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TOWARDS ENHANCED SECURITY: EDUCATION AND DEVELOPMENT OF MILITARY COMMANDERS WITHIN THE LITHUANIAN AND AUSTRIAN ARMED FORCES

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Abstract. This paper is focused on the current state of opinions and positions on issues of education and development of commanders within the Lithuanian and Austrian Armed Forces. The contribution presents the results of a questionnaire survey entitled „Analysis of current situation, opinions and attitudes to the issue of education and development of military commanders (managers) of chosen subjects in subordination of the National Defence System of Lithuania“and „Analysis of current situation (opinions, attitudes) of the issue of education and development of managers (military leaders) of chosen subjects in subordination of the Austrian Armed Forces“. The selected areas provide a current overview of the opinions and attitudes of the views of awareness and opportunities for consultation, development of managerial skills and leadership managing at the beginning effect on the function, development needs, barriers, educational and development activities attendance and integration of new elements to training. Attention is paid to the methodology of Crew Resource Management from a civilian and military point of view, its history, focus, application, etc. This paper focuses on the use of CRM at United States Navy and Marine Corps, United States Air Force, United States Army, United States Coast Guard and other world's military services.

Keywords: education, development, commanders, Lithuanian Armed Forces, Austrian Armed Forces, Crew Resource Management

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JEL Classifications: I2, O15

1. Introduction

Nowadays, knowledge and skills requirements placed on humans are constantly changing and in order to function as a labor force, therefore, been employed, shall his knowledge and skills continuously deepen and broaden. Education and formation of work abilities is becoming a lifelong process. In order to allow the armed forces to fully carry out its tasks, they must be flexible and ready to change. However, the flexibility of the armed forces is formed by flexible people, who are not only ready for change, but accept and support it. Education of employees (or forming of working abilities and personalities of employees) belongs to the relatively widely understood human resources activity, which is fundamentally linked with other personnel activities.

2. Education and development of managers

Education and development of managers assist the employer with regard to the need not only in the present, but also in the future. An employer deals with the education and development of managers with regard to cur-

rent needs and future needs (Čirjevskis 2015; Lace *et al.* 2015; Oganisjana *et al.* 2015; Długoborskytė *et al.* 2015; Matetskaya 2015; Dalati 2015; Giessen 2015; Raudeliūnienė *et al.* 2015; Tarabkova 2014; Caurkubule, Rubanovskis 2014). This activity is followed by management and career planning. It is an ongoing process to ensure the preparation of managers, management of reserves and stabilizing the optimum number of and structure of executives. Dvořáková (2007) describes the system of management and career planning at two levels. The first level represents the employer party that identifies needs, plans, selects and evaluates staff who will respond to future requirements. The second level represents the party staff – the future manager who carries out various steps to realize career goals. Education and development of managers is not just about handing over general, theoretical knowledge. An emphasis is also placed on leadership and applied knowledge. This includes the need to specifically develop appropriate teaching materials.

The manager's job then develops and intends possible variants of dealing with situation, organizes, continuously trains, attends trainings, evaluates information, communicates. Working eligibility of managers can be interpreted as a measure of consistency between the requirements and prerequisites. According to Moricová (2012) it consists of physical, psychological, professional and moral component. Ability and eligibility of manager should be as professional (the ability to manage, organize, coordinate, flexibly and dynamically decide) and social (to lead people, motivate, stimulate, maintain the moral qualities of personality, be able to face mental stress) and conceptual (planning, implementing solutions situations, see the context and consequences of the decision).

There is the claim that managers learn best while working. However, it is not possible for an employer to leave the managers to their fate and their future education and development were merely a random process. Armstrong (2008) recommends three basic approaches to the development of managers, i.e. non-formal education, "learning by doing", formal education, feedback, advice and support. Managers face the informal approach in everyday work. The manager must be able to deal with the new situation learnt and apply it in the future. Managers may, in discussions with colleagues and superiors, reveal weaknesses that need to be further developed. Formal development approaches of managers include development while working through coaching, consulting, monitoring and response from their superiors, development through work experience, i.e. job rotation, work in project teams, „learning by doing“, formal education through courses, structured development of oneself according to individual learning programs. Managers get feedback through a mentor, an expert in the field of education of managers, who provide advice aimed at improving activities carried out.

