

## FURTHER PROFESSIONAL EDUCATION OF THE SOLDIERS OF THE ARMY OF THE CZECH REPUBLIC

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The paper was developed as part of the solution of a long-term strategy of the organization development Lannd operations.

**Abstract:** The article presents some results of research. It deals with identifying the participation degree of military professionals in educational activities and identifying decisive motivational factors and barriers affecting participation in educational activities. The article is also aimed at analysing the influence of selected characteristics of age and the economic status of individuals. The analysis results show that no significant distinction in the representation of individual motives between the age groups has been proved. Statistically significant differences have been shown in the frequencies of responses expressing the evaluation of the significance of selected barriers by respondents with higher and lower military ranks.

**Keywords:** lifelong learning, motivation, human resource management, adult education, soldiers

### 1 Introduction

Lifelong learning of professional soldiers is becoming an important condition for adapting military personnel to the development and trends of the 21st century. Most present studies focused on military education agree that military education is important and needs to be researched (Martin & Yaeger, 2014; Murray, 2014). Similarly, the studies agree that military institutions must actively consider how to deal with the education of their members (Hurbišová & Davidová, 2016; Kozáková & Saliger, 2019). Zhao (2019) emphasizes the importance of active participation of professional soldiers in education and their interest in self-improvement. With his claims, Zhao et al. identifies himself e.g. with the results of a prior study by Thain et al. (2008) that states that increasing the level of motivation to study in professional soldiers is crucial. Not only Thain et al. (2008), but also Martin and Yaeger (2014) believe that soldiers should be allowed to attend seminars or specialized practice that correspond to their career goals. According to Fletcher (2009), in consideration of the cost and importance of a well-trained and educated army, effective training of soldiers is crucial for fulfilling defensive tasks. As early as in 2000, the same author stated that the changes in technology, tactics and missions, which are characteristic of military operations, required adequate flexibility in the design and development of training and educational programs. These changes must be made quickly and efficiently (Fletcher, J. D., & Chatelier, 2020). Lamb and Porro (2015) and Martin and Yaeger (2014) recommend the institutions that are involved in the organization of military training courses to receive regular feedback from professional soldiers regarding their experience with military education.

### 2 Methodology of Research

The system of training the personnel within the Ministry of Defence is a partial system of further professional education of adults in the Czech Republic and, at the same time, it is an important component of human resource management within the Ministry of Defence. If we consider further professional education, in accordance with Průcha and Veteška (2012, p. 12), as the preparation "after professional training and preparation within initial formal education", all types of training can be described by the same token as further professional training of professional soldiers implemented within the framework of career, language and professional education.

The aim of research carried out from 2016 to 2019 was to identify the opinions and attitudes of the respondents to selected aspects of further professional training. The theoretical basis of the research project was the concept of lifelong learning and the economic-sociological theory of rational choice. The authors of research were inspired with a research project published by Rabušicová and Rabušic (2008). For the determination of pedagogical facts, a questionnaire method was chosen, which contained a total of 21 questions focused on ascertaining the opinions and attitudes of the respondents. The questionnaires also included a request to fill in socio-demographic data on the rank level, age group, the highest educational attainment and the period of practice. The questionnaire contained a combination of closed-ended and semi-closed questions; in some of the responses, the respondents were offered to make a choice of several options. We use only selected questions to present the research results in this article. The basic set consisted of 23,184 professional soldiers of the Army of the Czech Republic (The Statistical Yearbook, 2018). The sample encompassed a total of 687 randomly selected professional soldiers of the Army of the Czech Republic. A total of 438 questionnaires were included in the final set for evaluation. Based on the respondents' answers, a data file was processed.

Table 1. Total number of respondents according to individual levels of military ranks.

Level of military ranks	SO	JO	WO	NCO	EP
Absolute frequency	1	86	62	201	88
Relative frequency (%)	0,2	19,6	14,1	45,8	20,1

Source: Authors' own elaboration

Designation of military rank levels, i.e. the rank level of Senior Officers (SO), the rank level of Junior Officers (JO), the rank level of Warrant Officers (WO), the rank level of Non-Commissioned Officers (NCO) and the rank level of Enlisted Personnel (EP).

The first step of the data analysis was to determine the relative frequency of responses; in selected items, the Chi-Square Test and Bonferroni correction for multiple tests were used to specify the statistical significance of the quantitative difference. The main research problem was to identify the opinions and attitudes of respondents relating to further professional training in the areas specified by individual research questions.

