Training Technologies as a Means of Communicative Competences Development of Prejudicial Inquiry Agencies’ Investigators

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Abstract: The communicative component of the investigator’s professional activities is a dominant one, as it demonstrates the employee’s ability to organize work on the basis of professionally balanced communication with the objects of interaction. The stage of obtaining higher education in institutions with specific learning environment is a sensitive period for the development of the main sociogenic structures of personality and the development of professional identity of future professionals. This period is characterised by a purposeful mastering of the system of professional knowledge and skills, formation of a holistic view of the professional community, which results in awareness of professional readiness. The use of training technology in the training of investigators helps to increase the efficiency of the professional training process, based on the basic principles of personality-oriented education. The aim of our research is to study the process of formation of components of communicative competence in future investigators of prejudicial inquiry agencies with the help of training technologies. Appropriate psychodiagnostic tools were used to solve this purpose, which was tested during the training of specialists for prejudicial inquiry agencies. Most of the respondents stated the existence of satisfaction with participating in the training courses, awareness of the importance of its informativeness and practical orientation. Post-training testing emphasized the participants’ rethinking of the value of interpersonal relations; growing desire to help and show warmth and friendliness in relations with others; the expediency and effectiveness of the use of cooperation and compromise in resolving conflict situations within a professional and personal environment.

Keywords: training technologies; communicative competence; interpersonal relations; investigators; professional training.

1. Introduction

Deep changes in the life of many countries around the world lay claim to a modern human being in terms of speed and quality of obtained information to adequately understand, explain and respond to social processes.

Modern life requires the individual to have a high level of professionalism and competencies, an active life position, understanding of social trends, the involvement of information and communication technologies aimed at his/her personal and professional development (Kotyk et al., 2021).

Progressive systems of specialists’ training for various fields are gradually moving away from traditional forms of work, which can promote the assimilation of a significant amount of information within the modern information space.

The introduction of educational technologies of applied character, which provide learner-centered approach and are aimed at developing skills of the specialist adaptation to all aspects of the functioning of such a society becomes relevant in the conditions of postmodern society. It is possession of information, development of skills of its applied use that allow to provide mobilization of resources, formation of the employee’s readiness to perform professionally important tasks, etc.

In general, the use of training technologies is a promising and effective tool of developing skills to implement the theoretical knowledge acquired in the process of personnel training and increasing the level of competitiveness of the specialist (Afanasenko et al., 2020; Torkos & Egerau, 2020). Interactive learning contributes to: the formation of ethical positions and the development of positive motivation of the individual; the growth of communicative competence; dynamics of professionally significant personality traits; the formation of models of role behaviour in various situations of professional activities; the implementation of the acquired knowledge in practice within a safe environment, etc. Given this, the involvement of training technologies is a necessary condition for the development of quality educational strategies.

The formed communicative competence, which can be interpreted as the ability to organize work on the basis of professionally balanced communication with the subjects of a certain sphere of interaction is a qualitative characteristic of the modern specialist of “human being-human being” type professions. This directly concerns the employees of prejudicial inquiry agencies, the quality and effectiveness of which reflects the real state of crime prevention in the state. The professional staff and relevant
professional training, which is carried out in higher educational institutions with specific learning environment is the dominant condition for the successful activities of the prejudicial inquiry agencies.

As rightly noted by some experts (Barko, 2007; Fuchs, 2022; Lefterov, 2011; Kubaienko et al., 2021; Terpstra & Schaap, 2021; Tsil’mak, 2017; Zhdanova et al., 2014), the communicative aspect of the investigator’s activities is dominant, because the effectiveness of investigative (search) actions directly depends on the presence of:

- certain knowledge regarding the structure, training, techniques, methods of psychological influence and counter-influence in communication;
- investigators’ understanding of the psychological features of professional communication with different categories of persons;
- certain skills (establishing contact, positive self-presentation, managing the interlocutor’s attention, using verbal and non-verbal methods of influence, listening and understanding information, revealing lies and insincerity and clarifying hidden information, organizing “interpersonal space” in communication with people, managing communication processes, providing a socio-psychological forecast of the communicative situation, rapid establishing of psychological contact, identifying various psychological states of a human being, using various tactical and psychological techniques of permissible psychological influence on persons of different procedural status, identifying and neutralizing psychological manipulation, etc.).

Insufficient development of communicative competence directly affects the effectiveness of the investigator’s professional activities in general, which is expressed both in the reduction of criminal investigation efficiency and the quality of interpersonal interaction at the horizontal and vertical levels. It is advisable to pay enough attention to the formation of the communicative component of professional activities namely at the stage of professional training, which is extremely important for the development of the professional component of personality on the basis of his involvement in society and future profession values.

Training technologies have proven to be an effective tool for the formation and development of professional competencies of specialists in various fields of training. Therefore, their use for the development of the communicative component of professional activities is relevant and appropriate.
2. Literature Review

Rethinking the level and quality of the modern system of training qualified specialists for units of the Police has contributed to the renewal of the existing approaches and methodologies of educational activities. The introduction of training technologies for the development and formation of professional competencies within higher educational institutions with specific learning environment is an integral part of innovative changes. It is professional and psychological training courses that allow you to focus on the most important qualities, knowledge and skills of the future specialist. Thus, Yevdokimova and colleagues believe that training courses aimed at the formation and development of personal and professional competencies should become one of the leading means of professional education (Yevdokimova et al., 2021).

