

Self-Efficacy Beliefs and Professional Development of the Military

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Abstract—The article considers self-efficacy in the context of professional development of the post-graduate students at the military school. It shows the adjuncts' self-efficacy as belief in their capabilities to exercise control over their professional work in general and research work in particular. Beliefs in personal cognitive efficacy influenced the officers' choice to enter post-graduate courses and to write a dissertation. It determined their level of motivation, quality of learning, vulnerability to stress. Military specialists must have a robust sense of efficacy to succeed in their professional activity and in research. The purpose of the present study was to investigate what self-efficacy beliefs the post-graduate students have and how self-efficacy influences their professional development. **Method:** A questionnaire, designed in the format of Google Forms, was based on the ideas of self-efficacy as stated in Reference Framework of Competences for Democratic Culture. 21 post-graduate students participated in the study all being officers of Ryazan Guard Higher Airborne Command School. The results of the study showed a correlation between the post-graduate students' self-efficacy and their professional development. The highest level of self-efficacy and professional development, motivation for academic research was demonstrated among the post-graduate students who already had some positive professional and research experience, had scientific papers published, saw other adjuncts defending their dissertations successfully, who had certain support of research supervisors and academic society. University professors having a high sense of academic achievements and teaching capabilities can motivate post-graduate students for hard work and enhance their professional development.

Keywords: *self-efficacy, beliefs, professional development, the military, post-graduate students, military school*

I. INTRODUCTION

In professional training of military personnel, high standards are required and it is obvious that officers need a strong self-efficacy to deal with the countless scenarios they may find themselves in their professional activity. Paratroopers, for example, take part in challenging and difficult exercises. Preparing for a parachute jump is a particular acute stressful situation (Boe & Hagen, 2015) [1]. An important factor in educating future officers of airborne troops is to create a high degree of belief in their own abilities, in order to think clearly and effectively, and to master their own emotions in the face of complex situations. Professional training of paratroopers with faith in themselves and their skills is crucial for solving different missions both at home and abroad.

A. Bandura defines self-efficacy as people's beliefs about their capabilities to produce designated levels of performance that influences events that affect their lives. People with a strong sense of efficacy approach difficult tasks as challenges to be mastered rather than as dangers to be avoided. They set themselves goals and do their best to accomplish them. In cases of failure, they quickly recover their sense of efficacy. In contrast, people who have low sense of self-efficacy and weak commitment to the goals they choose to give up. They are slow to recover after failure.

They are vulnerable to stress and depression [2]. Researchers specify certain conditions under which an elevated sense of efficacy can have negative effects [3].

Judgements of self-efficacy are also very important as they determine how persistent people will be and how long they will endure in the face of obstacles. In learning, those who perceive themselves to be supremely self-efficacious feel little need to prepare for it. High-perceived self-efficacy as a learner is associated with heavy cognitive effort and superior learning. A strong sense of self-efficacy helps withstand failures coupled with some uncertainty in tasks [4]. Besides, the learner’s beliefs in his abilities to succeed play a crucial role in his commitment and performances. Numerous studies indicate that the learners rarely engage in an activity, which they do not consider themselves capable of achieving [5].

Identifying personal determinants of performance and success has always been a key challenge for the selection of students in the military schools. As research tasks become more specialized and technically demanding, the individual work of military post-graduate students are consistently gaining more strategic significance. This accentuates the importance of valid selection processes and optimization of post-graduate military education. Post-graduate education in the military school consists of theoretical lectures and practical training and exercises. Post-graduate students are evaluated on both academic achievement and ability to execute the parachute jumps, for example. When considering the context of military post-graduate education, we therefore expect that self-efficacy mediates the relationships between academic achievements and military professional development [6].

- Research question 1: What are the military post-graduated students’ self-efficacy beliefs?
- Research question 2: What is the level of self-efficacy of the military post-graduate students according to their self-assessment?