The determination of research questions was based on variables already defined in previous similar research conducted e.g. by Šedřová and Novotný (2006, p. 143); these variables were marked as "identified, namely realized and unrealized educational needs". The research proceeded from the assumption that the degree of adult participation is influenced by motivation. We asked respondents about their participation in educational activities. Participation in education was defined as a period of 12 months before the date of interviewing. With regard to the fact that the decision to participate in further professional education is a process that interconnects the motives, objectives and experience of an individual with the requirements of the work environment (Průcha & Veteška, 2012), one of the partial research objectives was to identify respondents' motives for participating in further professional training. In view of the fact that the motivation of individuals changes over the course of their lives, we aimed at verifying the fact whether a difference in the representation of individual motives can be demonstrated between the age groups of respondents. When examining the area of motivation to learn, it was necessary to consider possible barriers that reduce the likelihood of achieving success. An important conclusion of previous research was the fact that in work-oriented education

"the assumption of an increasing degree of participation in relation to the complexity of the activities performed is maintained" (The Czech Statistical Office, 2018, p. 34).

According to the authors of research, it is possible to consider the reverse assertion that with the increasing complexity of the respondents' activities, the number of perceived barriers will be significantly reduced. In the search for an appropriate equivalent to this characteristic in professional soldiers, the characteristic of military rank was selected. Definition of military rank levels and military ranks used in the paper. Military rank level of Enlisted Personnel (EP)-military ranks: Private, Lance Corporal. Military rank level of Non-Commissioned Officers (NCO)-military ranks: Corporal, Sergeant, Staff-Sergeant. Military rank level of Warrant Officers (WO)-military ranks: Warrant Officer 3rd Class, Warrant Officer 2nd Class, Warrant Officer 1st Class, Chief Warrant Officer, Staff Warrant Officer. Military rank level of Junior Officers (JO)-military ranks: Second Lieutenant, First Lieutenant, Captain. Military rank level of Senior Officers (SO)-military ranks: Major, Lieutenant Colonel, Colonel (par. 7 of Act No. 221/1999 Coll.) In the environment of the Army of the Czech Republic, the military rank expresses the economic position from the point of view of the income group (the above-mentioned characteristic was reduced only to the area of income).

Based on the above-mentioned research problem and starting points, the following research questions (RQs) were formulated:

- RQ 1 What was the participation degree of respondents in further professional training courses in the past twelve months?
- RQ 2 What motivated the respondents to participate in further professional education?
- RQ 3 How did age affect the motivation to participate in further professional training activities?
- RQ 4 How did the economic position affect the assessment of the significance of barriers to participation in further training?

### 3 Research results

Selected results of the research survey are presented in the text below.

*RQ 1 What was the participation degree of respondents in further professional training courses in the past twelve months?*  
The basic indicator for evaluating the participation of adults in education is the participation degree of respondents, which expresses their share in participation in education in the previous twelve months. In order to determine the degree of participation, a question was put to respondents whether they participated in professional training courses in the last twelve months.

A total of 435 valid responses were evaluated. A total of 225 respondents (51,7%) stated that they had participated in professional training in the past months and a total of 210 respondents (48,3%) stated that they had not participated in professional training.

*RQ 2 What motivated the respondents to participate in further professional education?*

Respondents were asked to make a choice of four basic motives influencing their decision-making for participation in further professional training.

It was possible to mark more variants in the case of this question and a total of 435 respondents validly answered. A total of 62,5 % of respondents identified the acquisition of new knowledge as a motive for participation in further professional training; another motive, which a total of 30,1 % of respondents stated, was the possibility of changing their job classification.

In view of relative frequency, another motive was to extend the employment relationship (26,0%) and a total of 12,4% of respondents indicated a superior request.

*RQ 3 How did age affect the motivation to participate in further professional training activities?*

Age is one of the important input determinants of educational processes (Průcha, 2014) in view of the fact that the educational needs of individuals change over the course of a lifetime. We divided the group of respondents in terms of age into age groups for the needs of calculations of individual tests. Based on the responses to the previous respondents' question, we assigned the frequencies of responses to the individual age groups.

Table 2. Motivation to participate in further professional training activities in relation to age.