Lefterov considers psychological training technologies as a scientifically sound and practically expedient set of knowledge and means of conducting psychological training courses with the staff of various organizations, which contributes to the highly productive implementation of organizational goals and tasks. According to the scientist, this is a unique socio-psychological reality that ensures social progress in post-industrial society (Lefterov, 2011).

Regarding the understanding of the essence of the concept of “training course”, there are different approaches to its interpretation, namely: training course is:

- intensive short-term learning sessions aimed at creating, developing and systematizing certain skills needed to perform specific personal, educational or professional tasks, combined with strengthening the motivation of the individual to improve work (Shepeleva, 2006);

- a technology belonging to different fields of knowledge, highlighting its focus: the development of skills and ways of action in practical situations; formation of certain knowledge, skills and abilities related to one or another professional activity, etc. (Miloradova et al., 2015);

- a multifunctional method of intentional changes of psychological phenomena in order to harmonize the professional and personal life of a human being, reprogramming the model of behaviour and activities management (Buckley & Capel, 2002; Milyutina, 2004);

- a means of influence aimed at creating conditions for purposeful changes in personality, knowledge, social attitudes, skills, experience, life competencies (Zaytseva, 2002);
- a specially organized set of methods of educational activities, tasks and exercises aimed at the formation, improvement and expansion of experience (Novikova, 2008);
- a meta-method of psychological work aimed at the acquisition of specific professional knowledge, skills, abilities by a human being, correction of attitudes, development of personal qualities through the internalization of the professional environment (Fedorchuk, 2010).

Training course as a way to develop communication skills was first tested in the United States (Bethel) in the 50s of last century in the process of direct communication between the members of T-groups. The main goal was to study the interaction of the communication process, identify destructive factors, analyse group dynamics (Fedorchuk, 2010).

Various training courses are included in the training of employees within the system of training specialists of paramilitary organizations (Bjerregaard, & Lord, 2004; Bondarenko, et al., 2020a; 2020b; Nogala & Schröder, 2022; Okhrimenko et al., 2020; Ostapovich, et al., 2020; Prontenko et al., 2019; Prontenko et al., 2020b; Zhamardiy et al., 2019). Their use contributes to the formation of: psychological properties and qualities of employees, the ability to apply legitimate psychological influence in communication, personal approaches to conflict resolution, ways to overcome the effects of extreme conditions and more.

Foreign scientists also paid attention to the introduction and use of training technologies in the training of police officers. For example, the introduction of techniques to combat manipulation, the detection of insincerity in communication during the interrogation was considered by Abbe & Brandon (2014); Alcadipani, Lotta, & Rodriguez (2021); Balko (2017); Barrett, Miguel, Hurd, Lueke, & Tan (2003); Carlsmith, & Sood (2009); Cleary & Warner (2016); Cunha, Carvalho, de Castro Rodrigues, Cruz, & Gonçalves (2021).

However, the changes and transformations that are taking place in the law enforcement system, the reform purpose of which is to train the new generation police officers, require finding effective ways to improve the professional skills of investigators. In view of the above, it can be noted that there is a need to develop and implement training technologies in the professional training and retraining of police officers both while obtaining higher education in institutions with specific learning environment and advanced training as well as in-service training aimed at developing components of communicative competence of employees of inquiry agencies.
The aim of our research is to study the process of formation of components of communicative competence in future investigators of prejudicial inquiry agencies with the help of training technologies.

The following tasks were set and solved to achieve this purpose:
- to analyse and summarize the evaluation of the training by its participants with the help of a developed questionnaire after the training;
- to single out the peculiarities of establishing social contacts, the dominant types of interpersonal relations in the future investigators of prejudicial inquiry agencies before the training and two months after the training.

3. Methodology

A set of methods was used to solve the tasks:
- **theoretical methods** (analysis, synthesis and generalization of psychological literature on the problem of the research);
- **empirical methods** i.e. a diagnostic technique of interpersonal relations to study the peculiarities of relations in small groups and determine the predominant type of interpersonal relations, the author’s questionnaire to assess the effectiveness of the training;
- **methods of mathematical and statistical data processing** i.e. a package of “SPSS 22.0” and “Microsoft Office Excel 2003” application software, which provided the calculation of variational statistics indicators: ϕ-Fisher’s angular transformation criterion to identify statistically significant differences between the percentage shares of comparable indicators within the research groups; Student’s t-test for independent samples to identify statistically significant differences between the mean values of comparable indicators within the research groups.

Evaluating the results of the developed trainings in general and the effectiveness of the formation of components of communicative competence in particular, we used:
- subjective indicator i.e. self-reports and questionnaires of the participants after the training course;
- objective indicator i.e. psychodiagnostics of the training participants and control groups before the start of the training and re-psychodiagnostics of the training participants and control groups two months after the training course.

