Tolerance of Ambiguity of Cadets in the Military School

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Abstract—Tolerance of ambiguity of the military members very often determines their professional culture, which helps them fulfil professional duties. Tackling situations that are complicated, working well in unpredictable circumstances, dealing with uncertainty in a positive and constructive manner, feeling comfortable in unfamiliar situations — all of these are components of the competence of tolerance of ambiguity, one of the twenty competences for democratic culture, suggested by the Council of Europe. Working under circumstances of uncertainty may be implemented in different situations of the professional activity such as training paratroopers for jumping with a parachute, organizing the work of the military school under different circumstances, finding a solution in extreme situations, even in speaking a foreign language, etc. The authors support the ideas of T.V. Kornilova that tolerance of ambiguity is usually analyzed in two directions: acceptance of ambiguous conditions and avoiding ambiguity, trying to achieve clearness; the second aspect is focused on the variable intolerance of ambiguity. Most of the cadets believe that they are ready for fulfilling their professional duty in unfamiliar situations. A special questionnaire was offered for self-assessment to two groups of respondents, being cadets of the 4th and 5th year of study in Ryazan Guard Higher Airborne Command School named after General of the Army V. F. Margelov. The descriptors of tolerance of ambiguity were taken from Reference Framework of Competences for Democratic Culture. The results of the study show that the scores of self-assessment of tolerance of ambiguity of the 4th year cadets are a bit higher than the same scores of the 5th year cadets. Observation and interviews of the cadets show that the cadets of the 5th year of study are thinking about their future perspectives in professional activity and family life. The situation of uncertainty about the future influences their general scores of tolerance of ambiguity.

Keywords—tolerance of ambiguity; cadets; military school; self-assessment; peer assessment

I. INTRODUCTION

Tolerance of ambiguity is a concept with a long and rich history. In 1949 E. Frenkel-Bruswick defined the concept of tolerance of ambiguity as “an emotional and perceptual personality variable”. She applied personally-centered approach to the sphere of emotional ambivalence and to experiments on perceptual ambiguity and on related subjects. The authors support the ideas of T.V. Kornilova that tolerance of ambiguity is usually analyzed in two directions: acceptance of ambiguous conditions and avoiding ambiguity, trying to achieve clearness; the second aspect is focused on the variable intolerance of ambiguity. Most of the cadets believe that they are ready for fulfilling their professional duty in unfamiliar situations. A special questionnaire was offered for self-assessment to two groups of respondents, being cadets of the 4th and 5th year of study in Ryazan Guard Higher Airborne Command School named after General of the Army V. F. Margelov. The descriptors of tolerance of ambiguity were taken from Reference Framework of Competences for Democratic Culture. The results of the study show that the scores of self-assessment of tolerance of ambiguity of the 4th year cadets are a bit higher than the same scores of the 5th year cadets. Observation and interviews of the cadets show that the cadets of the 5th year of study are thinking about their future perspectives in professional activity and family life. The situation of uncertainty about the future influences their general scores of tolerance of ambiguity.

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I. INTRODUCTION

Tolerance of ambiguity is a concept with a long and rich history. In 1949 E. Frenkel-Bruswick defined the concept of tolerance of ambiguity as “an emotional and perceptual personality variable”. She applied personally-centered approach to the sphere of emotional ambivalence and to experiments on perceptual ambiguity and on related subjects. Those who are intolerant of ambiguity, are having a tendency to resort to black-and-white solutions, and characterized by rapid and overconfident judgement, often at the neglect of reality [1]. The opposite of this case is to understand that ambiguous situations are perceived as desirable, challenging and interesting [2], and to show both sensation seeking and risk-taking behaviour [3].

Other very similar to tolerance of ambiguity concepts are uncertainty avoidance and risk-taking propensity. In 1960’s uncertainty avoidance was introduced by R. M. Cyert & J. G. March [4] and was applied to the level of organizations. G. Hofstede borrowed it in 1970-s for describing differences between national societies [5]. He considered uncertainty avoidance as a characteristic of cultures and defined it as “the extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Unstructured situations are novel, unknown,
surprising, and different from usual. The basic problem involved is the degree to which a society tries to control the uncontrollable” [6]. Risk-taking propensity is also very similar to tolerance of ambiguity. In this respect D. L. McLain, E. Kefallonitis, & K. Armani write: “Threat is one reason that ambiguity is seldom attractive to people. In many circumstances, ambiguity hides a potential threat and is therefore undesirable. At first glance, thrill-seeking and risk-taking behaviour might appear to conflict with the claim that threat is undesirable” [7].

