

# EVALUATION OF THE CONTENTS OF MILITARY EDUCATION ACCORDING TO THE NEEDS OF THE CONTEMPORARY MILITARY MISSIONS

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## ***Abstract***

*Countries are responsible for the education and training of the members of their armed forces. Military education can be observed as an independent system in regards to its purpose, the preparation of military leaders for contemporary military operations and non-military missions. Besides the training for performing combat skill and training, it is also directed towards acquisition of skill for responsibility, critical thinking and initiative in modern ways of performing operations. The Republic of Macedonia implements military education through interdisciplinary programs realized at the Military Academy in Skopje.*

*Within the paper there was also a research conducted on the first generation of cadets (N=34) by questionnaires. This helped in getting a more realistic picture of the quality and effectiveness of each of the subjects of the curriculum of the first cycle of studies at the Military Academy.*

*The main purpose of this paper is to give appropriate scientific analyses of the real and effective use of the subjects of the first year of study at the Military Academy. The conclusions can then be considered and used as guidelines for eventual changes in the direction of upgrade of the system of military education.*

**Key words:** *military education, effectiveness, curriculum, officer duties, research, effective*

## **INTRODUCTION**

Military education is an independent system, with complete basis and knowledge, where a large contribution to its independence is due to the established military standards and the need for a permanent army. It is also a key element in the creation of a quality army, capable of taking on the modern security challenges, a system that encompasses several branches and subsystems. The theory of military

education is established as a relatively independent scientific discipline within the general theory of military education. At the same time, the theory of military education is focused on independent military research and construction of an autonomous methodology of scientific research. This means that we do not remain focused solely on the methods of military education, but also the overall logic and methodology of finding and testing of military expert military knowledge in the union of the general scientific achievements, so that it can be brought to new levels and verified appropriately.

On the other hand, military education is an inseparable part of the army, directly connected to it. Therefore comes the question “What would the army look like without vision, motivation for new knowledge, self-respect, self-confidence and strong personal and social character and what do we receive with good education?”. Without them, it would be a simple, non-formal company that does not reach the thorough conditions of a well-organized army. Hence, we say that from a well-organized army, a well-organized teaching process can be seen, which contributes positively and strongly towards the continual improvement of the army as an institution. In a way, military education is a mirror and a real indicator of an army where education, improvement and upgrading of the individual and the collective is continuous, which today especially comes to the force in a very developed technical and informational staff.

### **EDUCATION AND TRAINING OF THE CADETES – MAIN TASK OF THE CONTEMPORARY ARMY**

The training of the professional staff of the army implies development of specific skills and abilities, on whose development the academic level of education, military education and training have the strongest influence. The revolutionary changes in the technological development emphasize the importance of information and knowledge, which in the future must be the core when creating a military capability in the contemporary armies. Meanwhile, the restrictions of military budgets and the cost increase of sophisticated arms systems and military equipment inevitably lead to the need for creating smaller and more flexible national armies. For efficient action in this type of surrounding, a development in the army is necessary that will accept the changes, face unpredictable situations and leave the old-fashioned totalitarian way of military organization and action. In order to allow development of this type of modern army, an adequate system of military education and training is necessary.

“The central task of the education of this type of modern Army is to imprint will and the capacity to learn.” According to Eric Hoffer, “it should create people that learn, not people that have been taught”. Broadly interpreted, this concept of education says that education is constant and dependant<sup>1</sup>. It is dependant in terms of the permissive institutional structure and environment, and the individual availability and desire. Studying is constant in terms the even if someone graduates

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<sup>1</sup> Hoffer, E 2002. *The True Believer: Thoughts on the Nature of Mass Movements*. Harper Perennial Modern Classics

at a certain institution it is a lifelong activity. Unlike training, which is a routine by nature, and mostly focuses on “what we think”, education develops the intellectual curiosity and individual thoughts by focusing on “why and how we think”. Although it is important to make this distinction, training and education must not be seen as mutually exclusive activities. On the contrary, these two together with the experience are necessary for a complete development of an officer.

