

STUDY GROUP COHESION AS THE FACTOR OF EFFECTIVE FORMATION OF PROFESSIONAL COMPETENCE OF FUTURE SPECIALISTS

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Abstract. *The article deals with the analysis of the aspects of the study group cohesion and its role in the process of the professional competence formation of the future specialists in the conditions of the higher military educational establishment. The psychological aspects of the rise in effectiveness of study group cohesion within the framework of group organization and its dynamics have been analysed.*

The psychological determinants of the group cohesion of the study group of a higher educational establishment, which directly influence the level of students' professional competence formation in the system "teacher - study group members" have been determined.

The results of an empirical study on the use of the author's programme for increasing the cohesion level of a study group to improve the level of professional competence have been revealed taking into consideration the integrative characteristics of individual and interpersonal relationships of future specialists in the process of their professional competence formation.

The evidence of the usage of the special programme on rise in effectiveness of study group cohesion which consists of the problem-solving situations and trainings has been presented. The programme is aimed at improving interpersonal relationships in the system "teacher-students" in the conditions of the higher military education establishment.

Keywords: *cohesion, future specialists, group dynamics, higher military educational establishment, professional competence, study group.*

INTRODUCTION

The professional competence is considered to be the main factor which determines the success of carrying out the professional activities by specialists. In this context, it is essential to emphasize that the role of the group cohesion as the factor, which influences the level of skills and habits development of the future specialist, is stipulated by the social and psychological support for the study group management, taking into account the aspects of interpersonal relationships of the group members.

Topicality of the research. The relevance of the study of this issue as for the study group cohesion as one of the principal factors of effective formation of professional competence of future specialists is caused, on the one hand, by the necessity to improve the quality of future specialists professional training in the conditions of the higher military educational



establishment, the urgent need to find the effective ways for improving the management of study groups as an essential component of the teachers' psychological competence. We would like to stress that it is important for teacher to take into his/her account the level of group cohesion and socio-psychological determinants of group influence on an individual in the concrete study group.

That is why **the objective of the article** is to investigate the influence of the study group cohesion level on the rise in effectiveness of the process of the formation of future specialists' professional competence in the conditions of the higher military educational establishment.

The knowledge of these aspects will give the teachers opportunity to regulate the group processes in the particular study group and in its turn, to increase the study group cohesion level and influence upon the group dynamics for its effective organization and development in order to form the necessary level of the future specialists' professional competence.

Research period. The empirical study was carried out at Bohdan Khmelnytskyi National Academy of the State Border guard Service of Ukraine in the period of January 2023 up to July 2024 taking into account the real conditions of the military higher educational establishment on the basis of the sociometric method that allow us to determine the social status of a particular person in the concrete study group in order to influence the group cohesion level which in its turn has the positive effect on the process of professional competence formation of the future specialists.

Research hypothesis. The effective formation of professional competence of future specialists is determined by the appropriate level of cohesion of the study group.

In accordance with the purpose of the "research hypothesis, **the objectives of the study** were the following:

1. To analyze the meanings of the terms "study group", "cohesion" and "group cohesion" in the multidisciplinary context and determine the the essence, features, content of the military students group cohesion.

2. To determine the psychological features which are typical of military study groups and indicators to be taken into teacher's consideration while forming the necessary level of professional competence of the future specialists.

3. To develop and verify the special programme on rise in effectiveness of study group cohesion level in order to form the future specialists professional competence up to the level.

4. To develop the practical recommendations on the improving the group cohesion level in the conditions of the higher military educational establishment.

INVESTIGATION RESULTS

Scientific sources analysis. The results of the scientific sources analysis testify about the fact that there has been no shortage of the investigations on cohesion in general and the criteria for success group cohesion in particular. Let us consider some of them.