Modern Russian researchers T. V. Kornilova & M. A. Chumakova say that “tolerance of ambiguity is usually analyzed in two directions: acceptance of ambiguous conditions (challenging uncertainty, looking for the ways of overcoming the difficulties) and avoiding ambiguity (fear of ambiguity), trying to achieve clearness. The second aspect is focused on the variable intolerance of ambiguity” [8].

The question of this study is, whether cadets realize the importance of tolerance of ambiguity for the successful fulfillment of their professional tasks. The aim of this paper is to analyze cadets-paratroopers’ understanding of their ability to work well in unfamiliar situations in the context of their professional training. To avoid researchers’ subjectivity we arranged students’ self-assessment. This kind of investigation serves as a source of awareness of the self and a better understanding of the current goals. The research questions of the present study are as follows:

- What is cadets’ understanding of the concept of tolerance of ambiguity?
- What level of tolerance of ambiguity do cadets of the 4th and 5th years of study in the military school have according to their self-assessment?

II. METHODS AND MATERIALS

The present study dwells upon the problem of developing tolerance of ambiguity as a personality variable of cadets in the process of professional training in the military academy. It is guided by the competence-based and personally oriented methodological approaches to professional education. In the research, we used theoretical and empirical methods of study.

A. The Theoretical Methods

The theoretical methods are represented by analysis and systematization of publications of Russian and foreign scientists on the problem of the research. We investigated general tendencies in the contemporary military professional education [9]; innovative processes in military higher education [10]; dynamics of value orientations and attitudes of cadets in military academies [11] and others. We also analyzed issues of special professional training of the future service-men, such as assessing professional skills and abilities of the service-men working under extreme circumstances, personal approach to training paratroopers and controlling their competences [12]; the ways of paratroopers’ professional training in a dynamic simulator of a parachute system [13].

The authors advocate the ideas of E. V. Krasnov & T. V. Kornilova on the influence of emotional intelligence and tolerance for uncertainty on military leaders’ professional activity expressed by [14], the ideas of T. I. Sultanbekov, & V. A. Belovolov on actualization in the educational work of the ethno-cultural potential of the educational environment of the military institute [15].

B. The Empirical Methods

The empirical methods include: observation of the students’ academic activity; systematization of the authors’ personal practical experience of paratroopers’ professional training; observation of the students’ behaviour in situations of uncertainty; informal talks and interviews; questionnaire; comparative data analysis. On the statements of Reference Framework of Competences for Democratic Culture a special questionnaire was developed. Quantitative data were collected through the analysis of the scores of opinions received from questionnaires of 42 respondents. There were two groups of respondents. The first group included 20 cadets of the 4th year of study, aged 21-23 years and the second group comprised 22 cadets of the 5th year of study, aged 22-24 years old, all being cadets at Ryazan Guard Higher Airborne Command School named after General of the Army V. F. Margelov.

The data provide the material for comparative analysis of the students’ self-assessment and peer assessment of tolerance of ambiguity in the context of developing personality traits and psychological adaptability of the future military service men. The respondents had to assess their tolerance of ambiguity, according to 8 key descriptors of the Council of Europe [16]. The respondents were to choose numbers from 1 to 10 assessing their personal traits from the list of 8 descriptors, indicating the lowest level as 1 and the highest level as 10 (See "Table 1").