The empirical basis of the research was made up of the cadets of the faculty of specialists’ training for prejudicial inquiry agencies of the Kharkiv National University of Internal Affairs (total number of 260 persons).
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The research was carried out according to the requirements of the Code of Ethics of Kharkiv National University of Internal Affairs, which was developed on the basis of Ukrainian and world practices in ethical rulemaking, the recommendations of experts, taking into account the proposals of the structural units of the University. This document was approved by the Academic Council of Kharkiv National University of Internal Affairs (protocol No. 13 of 24 December 2019) and implemented by the order of the Rector of the University (order No. 875 of 27 December 2019). According to its provisions, the members of the scientific community are guided by the principles of self-sufficiency, independence in the dissemination of knowledge and information, conducting scientific research and the application of results. At the same time, the principles of upholding honesty, fairness, respect, responsibility, following ethical principles and rules of creative activity are taken into account in order to establish confidence in the results of scientific achievements. Informed consent was received from all individuals who took part in this research and people under test who could refuse participation at any time.

4. Results

It is necessary to effectively use training technologies to improve and stabilize the personal trajectory of cadets’ professional development. Psychological training is an active form of group work and involves the use of a set of actions aimed at modifying the knowledge, skills and abilities of the subject in order to achieve effective performance or self-development of the individual (Fedorchuk, 2010). With this in mind, we have developed several training courses aimed at improving individual-typological, motivational-behavioural, emotional-volitional, value-oriented characteristics and characteristics of the social component of professional development. All training courses perform both preventive and psychocorrectional functions and can be used as a whole or their individual elements, depending on the identified problem.

The following training courses were conducted with the cadets of the faculty of specialists’ training for prejudicial inquiry agencies of the Kharkiv National University of Internal Affairs as part of our empirical research:

1) “Diagnostic-adaptive” – to diagnose the processes of regulation of behaviour, value-semantic, motivational spheres and peculiarities of personal communication of the first-year cadets and help optimize the process of their adaptation to the educational and professional environment.

Main tasks:

7
- psychodiagnoses of processes of regulation of behaviour and value sphere and peculiarities of interpersonal interaction and interpersonal relations;
- development of a positive “Self-construction”, ideas about one’s own psychological capabilities, needs, interests, values, behavioural responses and communicative potential;
- formation of responsibility, system of goal-setting skills, motivation to develop knowledge, skills necessary for future professional activities.

2) “Transformation” – for the development of socio-psychological competence of the personality of the second-year and the third-year cadets and mastering the system of values of future professional activities.

Main tasks:
- understanding the value system of future professional activities;
- correction and development of communication skills;
- mastering the techniques of decoding psychological messages coming from people and groups around;
- development of professional communicative competence;
- development of internal self-regulation at the cognitive, emotional-volitional and behavioural levels.

3) “Transformation and consolidation” – to create conditions for the formation of professional self-awareness and personal changes in the motivational, value-semantic and communicative spheres on the basis of new professional and personal values and building one’s own hierarchy of values in the fourth-year cadets.

Main tasks:
- building one’s own hierarchy of values and personal changes by the cadets on the basis of the formed new values;
- consolidation of the system of professional values and motives;
- development of an active socio-psychological position and ability to carry out socially significant transformations in the field of interpersonal relations;
- increase of communicative culture as an essential aspect of comprehensive development of personality.

Methodical recommendations on the procedure for these training courses conduct are described in the study guide (Miloradova et al., 2017).

To test the effectiveness of the formation of components of communicative competence in future investigators with the help of the above training courses, we created three experimental groups (hereinafter referred to as EG) of the first-year cadets (20 people in each, a total of 60 people), three experimental groups of the second-year and the third-year
cadets (25 people in each, a total of 75 people) and three experimental groups of the fourth-year cadets (20 people in each, a total of 60 people) who participated in the training course.

Also, three control groups (hereinafter referred to as CG) of the first-year cadets (20 people in each), the second-year and the third-year cadets (25 people in each) and the fourth-year cadets (20 people in each) were formed, who did not participate in the training courses.

It was found (Table 1) that most cadets are satisfied with the training course and give it a “very good” rating according to the results of the questionnaire after participating in the training course, namely: 80.0 % of the first-year cadets, 66.7 % of the second-year and the third-year cadets and 75.0 % of the fourth-year cadets. At the same time, the first-year cadets (80.0 %) statistically (p ≤ 0.05) more often than the second-year and the third-year cadets (66.7 %) give an overall assessment of the training as “very good”.

Most of the training courses participants said that they liked everything: 85.0 % of the first-year cadets, 84.0 % of the second-year and the third-year cadets and 75.0 % of the fourth-year cadets. However, 10.0 % of the first-year cadets and 16.7 % of the fourth-year cadets said that they did not have enough time for discussion, which is statistically (p ≤ 0.05) more significant compared to the second-year and the third-year cadets (2.7 %).

The effectiveness of the training course was assessed by 5 points as “very good” by 80.0 % of the first-year cadets, 60.0 % of the second-year and the third-year cadets and 33.3 % of the fourth-year cadets. At the same time, it was found that the first-year cadets (80.0 %) rated it statistically (p ≥ 0.01) higher than the second-year and the third-year cadets (60.0 %) and the fourth-year cadets (33.3 %). While the fourth-year cadets (65.0 %) statistically (p ≤ 0.01) more often grade the training course as “good” compared to the second-year and the third-year cadets (28.0 %) and the first-year cadets (11.7 %).