3. Analysis of the current state of the commanders' opinions and attitudes on education and development in the Lithuanian and Austrian Armed Forces

The empirical surveys¹ taken in Austrian and Lithuanian Armed Forces determined the current status, attitudes and opinions of military commanders (managers) of the National Defence System of Lithuania and Austrian Armed Forces to their area of education and development and there after to undertake a comparison between these two armed forces.

By means of the questionnaire surveys taken in the Lithuanian and Austrian Armed Forces there were determined a current overviews of satisfaction, opinions and attitudes from the perspectives of:

- the information awareness and the consultation possibilities,
- the development of management skills and leading of manager at the beginning of his working position,
- the need for the development, barriers, range of educational/training and development activities attendance,
- integrating new elements of training.

¹ The empirical surveys „Analysis of current situation, opinions and attitudes to the issue of education and development of military commanders (managers) of chosen subjects in subordination of the National Defence System of Lithuania“ and „Analysis of current situation (opinions, attitudes) of the issue of education and development of managers (military leaders) of chosen subjects in subordination of the Austrian Armed Forces“ are part of the specific research at University of Defence, Faculty of Military Leadership in Brno in the Czech Republic [KRIMAR, 2013-2016] – „Education and Development of Crisis Managers in the Ministry of Defence of the Czech Republic“.

In Lithuania, the questionnaire survey was conducted from March to June 2015 with the help of the General Jonas Žemaitis Military Academy of Lithuania. Object of the study were the Lithuanian Armed Forces. The questionnaire contained 71 questions and respondents were 63 officers (60 men, 3 women) of Lithuanian Armed Forces. In detail 21 % of respondents were senior officers and 79 % of them were junior officers. The other one took a place in the Austrian Armed Forces in August and September 2014 with the help of Theresian Military Academy in Wiener Neustadt. The questionnaire contained 90 questions and respondents were 60 officers (58 men, 2 women) of Austrian Armed Forces. Seventy-three percent of respondents were senior officers and 27 % of them were junior officers.

3.1. The information awareness and the consultation possibilities

The survey revealed, that in the Lithuanian Armed Forces 71 % of the respondents have information about educational opportunities and development within the National Defence System of Lithuania. The rest of the respondents (29 %) said that they do not have such information. Is almost one third of uninformed respondents a lot or a little? At Austrian Armed Forces, the situation is better, 92 % of respondents confirmed that they have information about education and development within the resort. The rest of the respondents (8 %) said that they do not have such information. It is apparent that the Austrian military commanders are being better informed when compared to Lithuanian, i.e. 21 %. However, it is assumed that the army officers should be 100 % informed.

The second question was put slightly differently in the Lithuanian and Austrian Armed Forces, but the meaning remains the same. With the current range of education and development activities of military professionals – managers organized within the National Defence System of Lithuania is only 3 % of respondents very satisfied, 33 % of respondents are rather satisfied, 54 % neither satisfied nor dissatisfied and 7 % rather dissatisfied, and 3 % were dissatisfied (Figure 1). Paradoxical as it seems that only 18 % of the respondents submitted specific suggestions for amendments, and 28 % of the respondents submitted specific suggestions on the content of education and development activities.

On the question whether the offer of current educational and development activities provided by the Austrian Armed Forces is sufficient for managers (military commanders), 33 % of respondents answered yes, 54 % more likely yes and 8 % more likely no and remaining 5 % of respondents considered an offer of training and development activities as insufficient (Figure 2). Only 37 % of Austrian respondents have ever submitted a proposal to amend the educational and development activities for commanders (managers) in the Austrian Armed Forces.