| No | The key descriptors                                                                 | (-) Scores (+) |
|----|-------------------------------------------------------------------------------------|----------------|
| 1. | I engage well with other people who have a variety of different points of view       | 1 2 3 4 5 6 7 8 9 10 |
| 2. | I can suspend judgments about other people temporarily                              | 1 2 3 4 5 6 7 8 9 10 |
| 3. | I am comfortable in unfamiliar situations                                           | 1 2 3 4 5 6 7 8 9 10 |
| 4. | I deal with uncertainty in a positive and constructive manner                       | 1 2 3 4 5 6 7 8 9 10 |
| 5. | I work well in unpredictable circumstances                                          | 1 2 3 4 5 6 7 8 9 10 |
| 6. | I desire to have my own ideas and values challenged                                  | 1 2 3 4 5 6 7 8 9 10 |
| 7. | I enjoy the challenge of tackling ambiguous problems                                | 1 2 3 4 5 6 7 8 9 10 |
| 8. | I enjoy tackling situations that are complicated                                    | 1 2 3 4 5 6 7 8 9 10 |

Total scores:

**TABLE I. A CARD OF TOLERANCE OF AMBIGUITY (SELF-ASSESSMENT AND PEER ASSESSMENT)**
The data provide the material for comparative analysis of the university students’ self and peer assessment of tolerance of ambiguity. The juxtaposition of the cadets’ self and peer assessment average scores (to make it more convenient for comparison we equate average numbers with 10 scores) demonstrates that the cadets of the 4th year of study are more optimistic estimating their tolerance of ambiguity possessing than the 5th year cadets. On the eve of the graduation from the school, cadets are probably not quite sure of their future professional perspectives. This share of uncertainty may influence their self-assessment of tolerance of ambiguity.

### III. Results and Discussion

In the process of research, we studied literature and tried to clarify the meaning of the basic concept. Tolerance of ambiguity is an attitude, characterized by the overall mental orientation, which an individual adopts towards someone or something. “Attitudes usually consist of four components: a belief or opinion about the object of the attitude, an emotion or feeling towards the object, an evaluation (either positive or negative) of the object, and a tendency to behave in a particular way towards that object” [17].

The definition of the basic concept of the present study is as follows:

“Tolerance of ambiguity is an attitude towards objects, events and situations which are perceived to be uncertain and to deal with it constructively. People who have high tolerance of ambiguity evaluate these kinds of objects, events and situations in a positive manner, willingly accept their inherent lack of clarity, and deal with the ambiguity constructively. Hence, the term “tolerance” should be understood here in its positive sense of accepting and embracing ambiguity (rather than in its negative sense of enduring or putting up with ambiguity). People who have low tolerance of ambiguity instead adopt a single perspective on unclear situations and issues, hold a closed attitude towards unfamiliar situations and issues, and use fixed and inflexible categories for thinking about the world” [18].

### A. Research Question 1: What Is Cadets’ Understanding of the Concept of Tolerance of Ambiguity?

The first research task was to analyse the set of data, which contained the cadets’ understanding of tolerance of ambiguity in their future professional activity. The following data come from grouping the cadets’ responses, which they gave in their answers:

Out of 42 respondents:

- Practically all the respondents 95.2% (40 respondents) agreed that: “There can be multiple perspectives on and interpretations of any situation in the professional activity of a military man”.
- 88.0% of the rated answers (37 respondents) were: “Acceptance of complexity, contradictions and lack of clarity”.
- 76.2% of the rated answers (32 respondents) connected foreign languages acquisition with professional culture considering it as “Willingness to undertake tasks when only incomplete or partial information is available”.
- 85.7% of the rated answers (36 respondents) expressed assurance that “Willingness to tolerate uncertainty and to deal with it constructively.”
- 4.8% of the rated answers (2 respondents) did not make any assumptions.

### B. Research Question 2: What Level of Tolerance of Ambiguity Do Cadets of the 1st and 4th Years of Study in the Military Academy Have According to Their Self-assessment?

To answer the second research question a special questionnaire was developed. It had 8 descriptors borrowed from the Reference Framework of Competences for Democratic Culture (Council of Europe, 2017b, p. 18). The descriptors were modified for the 1st person singular for the purposes of self-assessment. The results of the study are presented in “Table II”.

