time reading books more than people?	-	-
8.	If obstacles arise in achieving certain goals, do you easily give them up?	-	-
9.	Do you easily establish connections with people older than you?	-	+
10.	Do you enjoy organizing various games and activities with your friends?	-	+
11.	Is it difficult for you to join a new company?	+	-
12.	Do you often postpone tasks that need to be done today?	+	-
13.	Is it easy for you to establish connections with strangers?	-	+

14.	Do you strive to ensure that your friends act in accordance with your opinion?	-	+
15.	Is it difficult for you to get used to a new team?	+	-
16.	Is it true that you don't argue with your friends because they don't keep their promises?	+	-
17.	Do you strive to meet and communicate with a new person when the opportunity arises?	-	+
18.	Do you show initiative in solving important issues?	-	+
19.	Do people around you make you angry, and do you want to be alone in this situation?	-	-
20.	Is it true that you usually struggle to find your way in an unfamiliar environment?	+	-
21.	Do you always like to be around people?	-	+
22.	Do you get nervous if you can't finish what you've started?	+	+
23.	If you need to take the initiative to meet a new person, do you experience difficulties, discomfort, and embarrassment?	+	-
24.	Is it true that you get tired of frequent communication with your friends?	-	-
25.	Do you like participating in group games?	-	+
26.	Do you often take the initiative in resolving issues affecting the interests of your comrades and friends?	-	+
27.	Is it true that you feel insecure among people you don't know well?	+	-
28.	Is it true that you rarely try to prove your rightness?	+	-
29.	Do you think staying at an unfamiliar company won't be difficult for you?	+	+
30.	Do you participate in community work in your team?	-	-
31.	Do you try to limit your circle of acquaintances to a small number of friends?	-	-
32.	If your opinion or decision is not immediately accepted by your friend, do you try to defend him?	+	-
33.	Do you feel comfortable in an unfamiliar company?	+	+
34.	Can you lead the organization of various events for your friends?	-	+
35.	Do you feel confident or uneasy when you have to say something in a large group?	-	-
36.	Are you often late for work-related meetings or discussions?	+	-
37.	Is it true that you have many friends?	+	-
38.	Are you frequently in the spotlight among your friends?	+	+
39.	Do you often feel embarrassed or uncomfortable when communicating with strangers?	-	+
40.	Is it true that you don't feel very confident when surrounded by big friends?	-	-

From the data presented in Table 5, it is known that as a result of the survey, the following was revealed. Students of the control group received the answer "Yes" in 18 cases and "No" in 22 cases. Students of the experimental group received the answer "Yes" in 19 cases and "No" in 21 cases.

The sum of the scores in the cases where "Yes" and "No" answers were obtained in the assessment of communicative abilities as a result of the questionnaire is presented in Tables 6 and 7.

Table 6

Points received for the answer "Yes" in the assessment of communicative abilities

Questions for the results of the experiment	Control group	Experimental group
1	+	+
5	+	+
9	-	+
13	-	+
17	-	+
21	-	+
25	-	+
29	+	+
33	+	+
37	+	-
Total points	5	9

Table 7

Points received for the answer "No" in the assessment of communicative abilities

Questions for the results of the experiment	Control group	Experimental group
3	+	-
7	-	-
11	+	-
15	+	-
19	-	-
23	+	-
27	+	-
31	-	-
35	-	-
39	-	+
Total points	5	9

The sum of the scores in the cases where, as a result of the questionnaire, "Yes" and "No" answers were obtained in the assessment of managerial abilities is presented in Tables 8 and 9.

Table 8

Points received for the "Yes" answer in the assessment of managerial abilities

Questions for the results of the experiment	Control group	Experimental group
2	-	+
6	-	+
10	-	+
14	-	+
18	-	+

22	+	+
26	-	+
34	-	+
38	+	+
40	-	-
Total points	2	9

Table 9

In assessing managerial abilities Points earned for "No"

Questions for the results of the experiment	Control group	Experimental group
4	+	-
8	-	-
12	+	-
16	+	-
20	+	-
24	-	-
28	+	-
30	-	-
32	+	-
36	+	-
Total points	3	10

The comparative scores obtained when determining the communicative and managerial abilities of graduates are presented in Table 10.

Table 10

Comparative points accumulated in determining the communicative and managerial abilities of graduates

Questions for the results of the experiment	Control group	Experimental group
"Yes" in assessing communicative abilities	5	9
"No" in the assessment of communicative abilities	5	9
"Yes" in the assessment of managerial abilities	2	9
"No" in the assessment of managerial abilities	3	10

The analysis of indicators based on the analysis of the results of the experiment is presented in Table 11.

Table 11

Analysis of indicators based on the analysis of experimental results

Criteria	Control group			Experimental group		
	Low	Medium	High	Low	Medium	High
Communicative		0,60				0,76
Organization	0,55					0,80

Conclusion. According to the analysis of the results of the experiment, it was established that the students of the experimental group involved in the research process effectively formed communicative and managerial competencies compared to the students of the control group. For an objective assessment of this situation, statistical analysis is carried out, and only the clarified conclusion confirms that the experimental work was carried out correctly and effectively from a scientific, pedagogical, technological, and methodological point of view.

Bibliography:

1. Абдуллаев С.Х. Таълим тизимида корпоратив бошқарув ёндашувини тадбиқ этиш таълим сифатини ошириш омили// Халқ таълими журнали. - Тошкент, 2015. - №3. -39-42б.
2. Денисов И.Н., Резе А.Г. Волнухин А.В. Коммуникативные навыки врачей в амбулаторной медицине // Проблемы социальной гигиены, здравоохранения и истории медицины. - 2012; 5: 18-22.
3. Задворная О.Л., Алексеев В.А., Борисов К.Н. Формирование и развитие корпоративной культуры медицинских организаций // МИР (Модернизация. Инновации. Развитие). - 2016. - № 3(27). - С. 142-149.
4. Каде А.Х., Занин С.А. Инновации в подготовке врача общей практики // Международный журнал экспериментального образования. - 2013. - № 4. - С. 119-121; URL: <https://expeducation.ru/ru/article/view?id=4732>.
5. Сериков В.В., Болотов В.А. Компетентностная модель: от идеи к образовательной программе // Педагогика. 2013. - № 10.
6. Carraccio C, Englander R, Van Melle E, et al. Advancing Competency-Based Medical Education: A Charter for Clinician-Educators. *Academic Medicine*. 2016;91(5):645-9. <https://doi.org/10.1097/ACM.0000000000001048>.
7. Gleiss A, Lewandowski S. Removing barriers for digital health through organizing ambidexterity in hospitals. *Journal of Public Health: From Theory to Practice*. 2021. DOI: 10.1007/s10389-021 -01532-y.
8. Holmboe E.S. The Transformational Path Ahead: Competency Based Medical Education in Family Medicine. *Fam Med*. 2021; 53(7):583-9. <https://doi.org/10.22454/FamMed.2021.296914>.
9. Junge H, Poppleton A, Sun S, et al. What competencies do European general practice trainees value the most? A prioritisation exercise using a Delphi-informed approach, *Education for Primary Care*. 2023. <https://doi.org/10.1080/14739879.2023.2222718>.
10. Lennon M.R., Bouamrane M.M., Devlin A.M. et al. Readiness for delivering digital health at scale: lessons from a longitudinal qualitative evaluation of a National Digital Health Innovation Program in the United Kingdom. *J Med Internet Res*. 2017;19(2):e42.