II. METHODS AND MATERIALS

The present study considers self-efficacy in the context of academic achievements and professional development of the military post-graduate students in the higher airborne command school and is based on the axiological [7], [8] and communicative [9] methodological approaches. Military post-graduate education undergoes the main worldwide trends of innovations in higher education and teaching approaches [10]. In the research, theoretical and empirical methods of study are used.

The theoretical methods: to acquire a general understanding of self-efficacy, we reviewed the research literature on how self-efficacy affects learning outcomes and professional development and other aspects of self-efficacy improvement in military and educational domains.

To do the research we should define the basic notions of the study — “attitude” and “self-efficacy”. In Reference

Framework of Competences for Democratic Culture we read: “An attitude is the overall mental orientation which an individual adopts towards someone or something” [11]. Attitudes usually consist of four components: a belief or opinion, an emotion or feeling, an evaluation (either positive or negative), and a tendency to behave in a particular way.

Self-efficacy is an attitude towards the self. It is associated with feelings of self-confidence in one’s own abilities. A positive belief commonly entails the further beliefs that one can understand what is required, can make appropriate judgments, can accomplish tasks, can navigate obstacles successfully and can influence what happens.

The empirical methods: to answer the above mentioned research questions, a quantitative method was used. A questionnaire in the format of Google Forms was sent via the Internet to 20 respondents, all being post-graduate students at Ryazan Guard Higher Airborne Command School.

The total number of post-graduate students at RHACS is classified information and will therefore not be revealed in this article. Our sample consisted of 20 respondents, aged 30-45 years (“Fig. 1”). When the sample was evaluated, it was assumed that the respondents were homogeneous.

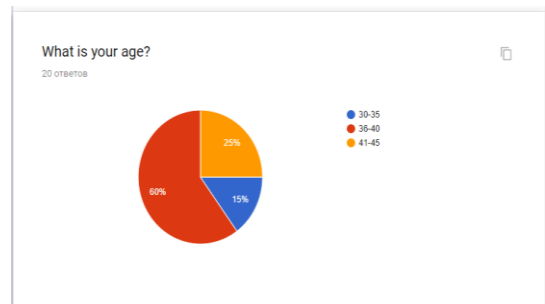


Fig. 1. The military post-graduate students’ age.

Being post-graduate students they all were doing research and had publications in scientific journals and in the books of volumes at scientific conferences (“Fig. 2”).

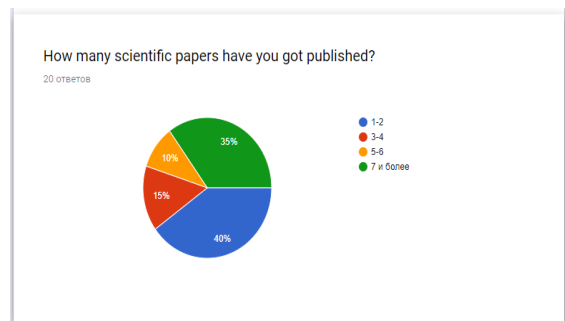


Fig. 2. The number of scientific papers published.

Procedure: the respondents filled out the questionnaire using their own personal computer or a mobile phone. They were asked to consider their own experiences and perceptions and then to indicate by putting a tick in a circle how much they agreed or disagreed with the statements in the questionnaire. The questionnaires were sent via the

Internet to one of the authors. The ideas of Reference Framework of Competences for Democratic Culture were used to single out key descriptors of self-efficacy. Quantitative data were collected through the analysis of the scores of self-assessment.

The data provide the material for comparative analysis of the post-graduate students' self-assessment of their self-efficacy. The respondents had to assess their self-efficacy according to 6 descriptors [12]. They indicated the level of the attitude using the score scale from 1 to 7, in which 1 is the lowest score and 7 is the highest score ("Table I").