The informativeness of the training course is assessed by the majority of the participants as very good: 85.0 % of the first-year cadets, 76.0 % of the second-year and the third-year cadets and 66.7 % of the fourth-year cadets. The highest rating of the practical orientation of the training course was given by the first-year cadets (80.0 %) who rated it as “very good”, which is statistically (p ≤ 0.01) more significant compared to the second-year and the third-year cadets (32.0 %) and the fourth-year cadets (35.0 %). On the other hand, the second-year and third-year year cadets (54.7 %) and the fourth-year cadets (56.7 %) statistically (p ≤ 0.01) more
often rated the practical orientation of the training course as “good” compared to the first-year cadets (20.0 %).

Answering the question of the questionnaire “How will you apply the knowledge gained during the training course in practice?” the first-year cadets (85.0 %) statistically (p ≤ 0.01) more often believe that they will need the ability to resolve conflict situations in their personal lives compared to the second-year and the third-year cadets (62.7 %) and the fourth-year cadets (53.3 %). The second-year and the third-year cadets (96.0 %) statistically (p ≤ 0.01) more often than the first-year cadets (75.0 %) and the fourth-year cadets (83.3 %) believe that the skills acquired during the training course to regulate their own emotional states will help them to establish interaction with different segments of the population. The majority of the fourth-year cadets (95.0 %) statistically (p ≤ 0.01) more often believe that they will need the ability to resolve conflict situations in their professional activities compared to the first-year cadets (60.0 %) and the second-year and the third-year cadets (66.7 %).

On the positive side, it is worth noting that the majority of the participants of all three groups of the research would recommend their acquaintances to participate in such training course, namely: 100 % of the first-year cadets, 94.7 % of the second-year and the third-year cadets and 96.7 % of the fourth-year cadets (Table 1).

The analysis of the received proposals (question 10) determined that 20.0 % of the first-year cadets, 36.0 % of the second-year and the third-year cadets and 58.3 % of the fourth-year cadets would like more time for the training course, and 16.7 % of the fourth-year cadets did not have enough time for discussion. 8.3 % of the first-year cadets and 21.7 % of the fourth-year cadets want to reduce the number of training course participants in the group from 20 to 10-14 (Table 1).

Table 1. Questionnaire results of the training courses participants, %
Source: Authors’ own conception

<table>
<thead>
<tr>
<th>Options for questions answering</th>
<th>Group 1 (n = 60)</th>
<th>Group 2 (n = 75)</th>
<th>Group 3 (n = 60)</th>
<th>p1-2</th>
<th>p1-3</th>
<th>p2-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Give an overall assessment of the training course.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very good (5 points)</td>
<td>80.0</td>
<td>66.7</td>
<td>75.0</td>
<td>1.75*</td>
<td>0.65</td>
<td>1.06</td>
</tr>
<tr>
<td>Good (4 points)</td>
<td>20.0</td>
<td>26.7</td>
<td>20.0</td>
<td>0.91</td>
<td>-</td>
<td>0.91</td>
</tr>
<tr>
<td>I can't decide (3 points)</td>
<td>-</td>
<td>6.7</td>
<td>5.0</td>
<td>3.01**</td>
<td>2.47**</td>
<td>0.411</td>
</tr>
<tr>
<td>Bad (2 points)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Very bad (1 point)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

2. What did you not like about the training course?
### Training Technologies as a Means of Communicative Competences Development of … Natalia MILORADOVA, et al.

<table>
<thead>
<tr>
<th>I liked everything</th>
<th>85.0</th>
<th>84.0</th>
<th>80.0</th>
<th>0.15</th>
<th>0.72</th>
<th>0.60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough time for discussion</td>
<td>10.0</td>
<td>2.7</td>
<td>16.7</td>
<td>1.82*</td>
<td>1.08</td>
<td>2.96*</td>
</tr>
<tr>
<td>No answer</td>
<td>5.0</td>
<td>13.3</td>
<td>3.3</td>
<td>1.72*</td>
<td>0.45</td>
<td>2.19*</td>
</tr>
</tbody>
</table>

3. How would you rate the effectiveness of the training course?

<table>
<thead>
<tr>
<th>Very good (5 points)</th>
<th>80.0</th>
<th>60.0</th>
<th>33.3</th>
<th>2.55**</th>
<th>5.38**</th>
<th>3.12**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (4 points)</td>
<td>11.7</td>
<td>28.0</td>
<td>65.0</td>
<td>2.41**</td>
<td>6.45**</td>
<td>4.38**</td>
</tr>
<tr>
<td>I can’t decide (3 points)</td>
<td>8.3</td>
<td>8.0</td>
<td>1.7</td>
<td>0.07</td>
<td>1.79*</td>
<td>1.81*</td>
</tr>
<tr>
<td>Bad (2 points)</td>
<td>-</td>
<td>4.0</td>
<td>-</td>
<td>2.32**</td>
<td>-</td>
<td>2.32**</td>
</tr>
<tr>
<td>Very bad (1 point)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. How would you rate the informativeness of the training course?