Frequency/ motive	Request of a superior	New knowledge acquisition	Extension of employment relationship	Possibility of changing job classification	
Age	19-30	31	159	62	84
	31-40	18	83	39	33
	41-50	4	20	8	12
	51-60	0	5	2	1

Source: Authors' own elaboration

To identify the significance level of motives, it was found out whether there is a significant difference in the representation of individual motives between age groups. With regard to the frequency of reasons, we merged two age groups (41-50 and 51-60).

Table 3. Comparison of homogeneity across age groups

Homogeneity test across age groups (merging 41-50 and 51-60)	x2 statistics	p-value
	3,1553	0,78912

Source: Authors' own elaboration

We do not reject homogeneity at the significance level of 0,05, no significant difference in the representation of individual motives was proven between age groups.

For the second homogeneity test, the age groups of 31-40, 41-50 and 51-60 years were merged and the group was marked as "older". The younger group was formed by the group of respondents in the age of 19-30. To identify the significance level of motives, it was found out whether there is a significant difference between the motivation of the younger age group and the motivation of the merged age group of older research participants.

Table 4. Comparison of homogeneity across "younger" and "older" age groups

Homogeneity test across young (19-30) and older (31-60) respondents	x2 statistics	p-value
	2,0165	0,569

Source: Authors' own elaboration

We do not reject homogeneity at the significance level of 0,05, no significant difference in the representation of individual reasons was proven between age groups.

*RQ 4 How did the economic position affect the assessment of the barrier significance to participate in further professional training?*

One of the key prerequisites for the development of adult education is the identification and subsequent elimination of barriers that prevent adults from participating in education. In the overview, we present the summary results of the respondents' answers according to relative frequencies, which express their assessing the significance of selected barriers according to the division into the military rank levels.

Table 5. Barriers to participation in relation to the levels of military ranks

Frequency		Military rank				
		SO	JO	WO	NCO	EP
Barrier to further professional training	Superior's Disagreement	0	12	7	75	43
	Unwillingness	0	0	1	4	1
	Fear of failure	0	0	0	12	11
	Impossibility to apply one's knowledge	0	20	10	48	23
	Devoting time to hobbies	0	1	3	16	5
	Lack of time	1	47	36	59	23

Source: Authors' own elaboration

A total of 394 respondents identified barriers to participation in further professional education. When selecting the barriers, a choice of six types of barriers was possible. A total of 42,1% of respondents determined the lack of time as the most significant barrier, a total of 34,8% of respondents identified superior's disagreement, and 25,9% of respondents determined the impossibility to apply their knowledge. A total of 5,8% of respondents indicated fear of failure as a barrier. A total of 3,7% of respondents identified the impossibility to devote time to hobbies as a barrier and a total of 1,5% identified unwillingness to learn as a barrier.

For verifying the assumption that with the growing complexity of the respondents' activities, the number of perceived barriers will be significantly reduced, we joined individual military rank levels together in view of the demands of the activities required for the individual tests performed.

Table 6. Comparison of the assessed barriers across all levels of military ranks

Homogeneity test	x2 statistics	p-value
	71,9167	< 0,001

Source: Authors' own elaboration

Table 7. Comparison of the assessed barriers across the levels of military ranks when merging SO+JO and WO+NCO+EP

Homogeneity test	x2 statistics	p-value
	31,6372	< 0,001

Source: Authors' own elaboration

Table 8. Comparison of the assessed barriers across the levels of military ranks when merging SO+JO+WO compared to NCO+EP

Homogeneity test	x2 statistics	p-value
	63,0709	< 0,001

Source: Authors' own elaboration

For comparison of the assessed barriers across the levels of military ranks listed in Tables 6, 7 and 8, the homogeneity was rejected at the significance level of 0,05. There are significant differences between the responses.

Table 9. Comparison of the assessed barriers across pairs SO+JO (merged), WO, NCO, EP at the significance level of 0.0083 (Bonferroni correction for multiple tests)

x2 statistics (p-value)	SO+JO	WO	NCO	EP
SO+JO	-	11,3 (0,5684)	34,5830 (< 0,001)	32,4602 (< 0,001)
WO	-	-	27,1378 (< 0,001)	30,1494 (< 0,001)
NCO	-	-	-	5,0119 (0,4144)

Source: Authors' own elaboration

The differences between the pairs in homogeneity are significant between SO+JO and NCO, SO+JO and EP, WO and NCO, WO and EP, i.e. between higher and lower ranks (Table 9). There are no significant differences within the framework of higher/lower military ranks, while the differences are insignificant within the framework of higher/lower military ranks (SO+JO compared to WO, NCO compared to EP).