TABLE I. CARD OF SELF-EFFICACY (SELF-ASSESSMENT)

No	The key descriptors	(-) Scores (+)
1.	I express a belief in my own ability to understand issues	1 2 3 4 5 6 7
2.	I express a belief that I can carry out activities that I have planned	1 2 3 4 5 6 7
3.	I express a belief in my own ability to navigate obstacles when pursuing a goal	1 2 3 4 5 6 7
4.	If I want to change, I am sure that I can do it	1 2 3 4 5 6 7
5.	I feel secure in my abilities to meet life's challenges	1 2 3 4 5 6 7
6.	I am sure that I know how to handle unforeseen situations due to my resourcefulness	1 2 3 4 5 6 7
		Total scores:
	SELF-ASSESSMENT:	

The most reliable score of self-efficacy of the post-graduate students we can get if we ask the respondents themselves what they think about it. It is very difficult sometimes to understand what a person thinks of himself and what he feels.

III. RESULTS AND DISCUSSION

- Research question 1: What are the military post-graduated students' self-efficacy beliefs?

The first research question was to analyse the set of data, which contained the military post-graduate students' view on self-efficacy. The respondents were given a choice to formulate their answers independently and were free to give their own understanding of self-efficacy. The following data come from grouping the responses:

Out of 20 respondents:

90 % of rated military post-graduate students (18 people) used the word "belief" in relation to self-efficacy, the example of the answer: "belief in the ability to fulfil professional duty", "to find appropriate methods for accomplishing tasks";

75 % of rated answers (15 respondents) connected self-efficacy with cognitive abilities and defined self-efficacy as "belief in one's ability to make judgements" or "to understand issues" or define self-efficacy as "the ability to navigate the obstacles that might arise";

60 % of rated answers (12 respondents) associate self-efficacy with "a feeling of confidence", the example of the answer: "Self-efficacy means to feel confident about tackling new challenges";

50 % of rated answers (10 respondents) connected self-efficacy with self-confidence: "Self-efficacy means to believe in one's own ability to fulfil mission".

Taking a closer look at the results, we find an interesting discovery, namely that the military post-graduate students' understanding of self-efficacy is generally similar to those

accepted by scholars. The main descriptive words the military post-graduate students use correspond to most of the components that are singled out by different researchers. Moreover, most of the military post-graduate students believe that high self-efficacy encourages them to better academic achievements and motivates for further professional development.

- Research question 2: What is the level of self-efficacy of the military post-graduate students according to their self-assessment?

The data obtained from the respondents' questionnaires revealed certain differences in self-assessment of the military post-graduate students. All the respondents worked separately and had their own individual score. Regarding the basic level of self-efficacy, the respondents answered two statements. Statement 1 was: "I express a belief in my own ability to understand issues". Here, 20% of the respondents gave themselves the highest score — "7", 70% of the respondents — "6", while 10% gave themselves "5" ("Fig. 3"). An average score — 6.6. Statement 2 was: "I express a belief that I can carry out activities that I have planned". 20% of the respondents chose — "7", 60% replied "6" and 20% of the answers were — "5" ("Fig. 4"). An average score was 6. In general we found that there was a tendency for the respondents to assess an average score of the basic level of self-efficacy as high — 6.3.



Fig. 3. Statement 1.

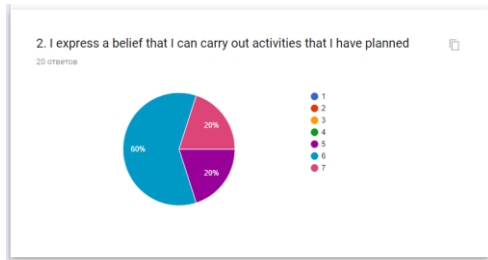


Fig. 4. Statement 2.