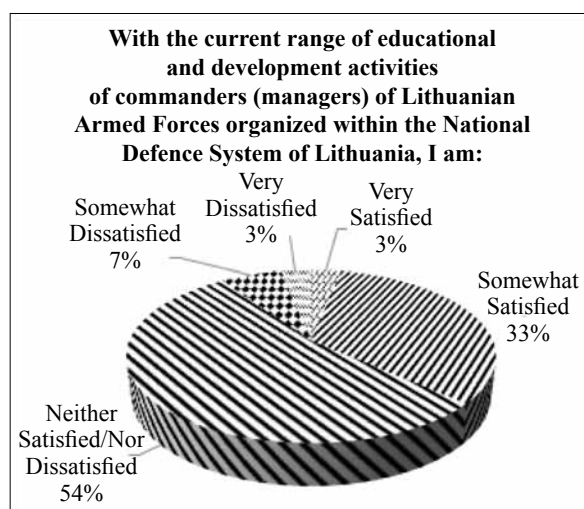


Fig.1. Satisfaction with the current range of educational and developmental activities – Lithuanian Armed Forces

Source: Own research

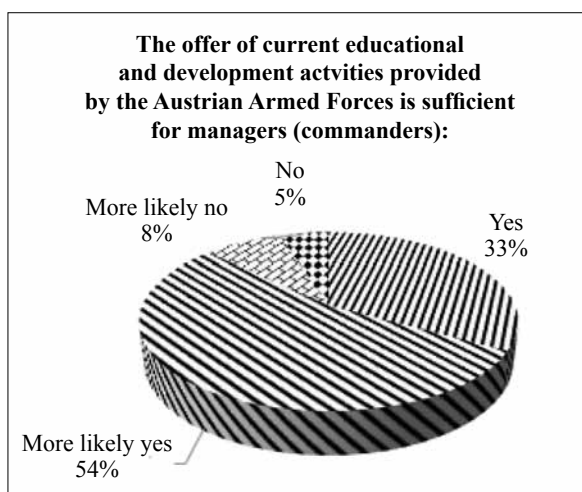


Fig.2. Satisfaction with the current range of educational and developmental activities – Austrian Armed Forces

Source: Own research

On the question whether the respondents (Lithuanian Armed Forces) consult with their nearest superior officer the individual areas of their further education and development, 54 % answered yes, 46 % no. At Austrian Armed Forces 85 % answered yes, 15 % no.

In the Lithuanian version of questionnaire survey 57 % respondents above that said they consult with their nearest superior officer individual areas of further education and development of their subordinates, 43 % do not consult at all.

Eighty-two percent of Lithuanian respondents answered that they pass information related to further education and development to their subordinates. In Austria, only one respondent does not pass information, thus 98% answered positively.

3.2. The development of management skills and leading of manager at the beginning at his working position

To the question whether the senior employee can become a good manager only by performance at their work, 79 % of respondents of Lithuanian Armed Forces answered yes. The larger part, i.e. 60 % of respondents, also adds that for development of managers are the courses developing managerial skills important. The remaining 21 % of respondents answered no. In Austria, only 59 % of respondents believe that it is possible, the remaining 41 % say that it is not possible. That is 38 % more negative responses than in the Lithuanian version.

To the question whether respondents had someone at the beginning at leading position who allowed them to learn from his knowledge and experience, at Lithuanian Armed Forces 68 % answered yes, 32 % did not (Figure 3). Respondents who in the previous question answered no, they were also asked whether they needed to have access to someone like that. This question was answered with 67 % yes, I missed advice and 33 % did not need any. In contrast, respondents of Austrian Armed Forces had someone like that just half of them, i.e. 50 % (Figure 4). Of this, 42 % took it as helpful, for the remaining 8 % it was not useful. Furthermore, 50 % of Austrian respondents who chose a negative response, stated that they lacked the advice at the beginning. They had a need to be next to someone that would enable them to learn from his knowledge and experience.

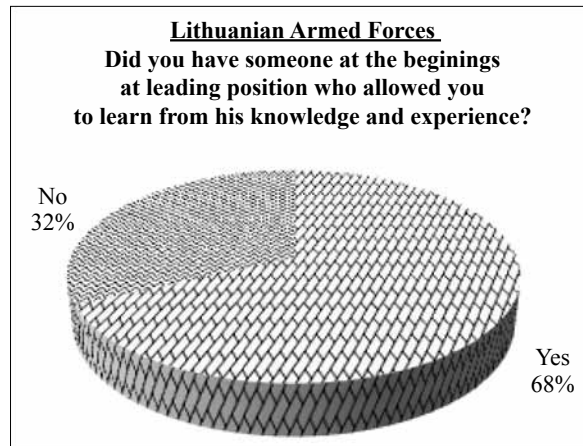


Fig.3. The need to have someone at the beginnings at leading position who allowed a respondent to learn from his knowledge and experience – Lithuanian Armed Forces