#### 4 Discussion and Conclusions

The basic indicator for evaluating the involvement of adults in education is the degree of respondents' participation, which expresses their share in participation in the monitored area of education in the previous twelve months. Based on our findings, the participation degree in respondents was 51,7%. The degree of participation can be the consequence of a motivational environment supporting participation in further education, the transparent setting of requirements for completing courses for individual positions. Šedová and Novotný (2006) state a lower degree of respondents' participation in informal education, which was attended by 33,7% of respondents, of which 27,7% related to participation in professional education. In relation to RQ 2, our finding is, therefore, significant that for a total of 62,5% of respondents the motive for engaging in further professional education was the acquisition of new knowledge. The factors of external motivation were only in the next order in contrast to the conclusions of Šedová and Novotný (2006) who mention the employer's request as the most common motive.

Statistical calculations for RQ 3 have shown that at the significance level of 0.05 no significant statistical difference was proven in the representation of individual motives in defined age groups as well as in merged groups marked as younger (19-30) and older (31-60). The division mentioned is in accordance with the findings of Šedová and Novotný (2006, p. 147) who state that "there is no simple connection between educational needs and the age of respondents (the correlation coefficients are not indicative of a demonstrable relationship)".

According to Kalenda and Kočvarová (2017), the inequality of access to lifelong learning and the incidence rate of educational barriers are influenced by the factors of status, occupation and education. From the viewpoint of relative frequency, respondents stated the lack of time (42,1%) to be the most significant assessed barrier and the superior's disagreement as the second one in the order. The significantly hierarchical structure of the organization and the nature of military activities increase the impact of the superior's disagreement barrier, which has been identified by 34,8% of respondents. In our research, we have also aimed at the analysis of how the complexity of working activities affects the perception of barriers. Our assumption that the complexity of respondents' working activities has an impact on the number of perceived barriers has been confirmed. Statistical differences between the opinions of respondents with higher and lower military ranks have been proven significantly through statistical calculations. In our opinion, the relationship mentioned is related to the fact that achieving a higher rank is conditioned by meeting the qualification requirements for the appointment to a higher military rank and is also associated with the length of service in the rank and thus with a higher age. A higher military rank is associated with a higher responsibility for fulfilling the tasks by subordinate soldiers. In this context, it can be stated that a superior with a higher military rank creates conditions for the professional and career development of subordinates and is obliged to deal with the issues of further professional training in detail.

The main sources of conclusions relating to participation or non-participation in lifelong learning are the national or international Adult Education Survey (AES) and the Continuing Vocational Training Survey (CVTS) or the research project of the staff of the Department of Educational Sciences at the Masaryk University (Rabušicová & Rabušic, 2008). According to the data of the Adult Education Survey 2016, the participation degree of workers in the Czech Republic in informal education was 48,0% (The Czech Statistical Office, 2018, p. 31). Our research has shown the respondents' participation degree in the amount of 51,7%. According to the survey results conducted by the Czech Statistical Office, the most common motives for participation in work-oriented informal education is an effort to increase performance, create conditions for the career advancement, deepen the knowledge

and skills, obtain a certificate and reduce the likelihood of losing employment (The Czech Statistical Office, 2013). Based on our findings, a total of 62,5% of respondents have mentioned the acquisition of new knowledge as a decisive motive for participation in further professional training. The possibility of changing the job position has been mentioned by 30.1% of respondents. A total of 26,0% of respondents have stated a pragmatic reason for extending the duration of the employment relationship and a total of 12,4% of respondents have mentioned a superior's request as a motive. No significant statistical difference in the representation of individual motives has been proved in individual age groups and also in the age groups marked as younger (19-30) and older (31-60).

Professional literature (Kalenda and Kočvarová, 2017; Rabušicová & Rabušic, 2008) cites the workload and the lack of time as the most significant barriers. Similarly, in the research presented here, the lack of time has been indicated as the most significant barrier in terms of frequency, and the disagreement of a superior has been indicated as the second barrier in the order. In our research, we have also focused on finding out how the military rank affects the perception of these types of barriers. Statistically significant differences between higher and lower military ranks have been proven in the frequencies of responses.

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