Statements 3 and 4 both refer to the intermediate level of self-efficacy. Statement 3 was related to the belief in one’s own ability to navigate obstacles when pursuing a goal. 40% of the respondents chose “7”, 55 — “6” and 40% answered “5” (“Fig. 5”). An average score was rather high — 6.6. Statement 4 was a very personal question. It was: “If I want to change, I am sure that I can do it” And here the respondents didn’t assessed themselves as very high. No one chose “7”. 55% of the respondents replied “6”. 35% said “5”. And there were even 5% with the answer “4” and 5% with “3” (“Fig. 6”). An average score of the statement was the lowest in the questionnaire — 5.4. In general the respondents indicated an average score of the intermediate level as 6.

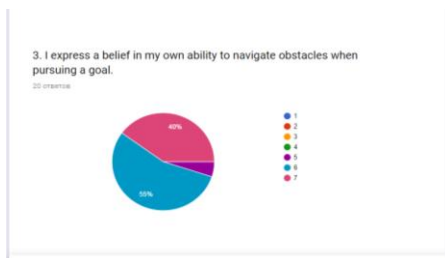


Fig. 5. Statement 3.



Fig. 6. Statement 4.

Another two statements were related to the advanced level of self-efficacy of the military post-graduate students. Statement 5 was: “I feel secure in my abilities to meet life’s challenges”. 25% of the respondents assessed themselves as “7”, 70% as “6”, and 5% made up their mind that they had “4”. No one pointed “5” (“Fig. 7”). An average score was 6.15. And, finally, Statement 6 expressed the belief that the respondent knew how to handle unforeseen situations due to his resourcefulness. 25% of the respondents gave themselves the highest score — “7”, 55% — “6”, 15% — “5”, and 5% — “4” (“Fig. 8”). An average score was 6.075.



Fig. 7. Statement 5.

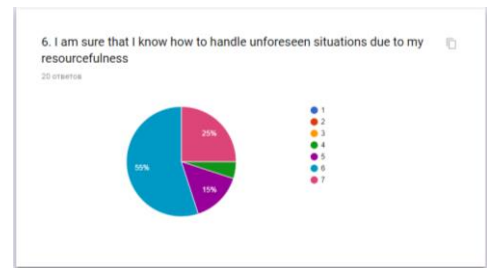


Fig. 8. Statement 6.

In general, the respondents assessed their self-efficacy as high. And that is absolutely clear. The post-graduate students at the military school usually have a very rich practical experience in their profession and have very good cognitive abilities. That’s why their average score of self-efficacy is very high — 6.125.

For the sake of short overview of the results, we give average scores of different descriptors of the questionnaire in “Table II”.

TABLE II. THE ADJUNCTS’ LEVEL OF SELF-EFFICACY (SELF-ASSESSMENT) (20 RESPONDENTS)

The level / An average score	The key descriptors	Maximum	An Average Score
Basic 6.3	I express a belief in my own ability to understand issues	7	6.6
	I express a belief that I can carry out activities that I have planned	7	6
Intermediate 6	I express a belief in my own ability to navigate obstacles when pursuing a goal	7	6.6
	If I want to change, I am sure that I can do it	7	5.4
Advanced 6.075	I feel secure in my abilities to meet life’s challenges	7	6.15
	I am sure that I know how to handle unforeseen situations due to my resourcefulness	7	6
Total average score:		7	6.125

As we see, self-efficacy of the military post-graduate students is very high. They are successful in their academic and professional development; they possess very good cooperation skills [13].

IV. CONCLUSION

In summary, our findings illustrate that post-graduate students at the military school possess very high self-efficacy that they have due to their rich experience of professional activity in airborne troops. They also demonstrate a high level of cognitive activity because they are doing research. No doubt that all of these characteristics encourage further development of their self-efficacy.

Self-efficacy should be neither too low nor too high. Low self-efficacy of the post-graduate students can discourage their academic achievements and professional development even when there is a high level of ability, while unrealistically high self-efficacy can lead to frustration and disappointment. An optimal attitude is relatively high self-efficacy coupled to a realistically estimated high level of ability, which encourages the military post-graduate students to tackle new challenges and enables them to take action on issues of concern. In the future, self-efficacy can be increased due to such factors as enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states [14].

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