Source: Own research

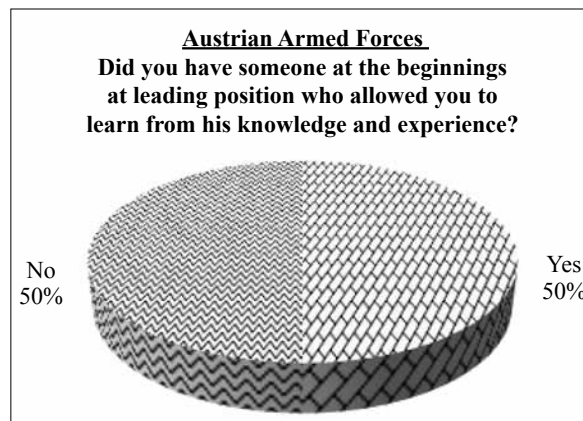


Fig.4. The need to have someone at the beginnings at leading position who allowed a respondent to learn from his knowledge and experience – Austrian Armed Forces

Source: Own research

3.3. The need for the development, barriers and educational and development activities attendance

To the question in which respondents were asked to identify areas in which they need to be further developed identified the following list (when calculating the percentage of responses „definitely yes“ and „more likely yes“ together):

Lithuanian Armed Forces:

1. Language skills,
2. Self-knowledge,
3. Communication skills,
4. Expertise,
5. Leadership skills,
6. Personal vision, goal orientation,
7. Personal requirements.

More significantly exceeding the needs of the development are (when calculating the percentage of responses „definitely yes“ and „more likely yes“ together) in excess over the other are the language skills. Other areas are about the same level, at least was a need for the development of personal qualities.

Austrian Armed Forces:

1. Language skills
2. Expertise
3. Communication skills
4. Personal vision, goal orientation
5. Leadership skills
6. Self-knowledge
7. Personal requirements

Individual respondents of Lithuanian Armed Forces added moreover a need to develop their flexibility, interoperability, instructor skills and they would welcome more training activities. Individual respondents of Austrian Armed Forces added moreover a need to develop the ability to solve problems which are given by differences between people (character, temperament, personality), in negotiation skills of an orator, social competencies in personnel management in relation to information and communication technologies (They submitted that the software is now available at Theresian Military Academy Wr. Neustadt).

An equally important area of questioning is the area of barriers that hinder military commanders in further education and development. As shown in Figure 5 and Figure 6, respondents perceive barriers to further education and development, when calculating the percentage of responses „definitely yes“ and „more likely yes“ together in following order mainly in:

Lithuanian Armed Forces

1. Time, the workload
2. Finance
3. Family
4. Languages
5. Methods of courses
6. Laziness
7. Age
8. Tiredness
9. Commuting
10. Health