Military education is an integral part of the preparation of the army for eventual operations with a broad specter of combat and non-combat actions. Military education must allow the development of the intellectual capacity and gaining of general knowledge, which is a requirement for a continuous development and acquisition of abilities for dealing with those complicated situations. The knowledge of those experts could be crucial for the achievement of the goals of the military forces. Knowledge means the absorption of information through the process of learning. Modern achievements in the areas of technical and IT sector, which are implemented in all modern armies around the world, as well as experiences, set new goals in the education of students on all levels of command “theoretical and/or factual”<sup>1</sup>.

Education and training are important and separate subsystems of the military educational process, which are used to build the qualities and conduct of military personnel. These two subsystems are complementary and intertwined within all levels of professional development<sup>2</sup>. Education must initiate the process of learning and establish creative ways of thinking while solving the set tasks. The increase of requirements for officer capabilities can be met most efficiently through the provision that education begin at the start of each of the carrier development steps, as well as the conviction that it is enough to provide for the individual needs during the appropriate phase of the military carrier. The goal that must be reached is the creation of a well-educated core of military leaders, which will be completely competent in technical, tactical and leadership sense, as well as poses skills, knowledge and abilities necessary for dealing with the challenges set by the modern way of performing operations.<sup>3</sup>

Theory and practice, and thereby military-theoretical achievements and their practical application, constitute two sides of the same medal. For a successful performance of the military duties, a quality performance of the teaching process is required. The basis for institutionalization is to highlight certain interconnected roles and characteristics that separate officers from other professions in society. In that regard, the system of training must ensure that officers demonstrate self-confidence, integrity, critical thinking and responsibility; these are the key characteristics necessary for action in complex, unpredictable and dynamic situations, where the ability to build an effective team implies having broad organizational and technological knowledge. Basic knowledge of diplomacy,

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<sup>1</sup> *Special Operations Technology - SOTECH 2012* Volume: 10 Issue: 6 (August)

<sup>2</sup> CJCSM 3500.03, Joint Training Manual for the Armed Forces of the United States, USA.

<sup>3</sup> Angelevski, S. 2009. *Evaluation of the need for changes in the continent of military education and training* Contemporary Macedonian defense, theory paper for the Ministry of Defense of the Republic of Macedonia, 16 Skopje, p. 14

economy, media and psychological tools necessary for working with people during crisis are also needed. One of the basic abilities that must be developed is the skill to collect and retrieve information, which is critical when the amount of information that must be gathered and processed is constantly increased. In order to be successful during these operations, the members of the armed forces must be intellectually agile in order to outsmart the opponent and be able to work with allies and large number of personnel from the unarmed forces. In addition, the need for education rises in the need for, as William Murray says: "...to prepare (the staff of the armed forces) for mission in the entire spectrum of conflict, starting from intimidation on the high end of the spectrum, to peace keeping on the low end of the spectrum"<sup>1</sup>.

The Republic of Macedonia realizes its military education through interdisciplinary programs. The responsibility for academic education as a part of the structure of education in the state institutions in the Republic of Macedonia lies with the Military Academy in Skopje (MA). It was established with the Law for Military Academy, as a higher education and research establishment for the education of staff for the needs of the Ministry of Defense (MD) and the Army of The Republic of Macedonia (ARM).

## METHODOLOGY

Within this paper, empiric research was also conducted at the Military Academy, during 2012-13, in order to determine the cadets' attitudes about does and how the knowledge gained from the courses of the current accredited first cycle studies' curriculum at the MA in Skopje<sup>2</sup>, helps towards a successful performance of officer's duties in the Army. This was conducted through evaluation of the internship as the beginning stage for professional development of officers in the Army of the Republic of Macedonia.

- **Hypothesis 1:** *The subjects content in the curriculum of the first cycle of studies at the MA differs in relation to the degree of their application during internship at the cadets of the MA*
- **Hypothesis 2:** *The subjects' content from the Military science field mostly comes to the fore during the performance of primary commanding duties.*
- **Hypothesis 3:** *The application of subjects in the curriculum does not differ in cadets from different branches.*
- **Sample:** The research is performed on a suitable sample (N=34), which can be said to be absolute at the moment, in accordance with the purpose of the research, composed by cadets from the fourth year of the first cycle of studies at the Military Academy Skopje<sup>3</sup>, which consists of male (n=26) and female (n=8) respondents, at an average age of 21, from the three branches:

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<sup>1</sup> Written by William Murray\_ Sof training and mission readiness. *Special Operations Technology - SOTECH 2012* Vol.: 10 Iss.: 6 (August)

<sup>2</sup> Military Academy Skopje 2009 Curriculum for the first cycle of studies, Skopje

<sup>3</sup> The first cycle of studies trains he candidates for management on a tactical level, as direct leaders and agents in the use of military power

Infantry (n=15), Artillery (n=9) and Communications (n=10). They have completed the questionnaire after finishing the internship of the fourth year and the implementation of the squad commanders' leadership course.