Henry Kellerman (1981) analyses the aspects of group cohesion in the context of theoretical and clinical perspectives. Gordon L. Lippitt (1982) examines the aspects of group cohesion based on the main characteristics of organization development. Marvin E Show studies the aspects of group cohesiveness in the context of the phenomenon of group composition in the social environment taking into his consideration the nature of group dynamics and psychological features of small group behavior (1976). Olena Volobuieva investigates the peculiarities of leader's ability to ensure the essential military study group cohesion level (2019) and others.

In spite of the fact that a number of scientists have dedicated their works to the investigation of the various aspects of group cohesion (cohesion - i.e. the act or state of keeping together (Hornby, 2005), the results of the study testify about the fact that nowadays the problem of study group cohesion as the factor of effective formation of professional competence of future has not been investigated up-to-the level. Particularly it is essential to study the nature of group cohesion within the framework of study group as organized system that is not as isolated phenomena but as the interrelated processes of social interaction in the condition of the higher military educational establishment.

There is the evidence throughout the literature that well-organized teaching and training process based on the specially created favorable conditions for proper relationships between the study group members increases the rise in effectiveness of developing future specialists' skills and habits.

The nature of the term “cohesion” within the framework of multidisciplinary

Cohesion is a multidisciplinary phenomenon covering the particular investigation subjects of the following sciences: in psychology - cohesion is the index of interpersonal relationships and one of the main group indices. Group Cohesion is the psychological term that defines the strength of the bond between group members that holds them together and fosters their desire to work together towards common goals (Henry Kellerman, 1981); (Carron & Brawley, 2000). Cohesion as a phenomenon within the context of group dynamics and it is important to understand the very group nature and

its life functioning on the grounds of the wide variety of the theoretical approaches or orientations to group dynamics (Volobuieva, 2019).

In psychology the term “unit cohesion” is defined as the level of trust, support, and common purpose among members of small groups, such as a military unit or work team. (Griffith, 2002). In sociology, cohesion is defined as a degree of integration and unity among society members or social group based on the shared values, norms and social ties (Moustakas, 2023). The term “group cohesion” is used to study the internal dynamics of social groups, trade unions, political movements and religious groups (Tilly, 2004).

In anthropology, the term “collective cohesion” describes the cultural and social cohesion of a collective, which is ensured by shared rituals, traditions and customs (Taylor & Davis, 2018).

In political science, the term “social cohesion” refers to the level of unity and agreement within political groups or factions, which affects their ability to achieve political goals and implement a common political programme (Chhibber & Kollman, 2004).

In epidemiology - cohesion is defined as the level of interaction and social support in a community or social group that affects the spread of infectious diseases and the effectiveness of public health measures (Christakis & Fowler, 2009; Bavel et al., 2020; Dixon & Schafer, 2014).

For our investigation it is essential to analyze the term “cohesion” which is used in the sphere of education. In the educational context cohesion is defined as a level of integration, mutual support and cooperation among students and teachers (Johnson & Johnson, 2009).

As for the term “group cohesion” in the context of education, it refers to the level of cooperation and support in study groups or classes that promotes effective learning, motivation and a positive learning climate (Slavin, 1996).

In communication research, cohesion is defined as the level of effective communication and understanding between group members that contributes to the achievement of common goals and the efficiency of group activities. (Scott & Lewis, 2017).

Thus, the results of our study indicate the various aspects and definitions of cohesion from a variety of academic disciplines. The importance of cohesion for achieving collective goals, work efficiency and social stability is of vital importance.

The psychological features which are typical of study group of the higher military educational establishment

In our study we have determined the psychological features which are typical of study groups at the higher military educational establishment and

indicators to be taken into teacher's consideration while forming the necessary level of group cohesion while forming the professional competence of the future specialists.

The study groups of students and cadets have not only social and psychological features common to any group, but also the specific features that are due to the specific tasks of higher military educational establishments and the nature of their daily activities. They are the following: 1) the clear regulation of the relations and functional dependence of the members of the study group, which is determined by the subordination system; 2) the observance of military discipline and law and order; 3) sole authority in complex coordinated activities and others.