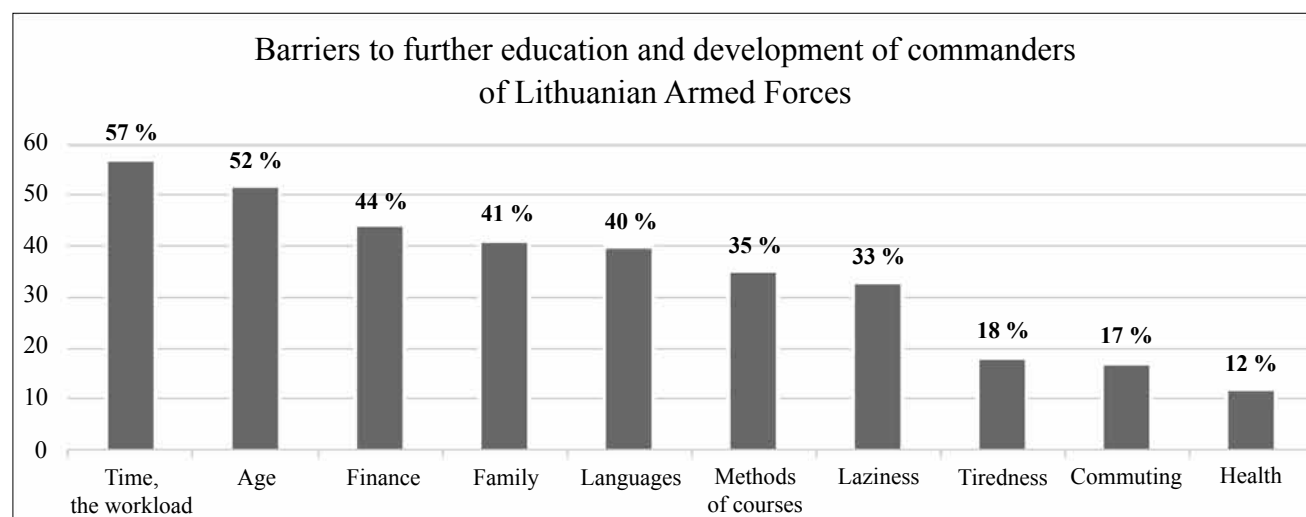


Fig.5. Barriers to further education and development of commanders of Lithuanian Armed Forces

Source: Own research

Austrian Armed Forces:

1. Time, the workload
2. Family
3. Commuting
4. Methods of courses
5. Laziness
6. Tiredness
7. Health
8. Languages
9. Age

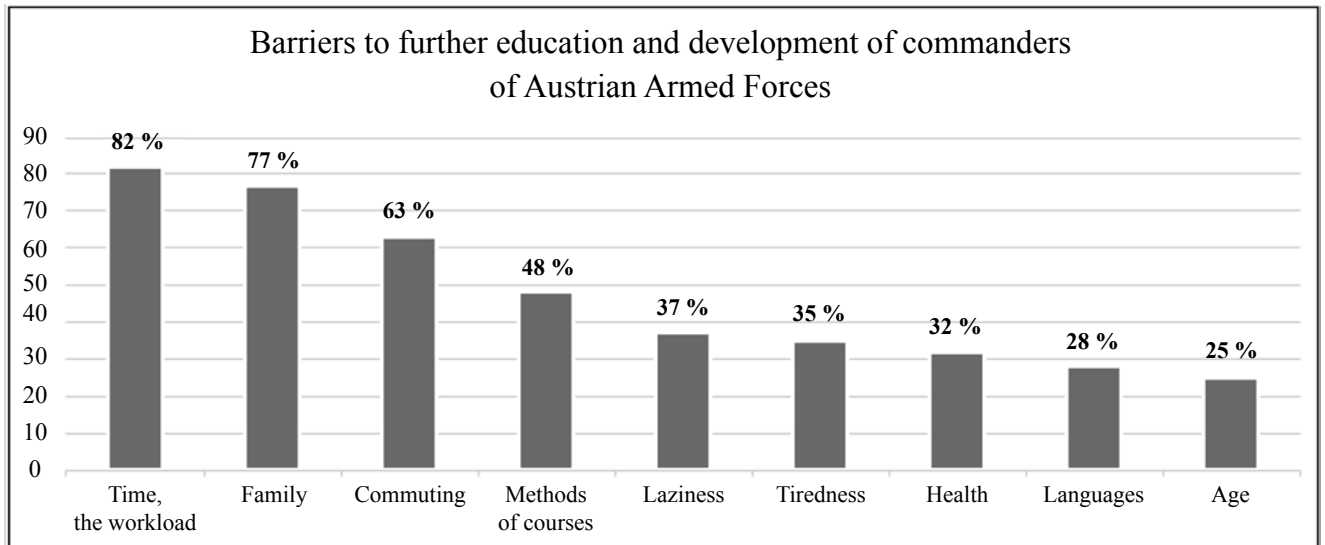


Fig.6. Barriers to further education and development of commanders of Austrian Armed Forces

Source: Own research

In the questionnaire authors also asked if the respondents already attended any training and development activities designed to improve the management skills, where they had gained them. Beyond activities completed within Lithuanian educational institutions as Generolo Jono Žemaičio Lietuvos Karo Akademija in combination with Aleksandras Stulginskis University, Mykolas Romeris University and Vilnius University respondents stated another foreign educational institutions. Foreign institutions where they completed educational activities or courses themselves are:

- Kremenchuk flight college of National Aviation University (KFC NAU)² ;
- Nato School Oberammergau – PSYOPS³ (Psychological operations) Course;
- Royal Danish Military Academy (Junior Officers Advance Course and Staff Officer’s Course);
- Baltic Platoon Commanders’ Course in Denmark;
- Training Command – Military Academy in Vyškov, Czech Republic (Instructor Course);
- NBC Defence Institute⁴ at University of Defence (Czech Republic);
- Language school in Canada;
- Instructor Course (United Kingdom);
- Baltic Defence College (Estonia) – *Joint Command and General Staff Course*;
- US Infantry Officers basic course;
- US Instructors course;

² A university in Ukraine specialising in the teaching of aerospace-related courses.