<table>
<thead>
<tr>
<th>Very good (5 points)</th>
<th>85.0</th>
<th>76.0</th>
<th>66.7</th>
<th>1.31</th>
<th>2.38**</th>
<th>1.19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (4 points)</td>
<td>15.0</td>
<td>17.3</td>
<td>33.3</td>
<td>0.36</td>
<td>2.38**</td>
<td>2.14*</td>
</tr>
<tr>
<td>I can’t decide (3 points)</td>
<td>-</td>
<td>6.7</td>
<td>-</td>
<td>3.01**</td>
<td>-</td>
<td>3.01**</td>
</tr>
<tr>
<td>Bad (2 points)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Very bad (1 point)</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>

5. How would you rate the practicability of the training course?

<table>
<thead>
<tr>
<th>Very good (5 points)</th>
<th>80.0</th>
<th>32.0</th>
<th>35.0</th>
<th>5.84**</th>
<th>5.19**</th>
<th>0.36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (4 points)</td>
<td>20.0</td>
<td>54.7</td>
<td>56.7</td>
<td>4.25**</td>
<td>4.25**</td>
<td>0.23</td>
</tr>
<tr>
<td>I can’t decide (3 points)</td>
<td>-</td>
<td>13.3</td>
<td>8.3</td>
<td>4.31**</td>
<td>3.20**</td>
<td>0.93</td>
</tr>
<tr>
<td>Bad (2 points)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Very bad (1 point)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

6. How will you apply the knowledge gained during the training course in practice?

- a) acquired communication skills will help in establishing contact 56.7 80.0 86.7 2.94** 3.77** 1.03
- b) the ability to regulate my emotional states will help in establishing interaction with different segments of the population 75.0 96.0 83.3 3.72** 1.12 2.53**
- c) the ability to resolve conflict situations will be needed in professional activities 60.0 66.7 95.0 0.79 5.03** 4.50**
- d) the ability to resolve conflict situations will be needed in personal life 85.0 62.7 53.3 2.99** 3.88** 1.09

7. Were you active enough during the training course?

<table>
<thead>
<tr>
<th>Yes</th>
<th>90.0</th>
<th>84.0</th>
<th>85.0</th>
<th>1.03</th>
<th>0.83</th>
<th>0.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>10.0</td>
<td>16.0</td>
<td>15.0</td>
<td>1.03</td>
<td>0.83</td>
<td>0.15</td>
</tr>
</tbody>
</table>

8. Estimate the percentage rate of your goal achievement by participating in the training course?

<table>
<thead>
<tr>
<th>100%</th>
<th>70.0</th>
<th>77.3</th>
<th>75.0</th>
<th>0.96</th>
<th>0.61</th>
<th>0.31</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%</td>
<td>10.0</td>
<td>-</td>
<td>16.7</td>
<td>3.71**</td>
<td>1.08</td>
<td>4.85**</td>
</tr>
<tr>
<td>80%</td>
<td>20.0</td>
<td>-</td>
<td>8.3</td>
<td>5.35**</td>
<td>1.87*</td>
<td>3.38**</td>
</tr>
<tr>
<td>50%</td>
<td>-</td>
<td>20.0</td>
<td>-</td>
<td>5.35**</td>
<td>-</td>
<td>5.35**</td>
</tr>
<tr>
<td>Less than 50%</td>
<td>-</td>
<td>2.7</td>
<td>-</td>
<td>1.89*</td>
<td>-</td>
<td>1.89*</td>
</tr>
</tbody>
</table>
9. Would you recommend your acquaintances to take part in such training course?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.0</td>
<td>94.7</td>
<td>96.7</td>
</tr>
<tr>
<td>2.69**</td>
<td>2.01*</td>
<td>0.57</td>
</tr>
</tbody>
</table>

10. Your wishes, suggestions to improve this training course

<table>
<thead>
<tr>
<th>Wishes</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>More time for conduct</td>
<td>20.0</td>
<td>36.0</td>
</tr>
<tr>
<td>Reduce the number of participants in the group (for example, to 10-14)</td>
<td>8.3</td>
<td>21.7</td>
</tr>
<tr>
<td>More time for discussion</td>
<td>16.7</td>
<td>4.60**</td>
</tr>
</tbody>
</table>

Note: * – p ≤ 0.05; ** – p ≤ 0.01

The next step in our research was to determine the dominant types of interpersonal relations in future investigators before the training course and two months after the training course.

The following types of interaction dominated in the average profile of the first-year cadets of the experimental group prior to participation in the training course (Table 2): authoritarian (8.00 ± 2.88), altruistic (7.80 ± 2.41), friendly (7.35 ± 2.74); and low values were recorded for suspicious (5.17 ± 2.18) and dependent (5.88 ± 2.72) types. The dominance of authoritarian (8.05 ± 2.86), altruistic (7.67 ± 2.25) and friendly (7.30 ± 2.54) types of interaction was also determined in the control group of the first-year cadets before the training course; and low values were recorded for suspicious (5.10 ± 2.12) and dependent (5.72 ± 2.58) types of interaction.