- **Instruments:** As techniques are used questionnaires prepared for the purposes of this study, in which subjects of the study program from the first cycle of MA, were evaluated from 1 to 5 in what extent they have helped in practice while performing officer's duties during the internship in the ARM (at the tactical level), by cadets.
- **Statistical Methods:** The statistical methods used are descriptive statistics, F-test and factor analyses, and the data has been processed by the software package SPSS 15.0.

## RESULTS AND DISCUSSION

The results will be presented in order of the hypothesis. In addition, every subject is rated only from the students that have taken it (that is why the N is different for different subjects).

From Table 1, we can conclude that *the average grade (M=3.01) for application of all subjects from the first cycle studies at the MA, during the internship, is above average (2.5)*, which means that the same gives fundamental knowledge, that in the future needs to be upgraded with individual work and advancement training. The average grade for application of different subjects' content varies between 1.33 and 4.15, as follows: 11 within the range of 1 to 1.99, 14 within 2 to 2.99, 23 within 3 to 3.99, 8 within 4 to 4.99, and noone with an average of 5. This means that certain subjects have a practical application from the very beginning, while some take more time or have an indirect application in the performance. It is also important to note that two of the respondents have been removed, given they graded all the subjects with 1, which shows they did not take the research seriously. Also, the subject Mechanics and Methods of operational research were not elected by any student from this generation, so they were not included in the next analyses.

**Table 1. Ranking of subjects from the first cycle of studies at the MA for their application during internship, according to cadets**

R	SUBJECTS	N	M	$\sigma$	R	SUBJECTS	N	M	$\sigma$
1	Infantry Weapons and Firing	13	4,54	1,67	30	Telecommunication	10	3	0,94
2	Methodology of infantry weapons	13	4,46	1,2	31	Computer networks and systems	10	3	1,49
3	<b>Weapons with theory and practice</b>	32	<b>4,34</b>	1,18	32	Engines and Motor Vehicles	32	2,88	1,34
4	<b>Physical Education</b>	32	<b>4,34</b>	1,18	33	Albanian Language	11	2,82	1,83
5	Infantry tactics	13	4,31	1,25	34	English Language	32	2,81	1,45
6	Methods of tactical training	13	4,31	1,25	35	Systems for radio-communicat.	10	2,8	0,92
7	Management and Leadership	32	4,13	1,16	36	Network Pathways	10	2,8	0,92
8	Ammunition and expl. materials	22	4,09	1,15	37	Theory of systems	4	2,75	0,5
9	Artillery Armaments	9	3,89	1,45	38	Electromagnetic waves and antennas	10	2,6	1,17
10	Communication and comm. Skills	32	3,81	1,28	39	Sociology	32	2,53	1,39
11	Communication tactics	10	3,70	0,48	40	IT, Computer Systems Security	10	2,4	1,17
12	Artillery Weapons and Firing	9	3,67	1,66	41	Military History	32	2,34	1,47
13	Firing and Weapons Management of Artillery Units	9	3,67	1,66	42	Basics of National Security	32	2,25	1,46
14	Military Andragogy	30	3,6	1,5	43	Comparative systems of national security	32	2,19	1,38
15	Applied geography and topography	32	3,56	1,5	44	Telecommunication in the security and defense systems	32	2,19	1,28
16	Ballistics	22	3,55	1,44	45	Models and Simulations	32	2,13	1,39
17	Basic Tactics 1	32	3,53	1,29	46	Constitutional law and political systems	32	1,97	1,36
18	Basic Tactics 2	32	3,53	1,39	47	Mathematics 1	32	1,91	1,33
19	Military Psychology	32	3,5	1,44	48	Economy with basics of financial	32	1,91	1,33
20	Armored Combat Vehicles	13	3,46	1,45	49	Physics	32	1,88	1,29
21	Modern combat arms	22	3,45	1,47	50	Environmental Chemistry	32	1,88	1,24
22	International military & human law	32	3,41	1,58	51	Management of IT Technology	32	1,84	1,08
23	IT	32	3,38	1,43	52	Mathematics 2	32	1,78	1,16
24	Firing Theory	9	3,33	1,66	53	Basics of electrical equipment 1	32	1,78	1,16
25	Telecommunications Networks	10	3,2	1,14	54	Basics of electrical equipment 2	10	1,70	0,82
26	Military Communication and IT	10	3,2	1,55	55	German Language	20	1,45	0,69
27	Firing management systems	22	3,18	1,47	56	French Language	3	1,33	0,58
28	Organization and Management	32	3,16	1,46	57	Mechanics	0	-	-