³ The aim of this course is to provide students with knowledge of PSYOPS contributions to NATO operations, and to enable an understanding of PSYOPS in operational-level planning procedures.

⁴ Department of Chemical, biological, radiological and nuclear defense (CBRN defense or CBRND).

- Junior Commander Course (UK Royal Marines);
- BG (Battle Group) Commander Course (UK);
- Civil-Military Cooperation Centre of Excellence (Netherlands);
- and other unspecified courses taken in USA, Denmark and Sweden.

Beyond activities completed within Austrian educational military institutions as Theresian Military Academy in Wiener Neustadt and National Defence Academy in Vienna respondents stated another and foreign educational institutions. Among foreign institutions where they completed educational activities or courses themselves belong:

- Schule für Feldjäger und Stabsdienst der Bundeswehr (School of Military Police and Headquarters Service in Hannover, Germany);
- Die Technische Schule der Luftwaffe (The Technical School of the Air Force, Kaufbeuren, Germany);
- Nato School Oberammergau;
- Practical training – Armored Infantry Battalion PzGrenB332 in Wesendorf (Germany);
- Operational Capabilities Concept Evaluation and Feedback (OCC E&F), Oberammergau (Germany);
- United States Military Academy (West Point);
- Flight training at 2 Canadian Forces Flying Training School – Phase IV (Royal Canadian Air Force);
- Radar Control Training (United States Air Forces);
- and other internships and courses in Germany, Switzerland (Thun), Canada and USA.

In Lithuanian version, at the end of the questionnaire respondents could note any comments and suggestions for education/training and development of military commanders (managers) of the National Defence system of Lithuania. Respondents stated the following:

- More good leaders (examples to follow).
- Be more strict and hold higher standards for cadets.
- National Defence System of Lithuania should provide more courses for aviation officers specialists to improve their skills.
- Create and maintain logical training system.
- Do not change system of officer's training every 5–6 years.
- More educated civilians or retired specialists.
- Need to properly prepare instructors prior to assigning them as an instructors.
- Military science should be approved as a separate science, that would help not to lose time for bachelor studies unrelated to military service in cadet training.

4. Integrating new elements of training

Above that the Lithuanian respondents were also asked whether they would be interested in an educational activity that would have applied the Crew Resource Management methodology (CRM). CRM is a process and a system of training for the activities in which human error has devastating effects. It was developed in the late seventies by NASA in order to reduce the possibility of human error in aviation. It focuses on interpersonal communication, leadership and decision-making in emergency situations. Training content created by NASA at workshop in 1979, has since been applied in various industries and organizations. CRM concept includes three basic elements, i.e. basic training to reinforcing awareness, practice, feedback and recurrent training. The key to success in the use of CRM is mutual respect and trust generated among crew members and teams, as well as supporting an environment that is conducive to openness and constructive criticism. The result is a higher professional performance due to the synergy which is achieved, thereby the risk of accidents or some random incidents is decreasing. The purpose of CRM is to streamline communication crews and teams who work in hazardous environments and the consequences of their decisions can be fatal.

CRM methodology was first applied to commercial aviation. Currently is used among air rescue teams, world military services, firefighters, police officers and hospital personnel. Statistics in the US document the decline in injuries and deaths of firefighters. After the implementation of the CRM methodology, deaths fell

by 100 and injured about 100,000 cases per year (Lesage, Dyar 2011). Also among employees in the US Coast Guard aviation personnel accidents were reduced by 70 % (Reason 1999). Feedback revealed the cause of past accidents. Those were seen by the rescuers in the lack of accountability, communication managers, administrators, insufficient training and further education. Authors Reason (1999) and Kanki *et al.* (2010) who were examining human error in aviation operations published statistics from the period 1959–1989. According to their studies the primary cause of the accident is caused by airline staff (70 %), further by technical error on aircraft (12 %), error in aircraft maintenance (3 %), bad weather (4 %), an error caused by airport (4 %), other errors (2 %). Marshall (2009) describes the CRM issue amongs paramedics and Okray and Lubnau (2004) examine CRM by fire brigades.