The following changes were recorded in the system of interpersonal interaction of the first-year cadets of the experimental group after participating in the training course: the first place was taken up by friendly (8.78 ± 2.44) type; the second place – by altruistic (8.22 ± 2.67) type, and the third place – by authoritarian (7.83 ± 2.34) type of interaction.

It was found that the indicators of benevolent (7.35 ± 2.74 < 8.78 ± 2.44) and altruistic (7.80 ± 2.41 < 8.22 ± 2.67) types of interpersonal interaction statistically (p ≤ 0.05) increased in the first-year cadets after participation in the training course. We can say that participation in the “Diagnostic-adaptive” training course contributed to the development of responsibility, friendliness, flexibility in establishing relations between the first-year cadets. The first-year cadets tend to resort more to cooperation and compromise when resolving problems in conflict situations. The first-year cadets also try to follow the established rules in relations with people.

No statistically significant changes in the system of interpersonal relations were recorded in the control groups of the first year-year cadets (Table 2).

We can say that there is an improvement in the process of adaptation to the educational and professional environment of higher
education with specific learning environment, awareness and reassessment of the existing system of values and beliefs, increasing responsibility and self-confidence in the first-year cadets after participating in the training course.

**Table 2.** Changes in the system of interpersonal relations of the first-year cadets before and after the training course, X ± σ

<table>
<thead>
<tr>
<th>Types of interaction</th>
<th>EG Before training</th>
<th>After training</th>
<th>CG Before training</th>
<th>After training</th>
<th>t (EG)</th>
<th>t (CG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian</td>
<td>8.00 ± 2.88</td>
<td>7.83 ± 2.34</td>
<td>8.05 ± 2.86</td>
<td>7.90 ± 2.77</td>
<td>0.24</td>
<td>0.16</td>
</tr>
<tr>
<td>Selfish</td>
<td>6.48 ± 2.56</td>
<td>6.22 ± 2.23</td>
<td>6.50 ± 2.53</td>
<td>6.44 ± 2.13</td>
<td>0.22</td>
<td>0.18</td>
</tr>
<tr>
<td>Aggressive</td>
<td>6.20 ± 2.72</td>
<td>6.00 ± 2.33</td>
<td>6.24 ± 2.58</td>
<td>6.12 ± 2.68</td>
<td>0.43</td>
<td>0.23</td>
</tr>
<tr>
<td>Suspicious</td>
<td>5.17 ± 2.18</td>
<td>4.78 ± 2.43</td>
<td>5.10 ± 2.12</td>
<td>5.05 ± 2.12</td>
<td>0.54</td>
<td>0.24</td>
</tr>
<tr>
<td>Subordinate</td>
<td>6.64 ± 2.86</td>
<td>6.34 ± 2.54</td>
<td>6.71 ± 2.66</td>
<td>6.53 ± 2.46</td>
<td>0.45</td>
<td>0.39</td>
</tr>
<tr>
<td>Dependent</td>
<td>5.88 ± 2.72</td>
<td>5.24 ± 2.55</td>
<td>5.72 ± 2.58</td>
<td>5.98 ± 2.72</td>
<td>0.59</td>
<td>0.33</td>
</tr>
<tr>
<td>Benevolent</td>
<td>7.35 ± 2.74</td>
<td>8.78 ± 2.44</td>
<td>7.30 ± 2.54</td>
<td>7.45 ± 2.66</td>
<td>1.78*</td>
<td>0.17</td>
</tr>
<tr>
<td>Altruistic</td>
<td>7.80 ± 2.41</td>
<td>8.22 ± 2.67</td>
<td>7.67 ± 2.25</td>
<td>7.44 ± 2.15</td>
<td>1.69*</td>
<td>0.28</td>
</tr>
</tbody>
</table>

Note: *p ≤ 0.05; **p ≤ 0.01

As it can be seen from Table 3, the dominance of the following types of interpersonal interaction was recorded in the second-year and the third-year cadets of the experimental groups before participating in the training course: authoritarian (10.00 ± 3.06), altruistic (8.00 ± 2.24) and aggressive (7.80 ± 2.34). The predominance of authoritarian (9.70 ± 2.94), altruistic (7.92 ± 2.37) and friendly (7.70 ± 2.54) types of interaction was recorded in the control groups.