29	Artillery Tactics	9	3,13	1,7 3	5 8	Methods of operational research	0	-	-
Total							3,01	0,86	

According to the cadets, *the subjects that have the biggest practical application during the initial performance of officer duties from mandatory subjects are Weapons with theory and practice in shooting, Physical education (both with an average of 4,34) Management and Leadership (M=4,13) and Communication and Communication skills (M=3,81)*. This is understandable, considering that cadets have been introduced for the first time with immediate work with people in the process of military training of soldiers. In regard to the elective subjects, we came to the conclusion that amongst the highest ones are the elective subjects from the branches of Infantry and Artillery, as opposed to the Communications branch, with the exception of the subject Tactics (M=3.70). From the aforementioned branches of Infantry and Artillery, most useful subjects during internship were those dealing with equipment and armaments from the respective branch, while for the Communications, the most important one as we already said, is Tactics.

*On the other hand, the lowest ranking subjects includes the elective subjects French (M=1.33), German (M=1.45), Basics of electro-mechanics 1 и 2 (M=1,74) and subjects from the Natural Sciences and Mathematics areas*. This is due to the fact that subjects from the Natural sciences and mathematics field are hard and abstract, and they are chosen as basis for mastering the expert subjects and the acquisition of skills for logical thinking in reasoning and decision making in military management. These subjects are evaluated that have been used in small amount in the primary officer duties, with regard to the short term of the internship; where the cadets did not have chance to face with a more expert training, for which implementation the knowledge from these subjects is fundamental. The low average score of the elective languages stems from the fact that the students did not get a chance to apply them in the internship, given that they are mostly used in reading tactically-technological instructions for certain equipment written in those languages and are used by the ARM, or for understanding eventual training abroad.

In order to determine the latent structure of the degree in which each subject helps in a successful internship, a factor analysis has been conducted and **seven factors**, which explain 82.17% of the variance, have been derived. It is important to note that because of the unequal number of students for the elective subjects, the same have been combined in groups comprised from different branches, thus trying to make the subjects equal by content, as well.



**Table 2. Factor analyses with Oblimin rotation of the cadets' evaluations of the first cycle MA studies subjects' application during the internship**