Complex problem solving in a dynamic environment entails open communication, respect, awareness and feedback. The methodology CRM is focused on:

- finding adequate communication;
- recognition of different opinions;
- conflict resolution;
- its monitoring;
- decisions;
- and evaluation of a situation.

By adopting these attributes it can detect the areas in which the team communication fails. The performance of employees is being protected through the methodology of CRM. Achievement of synergy is possible if all team members understand the mission, their strengths and weaknesses and its own role in the team communication.

4.1. Use of CRM from the military perspective

Crew Resource Management training was first introduced in the US military in the late 1980s. The initiative for CRM training in the US military came directly from commercial aviation. However, at the beginning CRM courses were not well received by all military aviators. In the early 1990s the US Army, Navy and Air Force began funding CRM-related research. There were made great advances in terms of developing a research based model for delivering effective military CRM training. Researchers and military aviators developed a CRM program that consisted of basic concepts, academics and skill sets relevant to the demands of military flight operations. In the US military, this model has remained largely unchanged for over a decade. Further, this research served as the basis for CRM training in many services throughout the world (O'Connor *et al.* 2010).

The US Navy and Marine Corps initiated CRM in the early 1990s. The program was developed on the basis of a significant research program carried out at the Naval Air Warfare Center Training System Division (NAWCTSD). This led to the identification of seven CRM critical skills decision-making, adaptability/flexibility, situational awareness, mission analysis, communication, assertiveness and leadership), and a theoretically grounded method for how to train these skills (O'Connor *et al.* 2010).

The United States Air Force (USAF) was the military leader in CRM. The first Air Force command to initiate a military version of CRM training for aircrew was the Military Airlift Command (MAC) in the mid-1980s. Almost immediately, other major commands began implementing their own mission-specific versions of CRM training for their aircrews (Wang 2013). In 1994, the Air Force formally mandated CRM training and assessment for all Air Force flight crew members (O'Connor *et al.* 2010). USAF specified six core CRM skill and knowledge areas which are situation awareness, crew coordination/flight integrity, communication, risk management/decision-making, task management, and mission planning/debrief (Wang 2013).

The US Army introduced their CRM training, called Aircrew Coordination Training (ACT) in 1994 for both their fixed wing aircraft and helicopters. This program only included a one-time training event with no continuation or refresher training. The following year's results showed a significant decrease in overall accident rates. By 1999, the accident rates had increased back to baseline. Therefore, any attempt to use CRM training

should contain a comprehensive plan to reinforce and build on the initial training (Baker 2007). According to O'Connor *et al.* (2010) the Army was the first US service to achieve a service-wide standardized CRM program. Since the inception of ACT, the US Army has invested substantial resources to update its program, and in 2006 implemented ACT-E (Aircrew Coordination Training-Enhanced).

The Coast Guard CRM training, which as part of program started in 2003, is very similar to that of the US Navy, addressing the same seven skills. All pilots and air crew are required to participate in initial and annual Coast Guard CRM training. Human error continues to be the most significant cause of U.S. Coast Guard mishaps. Studies show that 60% to 65% of cutter and boat navigation mishaps have had human error as a contributing cause. Ninety percent of the human error-caused mishaps were due to poor judgment (67%), inattention (more than 16%) and ineffective supervision (more than 5%). As a solution Coast Guard among other things delivers CRM training to boat personnel called Team Coordination Training (TCT). TCT is a program that focuses on reducing the probability for human error in cutter, boat and command/control operations and activities by increasing individual and team effectiveness (O'Connor *et al.* 2010; U.S. Coast Guard 1998).