**Table 3.** Changes in the system of interpersonal relations of the second-year and the third-year cadets before and after the training course, X ± σ

<table>
<thead>
<tr>
<th>Types of interaction</th>
<th>EG Before training</th>
<th>After training</th>
<th>CG Before training</th>
<th>After training</th>
<th>t (EG)</th>
<th>t (CG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian</td>
<td>10.00 ± 3.06</td>
<td>9.44 ± 2.85</td>
<td>9.70 ± 2.94</td>
<td>9.82 ± 2.94</td>
<td>0.67</td>
<td>0.16</td>
</tr>
<tr>
<td>Selfish</td>
<td>7.60 ± 2.61</td>
<td>7.44 ± 2.56</td>
<td>7.77 ± 2.82</td>
<td>7.75 ± 2.77</td>
<td>0.44</td>
<td>0.06</td>
</tr>
<tr>
<td>Aggressive</td>
<td>7.80 ± 2.34</td>
<td>6.00 ± 1.88</td>
<td>7.67 ± 2.44</td>
<td>7.48 ± 2.36</td>
<td>1.88*</td>
<td>0.09</td>
</tr>
<tr>
<td>Suspicious</td>
<td>6.97 ± 2.66</td>
<td>6.55 ± 2.47</td>
<td>7.00 ± 2.74</td>
<td>6.89 ± 2.67</td>
<td>0.31</td>
<td>0.14</td>
</tr>
<tr>
<td>Subordinate</td>
<td>6.28 ± 2.51</td>
<td>6.17 ± 2.38</td>
<td>6.15 ± 2.68</td>
<td>6.10 ± 2.68</td>
<td>0.26</td>
<td>0.06</td>
</tr>
<tr>
<td>Dependent</td>
<td>6.50 ± 2.72</td>
<td>6.08 ± 2.36</td>
<td>6.67 ± 2.49</td>
<td>6.60 ± 2.42</td>
<td>0.47</td>
<td>0.05</td>
</tr>
<tr>
<td>Benevolent</td>
<td>7.62 ± 2.68</td>
<td>8.98 ± 2.84</td>
<td>7.70 ± 2.54</td>
<td>7.75 ± 2.50</td>
<td>2.69*</td>
<td>0.04</td>
</tr>
<tr>
<td>Altruistic</td>
<td>8.00 ± 2.24</td>
<td>7.54 ± 2.24</td>
<td>7.92 ± 2.37</td>
<td>7.88 ± 2.32</td>
<td>0.34</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Note: *p ≤ 0.05; **p ≤ 0.01
It was diagnosed that the indicator of the aggressive type of interaction statistically ($p \leq 0.05$) decreased in the second-year and the third-year cadets from $(7.80 \pm 2.34)$ to $(6.00 \pm 1.88)$ after participation in the training course. In addition, the indicator of the benevolent type of interpersonal interaction statistically ($p \leq 0.05$) increased from $(7.62 \pm 2.68)$ to $(8.98 \pm 2.84)$.

No statistically significant changes were recorded in the indicators of types of interpersonal interaction before and after the training course in the control groups of the second-year and the third-year cadets.

We can say that participation of the second-year and the third-year cadets in the training course of “Transformation” promotes the development of communication skills and friendliness.

The next step in determining the effectiveness of “Transformation and Consolidation” training course was to clarify the changes in the system of interpersonal relations of the fourth-year cadets before and after participating in the training course (Table 4). Thus, it was determined that the indicators on the scale of a friendly type of relations statistically ($p \leq 0.01$) increased from $(6.77 \pm 3.42)$ to $(8.27 \pm 3.42)$. We can say that the fourth-year cadets of the experimental group became more prone to cooperation, collaboration, flexibility and compromise in resolving problems in conflict situations after participating in the training course. They seek to help, deserve attention, show warmth and friendliness in relations.

It was found that the indicators on the scale of altruistic type of interaction statistically ($p \leq 0.05$) increased from $(6.50 \pm 3.24)$ to $(7.66 \pm 3.24)$. That is, the fourth-year cadets’ responsibility towards people acquired a higher level of development, as well as emotional attitude to people in the form of compassion, sympathy, care. The fourth-year cadets began to use support and encouragement to cooperate more successfully in relations with others (Table 4).

**Table 4.** Changes in the system of interpersonal relations of the fourth-year cadets before and after the training course, $X \pm \sigma$

Source: Authors’ own conception

<table>
<thead>
<tr>
<th>Types of interaction</th>
<th>EG Before training</th>
<th>EG After training</th>
<th>CG Before training</th>
<th>CG After training</th>
<th>$t$ (EG)</th>
<th>$t$ (CG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian</td>
<td>6.00 ± 3.16</td>
<td>6.06 ± 3.07</td>
<td>5.93 ± 2.97</td>
<td>5.90 ± 2.86</td>
<td>0.04</td>
<td>-</td>
</tr>
<tr>
<td>Selfish</td>
<td>5.14 ± 2.46</td>
<td>5.10 ± 2.44</td>
<td>5.10 ± 2.42</td>
<td>5.00 ± 2.34</td>
<td>0.06</td>
<td>0.28</td>
</tr>
<tr>
<td>Aggressive</td>
<td>4.05 ± 2.25</td>
<td>3.98 ± 2.24</td>
<td>4.00 ± 2.14</td>
<td>4.01 ± 2.12</td>
<td>0.04</td>
<td>-</td>
</tr>
<tr>
<td>Suspicious</td>
<td>3.00 ± 1.25</td>
<td>3.02 ± 1.26</td>
<td>3.17 ± 1.34</td>
<td>3.10 ± 1.28</td>
<td>-</td>
<td>0.26</td>
</tr>
<tr>
<td>Subordinate</td>
<td>3.50 ± 2.74</td>
<td>3.34 ± 2.64</td>
<td>3.44 ± 2.45</td>
<td>3.40 ± 2.42</td>
<td>0.36</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Let us note that the indicators of the authoritarian type of interaction of the fourth-year cadets of the experimental groups before (6.00 ± 3.16) and after (6.06 ± 3.07) participation in the training course take up the third rank, i.e. are leading within the system of their relations. However, the values of the indicators have a low level of development, which indicates that the fourth-year cadets have self-confidence, perseverance, the ability to be good mentors and organizers.