Component	1	2	3	4	5	6	7
Mathematics 1	<b>0,90</b>	0,16	-0,30	0,04	-0,04	0,24	0,13
Mathematics 2	<b>0,89</b>	0,12	-0,32	0,03	-0,12	0,22	0,06
Physics	<b>0,90</b>	0,25	-0,53	-0,16	0,07	0,32	0,00
Environmental Chemistry	<b>0,92</b>	0,21	-0,59	-0,15	0,10	0,39	-0,04
Sociology	<b>0,71</b>	0,32	-0,73	0,29	0,03	0,42	0,00
Constitutional law and political systems	<b>0,83</b>	0,17	-0,53	-0,08	0,06	0,42	0,14
Economy with basics of financial management	<b>0,79</b>	0,13	-0,44	0,03	0,08	0,51	-0,02
Basics for national security	<b>0,87</b>	0,32	-0,64	-0,20	0,08	0,46	0,04
Comparative systems of national security	<b>0,86</b>	0,23	-0,61	-0,13	0,15	0,50	-0,06
Military history	<b>0,80</b>	0,30	-0,48	-0,10	0,05	0,47	-0,17
Basics of electrical equipment 1	<b>0,69</b>	0,10	-0,55	0,08	0,21	0,58	-0,26
Engines and motor vehicles	<b>0,76</b>	0,51	-0,37	-0,15	-0,30	0,43	0,13
Models and simulations	<b>0,80</b>	0,15	-0,53	0,12	0,28	0,36	-0,18
Telecommunication in the defensive security systems	<b>0,63</b>	0,33	-0,47	0,16	0,24	0,38	-0,32
Ballistics/ET2	<b>0,71</b>	<b>0,61</b>	-0,48	-0,44	-0,08	0,36	0,15
Modern Combat Arms/Radio-communication systems	0,49	<b>0,63</b>	-0,35	0,24	-0,17	0,58	0,20
Ammunition and explosive materials/Telecommunication	0,40	<b>0,82</b>	-0,48	-0,08	-0,15	0,53	0,16
Armored Combat Vehicles/Firing Theory/ Network Pathways	0,57	<b>0,68</b>	-0,63	0,09	-0,11	0,28	0,19
Infantry Weapons and Firing/Firing and Weapons Management of Artillery Units/Electromagnetic waves and antennas	0,17	<b>0,90</b>	-0,14	-0,28	-0,25	0,11	0,38
Methods of tactical training/Artillery Firing and Weapons Management/Military Communications and IT systems	0,06	<b>0,93</b>	-0,23	-0,26	-0,29	0,21	0,23
Tactics of Infantry/Artillery/Communications	0,08	<b>0,89</b>	-0,28	-0,12	-0,37	0,36	0,09
Methodology of Infantry Weapons/Artillery Weapons and Firing Practice/Computer Networks and Systems	0,13	<b>0,95</b>	-0,26	-0,29	-0,25	0,25	0,30
English language	0,55	0,15	<b>-0,86</b>	-0,15	0,09	0,41	-0,11
Physical education	0,23	0,47	<b>-0,71</b>	-0,27	-0,43	0,56	0,10
IT	0,36	0,34	<b>-0,86</b>	-0,08	-0,22	0,33	-0,13
IT management	0,64	0,04	<b>-0,74</b>	-0,08	0,18	0,34	0,00
Weapons with theory and practice in firing	0,23	0,53	<b>-0,73</b>	-0,28	-0,52	0,58	0,02
Arms management systems/TC networksМрежи	0,47	0,49	<b>-0,68</b>	0,31	-0,22	0,58	0,08
International military and human law	0,43	0,59	-0,41	<b>-0,74</b>	-0,35	0,47	0,13
Communication and communicational skills	0,35	0,50	-0,53	<b>-0,64</b>	-0,28	0,46	0,27
Applied geography and topography	0,43	0,59	-0,41	<b>-0,74</b>	-0,35	0,47	0,13
Basic tactics 1	0,22	0,34	-0,45	-0,23	<b>-0,72</b>	0,58	-0,20
Basic tactics 2	0,31	0,43	-0,37	-0,23	<b>-0,86</b>	0,33	-0,03
Organization and management	0,40	0,35	-0,45	-0,14	0,01	<b>0,89</b>	-0,01
Military andragogy	0,23	0,16	-0,26	-0,13	-0,38	<b>0,76</b>	0,08
Military psychology	0,37	0,46	-0,59	0,06	-0,13	<b>0,65</b>	0,41
Management and leadership	0,30	0,58	-0,61	-0,37	-0,32	<b>0,73</b>	0,06
Foreign language	0,13	0,27	-0,02	-0,06	0,10	0,09	<b>0,84</b>

The first factor explains the largest part of variance (45.48%) and consists of the largest number of subjects, which are basic for further development of the officer's



profile (Table 3), thus being named *Basic academic Factor* for officer's duties; the second also explains a large part (15,15%), named *Expert-specialist Factor* and consists of all the combinations of elective subjects (with the exceptions of Ballistics and Electro mechanics 2, whose presence is almost equal in the first two factors); the third factor comprises subjects that deal with skills and abilities necessary for military training (or, in layman's terms, constitute their craft), explains for 6.65% and is named *Factor of Specific academic abilities*; the fourth takes 5.20%, is named *Factor of additional applied disciplines* and encompasses subjects from non-military scientific areas which assist in the successful performance of officer duties; the fifth factor explains for 3.54% of the variance and is best described by subjects from general military tactics, thus being named *Art of War*; the sixth factor deals with 3.40% of the variance and is constituted by subjects that deal with the work with personnel, management and leadership skills, and is named *Organizational leadership Factor*; and finally, the last factor explains 2.74%, it is constituted of an additional foreign language, which are not key subjects, but are always a plus for this profession, and is dully named *Factor of additional foreign languages*.