FACTORS OF EFFECTIVE FORMATION OF PROFESSIONAL COMPETENCE OF FUTURE SPECIALISTS

Terminology

In order to clarify the aspects of the positive influence of the proper cohesion level upon the essential level of professional competence of the future specialists we would like to point out that in the study the term "competence" in the meaning of individual's "ability to do something well" (Hornby, 2005) is used. As for the term "professional competence" we have defined it as the individual's broad professional knowledge, attitude, and skills required in order to work in a specialized area or profession.

Professional competence formation peculiarities

While analyzing the peculiarities of the process of professional competence formation of the future specialists we took into our account the conceptual provisions of the integrated approach theory to professional aptitude, which combines the analysis of the social factors of professional development (knowledge, skills, abilities; motives and professional abilities) and psychophysiological characteristics (Kuijpers et al., 2010). In the context of our study, we would like to emphasize that the positive influence of group work upon professional competence formation is obvious alongside with proper theory and practice methodology (Niu et al., 2021).

From the psychological point of view, professional competence is closely connected with the professional readiness of the future specialists to carry out service duties according to the standards. The essential parts of this competence are well-developed skills and habits in all the aspects of the future professional activities to be performed by the future specialists after having graduated from the higher educational establishments.

Sturm (1998) finds professional competence to be the basis of the competent practice that promotes human welfare and protects clients from

harm within the framework of professional ethics. In this context the boundaries of professional competence are based upon education and training. Auner, C., Dorner, B., Pankofer, S. (2023) have proved that professional intervention strategies are the positive indexes of the professional competence.

Thus, professional competence means having requisite knowledge, skills, and abilities to carry out the professional duties according to the standards of the future specialist's profession.

In our studies (Volobuiev, 2022) we analyzed the very peculiarities of the formation of the professional readiness of future border guard officers and determined the certain criteria, indicators and levels of formation of professional readiness of future border guard officers for project management which are considered to be the principle factors of the essential professional competence level (Volobuiev, 2022). All these investigation results have been taken into our consideration while investigating the psychological aspects of the rise in effectiveness of study group cohesion level within the framework of group organization and its dynamics.

SPECIAL PROGRAMME ON RISE IN EFFECTIVENESS OF STUDY GROUP COHESION LEVEL

In our research we have developed and verified the special programme on rise in effectiveness of study group cohesion level in order to form the future specialists professional competence up to the level. We determined and experimentally test the psychological and pedagogical conditions for the formation and development of cohesion of the study group through the psychological training using the author's programme based on problem-solving situations and trainings on the grounds of problem-based learning.

EMPIRICAL STUDY

To determine the effectiveness of the programme, we have used the sociometric method that allow us to determine the social status of a particular person in the concrete study group.

The investigation was conducted in three study groups, with a total number of 94 students. In each group, the respondents had to choose (the so-called "positive choice") or did not choose (the so-called "negative choice") the groupmates in the different categories in order to determine the level of interpersonal relations in the study groups involved into the experiment. As far as this method is concerned, it is one of the socio-psychological methods of studying interpersonal relations in a group based on the choice matrix. We

used six questions on likes and dislikes of each member of the study group in the sociometric survey questionnaire.

After having processed the results, we analysed the elections according to the following criteria: 1) 'the most reliable person' (six or more positive marks); 2) 'a desirable person' (three to five positive marks); 3) 'an acceptable person' (one or two positive marks, no negative marks); 4) a passive person' (approximately the same number of positive marks, but one negative mark or two - negative marks); 5) 'a destructive and passive person' (a few positive marks, but many negative ones), 6) 'a rejected person' (only the negative marks were received); 7) 'an isolated person' (there is no any positive mark).