Thus, the fourth-year cadets of the experimental groups are rethinking the value of interpersonal relations after participating in the training course (increasing indicators of friendly and altruistic types of interaction).

5. Limits and Discussion

The psychodiagnostic techniques used in our research are not original. They are adapted versions in Russian and Ukrainian, the use of which is authorized by Ukrainian scientists on the basis of a cooperation agreement between G. S. Kostiuk Institute of Psychology of the National Academy of Pedagogical Sciences of Ukraine and international public professional organization European Federation of Psychologists Associations (EFPA).

The results of the questionnaire give the right to note that after participating in the training courses:

- most future investigators are satisfied with the training courses and grade them as “very good”, namely: 80.0 % of the first-year cadets, 66.7 % of the second-year and the third-year cadets and 75.0 % of the fourth-year cadets;

- the informativeness of the training courses is assessed by the majority of the participants as very good: 85.0 % of the first-year cadets, 76.0 % of the second-year and the third-year cadets and 66.7 % of the fourth-year cadets. The effectiveness of the training course was rated with 5 points as “very good” by 80.0 % of the first-year cadets, 60.0 % of the second-year and the third-year cadets and 33.3 % of the fourth-year cadets;

- no statistically significant changes in the system of interpersonal relations were recorded in the control groups of the first-year, the second-year, the third-year and the fourth-year cadets;
- most participants of the training course would recommend their acquaintances to take part in such training course.

Such indicators demonstrate the feasibility of involving training courses in the system of training specialists of different categories, as previously noted in the research of individual researchers (Bilyk et al., 2021; Bondarenko, et al., 2020c; Lefterov, 2011; Novikova, 2008; Okhrimenko et al., 2021; Ostapovich, et al., 2020; Prontenko, et al., 2020a).

Most cadets of the experimental research groups believe that they will need the ability to resolve conflict situations in their professional activities. Understanding of the significance of such skills increases after participation in the training courses from the first group of the respondents (60.0 %) to 95.0 % in the third group. These results generally confirm our previous position that the use of training technologies contributes to the formation of psychological properties and qualities of specialists (Okhrimenko et al., 2020; Yevdokimova et al., 2021).

Along with this, there are significant changes in the averaged profiles of interpersonal interaction:

- authoritarian, altruistic, friendly types dominated in the participants of the first group before the training course and after the training course the first place was taken up by friendly type, and the third place – by authoritarian type;

- it was diagnosed that the indicator of aggressive type of interaction statistically (p ≤ 0.05) decreased from (7.80 ± 2.34) to (6.00 ± 1.88) and the indicator of friendly type of interpersonal interactions statistically (p ≤ 0.05) increased from (7.62 ± 2.68) to (8.98 ± 2.84) in the second group after participation in the training course;

- an increase in the propensity to cooperation, collaboration, flexibility and compromise in resolving problems in conflict situations was diagnosed in the third group after participating in the training course.

These data significantly expand the understanding of the average profile of interpersonal interaction that occurs in the scientific literature on the outlined issues (Barrett et al., 2003; Barko et al., 2020; Bondarenko et al., 2020b; Bondarenko et al., 2020c; Fedorchuk, 2010; Fedorenko et al., 2020; Carminatti et al., 2021; Prontenko et al., 2020b; Shepeleva, 2006; Tsil’mak, 2017; Zaytseva, 2002), and highlight the positive impact of training technologies on the process of forming communicative competencies of investigators.
6. Conclusions

Thus, it was ascertained within our research that the use of training technologies for the development of communicative competencies of the prejudicial inquiry agencies’ investigators at the stage of their professional training is quite effective. The results of post-training diagnosis of the respondents show:

- informativeness and practical orientation of the training courses;
- creation of conditions for rethinking of the value of interpersonal relations (increase of indicators of benevolent and altruistic types of interaction) by the participants of the training courses;
- growing desire to help, deserve attention, show warmth and friendliness in relations with others in both professional and personal life;
- awareness of the expediency and effectiveness of the use of cooperation, collaboration, flexibility and compromise in resolving conflict situations in a professional and personal environment.

The obtained results testify to the positive influence of training technologies on the development of communicative competencies of investigators, which gives grounds to consider these training courses expedient for use in the professional training of the prejudicial inquiry agencies’ employees.

Acknowledgement

Authors’ contributions: Natalia Miloradova and Ivan Okhrimenko were involved in study concept and experimental design. Natalia Miloradova, Victoria Dotsenko and Tetyana Matiienko were involved in data collection, analysis, and article writing. Ivan Okhrimenko, Victoria Dotsenko and Olena Rivchachenko were involved in statistical analysis and data interpretation. All authors were involved in critical review and final approval of the article.

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