### TABLE II. The Cadets’ Self-assessment and Peer-assessment of Tolerance of Ambiguity (42 Respondents)

| No | The key descriptors | Max | An average score (20 respondents of 4th year of study) | An average score (22 respondents of 5th year of study) |
|----|---------------------|-----|-----------------------------------------------------|-----------------------------------------------------|
|    |                     |     | Self-assessment | Peer assessment | Self-assessment | Peer assessment |
| 1. | I engage well with other people who have a variety of different points of view | 10  | 8,11 | 6,72 | 9,14 | 8,43 |
| 2. | I can suspend judgments about other people temporarily | 10  | 6,54 | 5,36 | 7,55 | 7,23 |
| 3. | I am comfortable in unfamiliar situations | 10  | 8,09 | 7,09 | 7,62 | 8,34 |
| 4. | I deal with uncertainty in a positive and constructive manner | 10  | 7,72 | 6,54 | 7,88 | 7,64 |
| 5. | I work well in unpredictable circumstances | 10  | 8,09 | 6,09 | 7,16 | 8,06 |
| 6. | I desire to have my own ideas and values challenged | 10  | 7,75 | 6,42 | 8,24 | 7,69 |
| 7. | I enjoy the challenge of tackling ambiguous problems | 10  | 6,28 | 7,15 | 7,08 | 6,67 |
| 8. | I enjoy tackling situations that are complicated | 10  | 8,26 | 6,33 | 8,13 | 7,95 |
|    | Total: | | 80 | 76,65 | 51,7 | 62,8 | 62,01 |

An average score of the group: 80 (100%) 64,2 (80,25%) 62,4 (78%)
The results of the questionnaire revealed differences in self-assessment and peer assessment of the cadets of the 4th and 5th years of study, future officers of the airborne troops.

As for the cadets of the 4th year of study, they believe that they could engage well enough with other people who have a variety of different points of view and had an average score of 8.11. But at the same time they could hardly suspend judgments about other people temporarily, having an average score of 6.54. Peer assessment in both cases is much lower – 6.72 and 5.36 correspondingly. The first descriptor gets the highest scores, and the second descriptor in this list seems to be the most problematic for all of the respondents, it gets the lowest scores in the questionnaire.

The cadets demonstrate the highest average scores, admitting that they feel comfortable in unfamiliar situations (8.09), and work well in unpredictable circumstances (8.09) and enjoy tackling situations that are complicated (8.26).

The participants demonstrate an active position and have an average score of 7.72, considering that they deal with uncertainty in a positive and constructive manner; and 7.75 — desire to have their own ideas and values challenged. But peer assessment is much lower in these cases — 6.54 and 6.42 correspondingly.

The total sum of self-assessment is 76.65 and peer assessment — 51.7. An average of the total sum of tolerance of ambiguity for the cadets of the 4th year of study is 64.2 (80.25%).

As for the cadets of the 5th year of study their average scores are surprisingly lower. The total sum of their self-assessment is 62.8 and of peer assessment is even lower — 62.4. An average of the total sum of tolerance of ambiguity for the cadets of the 5th year of study is 62.4 (78%).

In general, tolerance of ambiguity of the participants of the questionnaire is of intermediate and advanced levels and that is very good for the future military service men. Lower scores of the cadets of the 5th year of study probably show that they are not quite certain about their future perspectives in professional activity and personal life. The situation of uncertainty makes them hesitate about tackling ambiguous problems.

The comparison of the average scores of 8 descriptors of tolerance of ambiguity of the cadets of the 4th and 5th years of study is shown in the chart of “Fig. 1”.

![Fig. 1. The cadets’ tolerance of ambiguity, an average score of self-assessment.](image)

As we see, tolerance of ambiguity of the cadets of the 4th year of study is a bit higher than that of the cadets of the 5th year of study. At first glance, it seems quite paradoxical. Nevertheless, our observations, personal talks and interviews show that the 5th year cadets have some hesitations about their future perspectives in professional activity and personal life.

IV. CONCLUSION

Developing tolerance of ambiguity as one of the most important personal traits is a very important issue of professional education of the military [19]. A future service man should have a thorough professional training to be able to foresee the complexity of professional tasks and uncertainty of possible situations. We see it “as measure of adaptation and healthy functioning” [20]. Our research shows that professional training in the system of higher military education gives very good psychological results. Professional competences support character development, better knowledge and understanding, professional skills and abilities, which result in personal stability and in high level of tolerance of ambiguity.
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