4.2. CRM in other world's military services

Most of the world's military services have a CRM program. Among those services applying CRM training belong e.g.: Royal Air Force (United Kingdom), Royal Australian Air Force, Royal Australian Navy, Italian Navy, Dutch Navy, Spanish Navy, South African Air Force, Taiwan Navy, and the Finnish Air Force. The influence of US military CRM programs, curricula and research can be seen in all the services above. In some cases, however, such as the UK, there is substantial independent research and subsequently a distinct CRM program is emerging. In the Netherlands, the basic academic curriculum for military CRM programs is administered by the Netherlands Defence Academy (NLDA). Most countries have a Ministry of Defense order or instruction that governs their CRM program. The Dutch military CRM program subscribes extensively to civilian CRM program governance promulgated by Dutch civil aviation authorities. For all the services above, CRM program were implemented in the 1990s. Once the US military adopted CRM programs, it appears many non-US militaries followed suit (O'Connor *et al.* 2010).

Eighty-three percent of Lithuanian respondents answered that they would be interested in an educational activity that would have applied the Crew Resource Management methodology, 17 % have no interest.

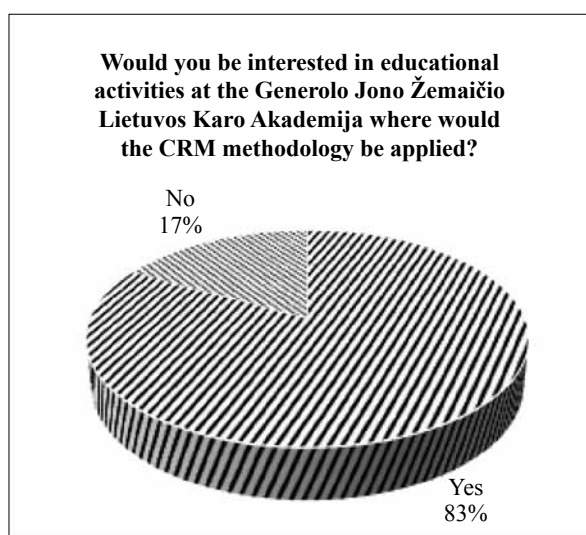


Fig.7. The interest in educational activities at the Generolo Jono Žemaičio Lietuvos Karo Akademija (The General Jonas Zemaitis Military Academy of Lithuania) where would be the CRM methodology be applied.

Source: Own research

Conclusions

The surveys taken in Lithuanian and Austrian Armed Forces showed that most of the Austrian commanders are aware of the opportunities for education and development within the Austrian Armed Forces. A situation is a little bit worse in Lithuania, where the commanders are by 21 % less informed when compared to Austria.

Also, most of the commanders transmit the information and consult them with superiors and subordinates employees. Interestingly, however, it may appear that a range of training and development activities is by Lithuanian Armed Forces very and rather satisfied only 36 % of commanders, 10 % commanders is very and rather dissatisfied with the current state – of which only 28 % of the respondents submitted specific suggestions on changes or additions to the content of education and development activities.

The offer of current educational and development activities provided by the Austrian Armed Forces is for 87 % of commanders sufficient or rather sufficient and for 13 % is the offer of training and development activities insufficient or rather insufficient. A proposal to amend the educational and development activities for commanders in the Austrian Armed Forces has ever submitted only 37 % of Austrian respondents.

Larger part of the commanders believe that the senior employee can become a good manager only by performance at their work, at the same time for development of managers are the courses developing managerial skills important. As a positive, it appears that more than half of Lithuanian commanders and exactly half of Austrian commanders had someone at the beginnings at leading position who allowed them to learn from his knowledge and experience.

For Lithuanian commanders arise as the most first three important areas in which they need to be further developed language skills, self-knowledge and communication skills. At Austrian Armed Forces are the priority areas for development needs at language skills, expertise and communication skills. The greatest barriers to further education and development Lithuanian commanders see in time, the workload, age, finance and family. Austrian commanders perceive the greatest barriers in time, the workload, in family, in commuting and methods of courses.

Up to 83 % of commanders at the Lithuanian Armed Forces would appreciate an implementation of new systems of training focused on the Crew Resource Management methodology and its application to the conditions of the National Defence System of Lithuania. The results of the questionnaire survey can be used to synchronize the needs and requirements with planning and implementation of educational and developmental activities of commanders in the Lithuanian Armed Forces and Austrian Armed Forces.

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