In order to determine the level of cohesion in the groups at the beginning of our study we determined three levels of social status in the study groups taking into our consideration the level of mutual sympathy in interpersonal relationships and the degree of attractiveness (usefulness) of the group for its members: 1) *a high level of social status* - for the types of the students of the so-called "the most reliable person" and for so-called "a desirable person; 2) *a middle level of social status* - for the types of the students of so-called "an acceptable person" and so-called "a passive person" - these are the individuals with a middle level of perception in the study group; 3) the rest of the participants have a *low social status* in the group.

The main sections of the sociometric results are presented in Table 1.

Table 1 Results of the Sociometric Survey According to the Social Group Status

Groups (number of students)	High level	Medium level	Low level
Group 1 -30 students	5	18	7
Group 2 - 33 students	8	16	9
Group 3 - 31 students	9	14	8
Total - 94 students	22 (22,4%)	48 (51,1%)	24 (25,5%)

(Source: compiled by the author)

The psycho-pedagogical conditions for the formation and development of study group cohesion through psychological training using the author's programme for the formation and development of cohesion of the students group have been determined and experimentally tested.

While influencing the study group members psychologically, a teacher has to take into his/her account that an important indicator of the interpersonal relations between students in a group is the group cohesion which influences the process of the professional competence formation and

is one of the main group indices. It characterises the degree to which the likes and dislikes of each member of the study group prevail over the other members. Cohesion is a characteristic of a group that is measured by the level of mutual sympathy in interpersonal relationships and the degree of attractiveness (usefulness) of the group for its members. Cohesion reflects the extent to which group members feel sympathy or antipathy towards other team members (Steponov, 2006).

After having conducted the special problem-solving trainings with the students in order to improve their interpersonal relationships in groups we determined three levels of social status. Then, after the cohesion work, the analysis of the sociometric matrix showed an increase in the number of students with the high social status by 14.8% in the training group. At the same time, there was a significant decrease in the proportion of students with the low level of perception in the training group (by 12.7%).

The results of sociometry at the end of the experiment on programme usage is presented in Table 2.

Table 2 Results of Sociometry after the Programme Usage

Groups / number of students	High level	Medium level	Low level
Group 1: 30 students	10	17	3
Group 2: 33 students	13	16	4
Group 3: 31 students	12	14	5
Total number: 94	35 (37,2%)	47 (50,0%)	12 (12,8%)

(Source: compiled by the author)

We varified the significance of these changes using Pearson's statistical test (Rudenko and Rudenko, 2009), which we calculated using the EXCEL software. The results of the test are given in Table 3.

Table 3 Calculating the Empirical Value of Pearson's χ^2 Criterion

Levels	Empirical frequencies/students		Amounts	Theoretical frequencies	
	at the beginning	at the end		at the beginning	at the end
high	22	35	57	28,5	28,5
middle	48	47	95	47,5	47,5
low	24	12	36	18	18
Total	94	94	188	94	94

(Source: compiled by the author)

We checked up the significance of these changes using the Pearson statistical test , which we calculated using EXCEL software as well. The resulting empirical value was 6.9754, which allows us to state with at least 95% confidence that the positive changes that have taken place in the study groups after having used the program are significant statistically. Our calculations confirm that the measures taken to bring the study group together during the training are effective. The summarised results before and after the study are presented in Figure 1.