We can conclude (although the results should be taken with reserve, considering the small number of respondents used for this statistical method) that the obtained factors logically explain the application of the subjects during the performance of the primary officer duties, in accordance with their priority, and how subjects upgrade each other. In order for practical use of the subjects from the fifth and sixth factor, which may seem most useful for the management in the military profession, it is necessary to set the appropriate foundation with knowledge from subjects that are part of the previous factors. This in turn confirms the idea that successful leadership in the army is actually the icing on the cake, where the base is a well-trained soldier.

The latest is also confirmed with the correlation matrix of the extracted factors, according to which all the factors are independent, except for the correlations between the *Basic academic factor*, *Factor for Specific academic abilities* and *Organizational leadership factor*. This is understandable, considering that the third factor consists of subjects that are studied at all faculties, but here have a specific place in the bases for military profession, while on the other hand those are not academic subjects, but mostly are skills and practical knowledge; and furthermore, the sixth factor consists of social sciences, which basically compose the managerial performance for most professions, taken into account that it is more philosophy and doctrine than expert knowledge, and must be specifically expressed here (given the specifics of the military organization – the strict hierarchical structure, subordination and management aimed at the organized use of weapons, where mistakes in decision making must be minimized).

From the above, we can conclude that every subject has a different, but important part in the academic curriculum for preparing successful military officer, which *confirms the first hypothesis*.

**Table 3. Significance of the differences in the cadets' attitudes of the different scientific fields' application during the internship**

Scientific Fields	M	$\sigma$	df1	df2	F	Sign.
Natural Sciences and Mathematics	1,81	0,05	3	132	16,731	,000
Social Sciences	2,74	0,84				
Technical Sciences	2,80	0,59				
Military Sciences	3,63	0,45				

From Table 3 we can see that *during the internship, the subjects that were shown as most useful are from the Military scientific area, while least useful are those from the Natural sciences and mathematics*. In addition, we found that there is a significant difference in the application of subjects from different areas ( $F=16,731$ ,  $p<,000$ ), where the military sciences have been applied more than the natural sciences and mathematics ( $MD=1,869$ ,  $p<,000$ ), and than the subjects from technical ( $MD=,924$ ,  $p<,008$ ) and social sciences ( $MD=,942$ ,  $p<,007$ ), as well. The subjects from natural sciences and mathematics have been applied even less than those from technical ( $MD=-,945$ ,  $p<,006$ ) and social sciences ( $MD=-,927$ ,  $p<,008$ ); while between the application of technical and social sciences is not shown significant difference (Table 3a). Hence, *the second hypothesis has been confirmed*.

**Table 3a. Scheffe test of the significance of the cadets' attitudes of the different scientific fields' application during the internship (only significant)**

$M_1$	$M_2$	MD	Std. Err	Sig.
Military Sciences	Natural Sciences and Mathematics	1,869(*)	,264	,000
	Social Sciences	,942(*)	,264	,007
	Technical Sciences	,924(*)	,264	,008
Natural Sciences and Mathematics	Social Sciences	-,927(*)	,264	,008
	Technical Sciences	-,945(*)	,264	,006

In table 3b, a different division of the fields has been made, where the physical education is divided from the other sciences as a separate category, together with practical operation<sup>1</sup>. In addition, we found that during internship, the most important was shown the physical education; while the least important were the natural sciences and mathematics, as before. We also found that there is a significant difference in the application of subjects from different fields in the practical part during internship ( $F=21,535$ ,  $p<,000$ ), where **physical education** is applied more than the subjects from natural sciences and mathematics ( $MD=2,338$ ,  $p<,000$ ), social sciences ( $MD=1,522$ ,  $p<,000$ ) and technical sciences ( $MD=1,393$ ,  $p<,000$ ), while it is not more applicable than **the subjects from military sciences**. The subjects from natural sciences and

<sup>1</sup> According to The Official Presentation for the Military Academy Skopje, December 2011, slide number 10

mathematics are less applied than those from the military (MD= -1,869, p<,000) and technical sciences (MD= -,945, p<,026). The military in turn are more applicable than the technical (MD=,924, p<,032) and social (MD=1,053, p<,009), while between the technical and social sciences was not shown significant difference (Table 3c.). Hence, we conclude that *physical education and subject from the Military scientific field have the biggest application in the initial officer duties*, which completely *confirms the second hypothesis*.

**Table 3b. Significance of the differences the cadets' attitudes of the different scientific fields' application during the internship (physical education placed separately from social sciences)**

Scientific Fields	M	$\sigma$	df1	df2	F	Sign.
Natural Sciences and Mathematics	1,81	1,14	4	165	21,535	,000
Social Sciences	2,63	1,02				
Technical Sciences	2,75	0,98				
Military Sciences	3,68	1,21				
Physical Education	4,15	1,39				

**Table 3c. Sheffe test of the importance of differences of the cadets' attitudes of the different scientific fields' application during the internship (only significant)**

M <sub>1</sub>	M <sub>2</sub>	MD	Std. Err	Sig.
Physical Education	Natural Sciences and Mathematics	2,338(*)	,281	,000
	Social Sciences	1,522(*)	,281	,000
	Technical Sciences	1,393(*)	,281	,000
Natural Sciences and Mathematics	Technical Sciences	-,945(*)	,281	,026
	Military Sciences	-1,869(*)	,281	,000
Military Sciences	Social Sciences	1,053(*)	,281	,009
	Technical Sciences	,924(*)	,281	,032

**Table 4. Significance of the differences between cadets' attitudes for first cycle MA studies subjects' application during the internship, from different branches**

Branches of Cadets	M	$\sigma$	df <sub>1</sub>	df <sub>2</sub>	f	sign.
Infantry	2,99	1,05	2	31	,757	,477
Artillery	2,93	1,03				
Communication	2,53	0,61				

From table 4, we can conclude that although the cadets from the Communication branche express a low degree of importance about the usage of the first cycle curriculum subjects, it is not significantly lower than the other branches (F=,757, p<,477). This means that although cadets from different branches have

different elective subjects and partially different application according to the scope of work, *the first cycle MA subjects can be applied in equal extent during the performance of the primary officer duties, in all of the three branches*, which confirms the third hypothesis.

**Future research:** It is important to note that into consideration were taken only the attitudes from the target group, whilst having no data for: the degree of performance duties success during the internship; in what extent have the participants absolved the material from the MA curriculum; is there subjects for which have a need for and are not included in the curriculum of the MA; the degree of subjectivity in the evaluation, in terms of whether they were grading the subjects or they have resentment towards the professor, the subject content, personal lack of knowledge, or were completely uninterested in answering the questionnaire (two respondents answered 1 to all the questions), fatigue, and etc.

On the other hand, certain shortcomings must be taken into consideration, given that since the reactivation of the MA in 2009, only one generation has completed the first cycle of studies, which currently limits the size of the sample and increases the error in results' interpretation. In addition, the fact that the grades for the application of knowledge acquired at the MA during the internship are just initial indicators given that the time frame is short, so there is a high probability that the respondents have not been in a situation in which they could realize the need of many of the subjects they have graded low. On the other hand, these scores are important from the position of the lowest level of duty performance and the way of perception of knowledge application and monitoring of the ARM officer staff development.

All of the aforementioned shall be taken into consideration for a future research, whose subject would be the evaluation of the degree in which the curriculum of the Military Academy in Skopje, as the beginning of higher military education, has a real practical application, in order to determine the suggestions for changes and improvement.

## CONCLUSION

The changes in international level about the question of establishing world peace have a dominant influence in the military education in the Republic of Macedonia, as well. In order to be successful in this field internationally, the members of the armed forces must possess certain knowledge and skills, useful and necessary for performing tasks in specific conditions. This in term contributes towards a serious change in the overall method of military education, in general, as well as in the Macedonian military education in particular. In the Republic of Macedonia, the Military Academy carries out higher, scientific and applied expert education in the area of defense as a broader scientific area of the social sciences, in the military and military-technical sections, in particular. The work of the Military Academy is defined with the structure and content of the curriculum that is being studied, passed from the Ministry of Defense, as a founder. The Military Academy is educational institution that collects important historical knowledge and data for the perseverance of generational experience and traditional values on the one hand,

and sets the meeting ground for communication between the two parts of higher education: the students and the university professors or assistants.

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