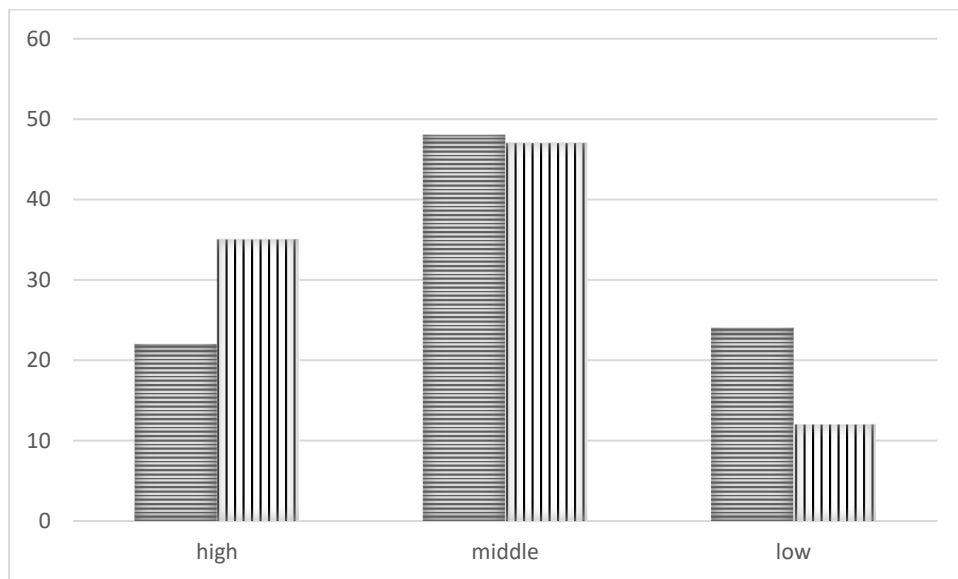


Fig.1. Comparison of Social Status Levels at the beginning and at the end of the study (Source: compiled by the author)

CONCLUSION

1. Group cohesion is a multidisciplinary phenomenon. The various aspects of group cohesion have been the investigation subjects of such sciences as psychology, sociology, anthropology, epidemiology political studies and others.
2. The proper group cohesion level in the certain study group is one of the main factors, which influences the effective formation process of the future specialists' professional competence greatly.
3. The professional competence is considered to be the main factor which determines the success of carrying out the professional activities by specialists.

4. The level of cohesion of the study group directly affects the level of organisation of educational communication in the teacher-student system. For teachers it is necessary to create the psycho-pedagogical conditions while using the programme in order to increase the level of group cohesion. It is essential to take into teachers' account the socio-psychological determinants of group influence upon the group members. The proper knowledge of these determinants gives the opportunity to create the motive influences in order to actualize the real possibilities of every group member within the objective measures of individual's potential.
5. Group cohesion as an integral characteristic of the central link of the group structure of a small group characterises the process of development of intragroup relations that correspond to the development of group activities of the future specialists.
6. The special programme on rise in effectiveness of study group cohesion level gives the teachers the opportunity to perform the positive interaction with the study group members in order to form the future specialists' professional competence. The empirical results of the usage of the programme have proved its effectiveness.
7. While using the above-mentioned programme the teachers have to create the necessary didactic, psychological and pedagogical conditions in the study group for the successful educational communication in the system "teacher – students" in order to form the essential level of the future specialists' professional competence i.e. their abilities to perform the professional duties up-to-the level.
8. Problem-based learning, which main function is to maximise the development of future specialists' mental, intellectual and creative abilities, and the ability to use previously acquired knowledge actively, gives the learning process a character of completeness. In this regard, it is important for teachers to take into their consideration the individual characteristics and capabilities of group members.
9. The teachers have to be good at special knowledge on group dynamics and use various abilities and strategies they have to take into their consideration the aspects of the group cohesiveness, which will help them to get the feedback of the training process ultimately.
10. It is of vital importance for teachers to be good at the socio-psychological regularities of group processes functioning in order to provide the effective processes of education and training in the particular study group. This means that only proper psychological teachers' training, along with professional and methodological training gives them the opportunity to organise educational communication

properly, taking into account the level of cohesion of each particular study group.

Unfortunately, the limited volume of the article does not allow us to reveal all the aspects of the problem under consideration in more details.

The directions of the further research of the improving the process of professional training of the future specialists in the conditions of the higher military educational establishment are the following: 1) the analysis of the motivational mechanisms for regulating the management of the study group state and 2) the investigation of the structure of socio-psychological characteristics of the study group.

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