DEFENCE AND SCIENCE

LEPL - DAVID AGHMASHENEBELI
NATIONAL DEFENCE ACADEMY OF GEORGIA

DEFENCE AND SCIENCE

Editorial Board

Content

TECHNOLOGY IN DISTANCE LEARNING

Nino Bochorishvili
Ph.D., Associate Proffesor
Georgian Technical University

Nino Lomsadze
Ph.D., Associate Proffesor
Georgian Technical University

Irakli Bochorishvili
Ph.D., Associate Proffesor
Georgian Technical University

Abstract

Since there are no scheduled classes to attend and all necessary information is available online, distance education has replaced synchronous learning for many students and teachers during the pandemic. However, we are still unsure of the long-term effects of distance learning and whether it provides the same value as learning in a classroom face-to-face.

This article discusses important challenges that colleges must take into account, such as how to help students without dependable internet access or technology participate in digital learning, as well as some specific issues related to the management of remote learning.

Introduction

Technology today is a natural component of our surroundings. Every time it makes sense, technology is employed to aid in learning, the development of fundamental informational and technological literacy abilities, and the acquisition of subject-specific fluency by students. The education industry has seen a lot of changes recently, developments that in earlier decades would have been unthinkable. Nobody could have predicted the innovations this industry would see. It is crucial to consider the future of the industry and what the next generation of online learning environments might include as higher education institutions continue to embrace and discuss online learning. A glimpse of the pedagogical and technological possibilities is given by recent investigations. Online teaching and learning are about to enter a novel and exciting phase[1]. The potential to materialize a person's vision of ongoing education or a need for knowledge is a particularly alluring element of remote education. The incorporation of remote learning in this system considerably improves the quality of student training, as shown by the analysis of domestic and international experience, and this may be attributed to a variety of factors. Since the Internet offers unique opportunities in the form of services and information educational resources for various types of educational institutions, as well as for individual users, distance learning is becoming more and more self-assured, which is quite understandable. As a result, we must acknowledge that university students have a strong motivation to work independently, which is important in distance learning[2].

Distance education technology allows realizing the individual nature of teacher-student communication and distance educational technologies make it possible to expand the University's influence in geographically remote regions and thus increase the flow of entrants[3]. In the rapidly evolving world of internet technologies, distance education has become a valuable alternative to traditional education in many countries around the world[4].

Consequently, the use of modern educational technologies reveals a number of grave issues. 2018; Leontyeva, p. The quality of the current educational system is threatened by educational institutions' inflexibility, and we must remember that Georgia's new consumers and market demand the creation of quality standards. The challenge of integrating new information technologies and the potential they present call for a comprehensive reevaluation of the strategy utilized to approach the particular educational system. Students may access and use the network's vast information potential to develop their own independent critical thinking, but there is also a risk associated with technology system education.

By promoting the positive aspects of technology, the online teacher can present a quality educational learning experience. Effective online pedagogy indicates student-centered learning and applies active learning exercises. "Interactivity, faculty, and student presence are basic in an efficient online learning environment" The use of a delivery device, such as the Internet or Blackboard "should not determine the pedagogical practice." The technology should provide "the mechanism through which the online teacher introduces the best pedagogy for that course or topic"[5].

The use of a delivery mechanism, such as the Internet or Blackboard "should not define the pedagogical practice." The technology should provide "the mechanism through which the online teacher implements the best pedagogy for that course or topic"[6].

Although using multimedia in education is not new, the internet poses concerns about the quality, accessibility, and appropriateness of the sources that students and educators choose and incorporate. Issues of course ownership and measurable learning outcomes arise when combining the usage of multimedia and free online resources with instructor-delivered content.

Classes can be accessed online whenever and anywhere you choose. Because of the flexible timetable, each student can design a unique study strategy that meets their needs. Due to a lack of time, nothing needs to be abandoned. The student is required to be present in the classroom for each lesson in traditional schooling. So they must commute, which takes time and money, from one location to another. These costs are eliminated with online education, therefore there is no need to spend money[7].

The training of staff, particularly teachers who can conduct remote learning, and the use of information technology in the delivery of any form of education are essential issues. Universities all over the world are developing specialized training programs for teachers of distant learning who can use Internet resources and services in any type of educational system to deal with this problem. The use of digital resources is another issue, which is one of the reasons why the vast majority of distance learning courses are accessible online. However, the key issue is the development of leading remote learning programs in a wide range of subjects and their ongoing update to account

---

1 Soldatov & Soldatova., 2021, p.5.
2 Melissa Roy, 2020.
3 Learner & Luo, 2014.
4 considering the covid 19 situation around the world.
5 Lung-Yu Li & Long-Yuan Lee, p.153 2016.
6 McVay et al., p. 6.
7 Burns, p.10, 2011..

for the ever-expanding capabilities of digital technology. It is possible to employ multimedia more frequently as information delivery speeds up, and it's crucial to use reflective teaching methodologies. Different interaction models for information exchange over networks are mentioned by experts: targeted users; When information is spread from a particular source to numerous recipients, it is conducted one at a time, one to many, or many to many[8].

In addition to changing the course's content, multimedia also helps make a variety of information available. It also provides students with the opportunity to independently write and edit texts, illustrate tasks with the full range of visualization tools, and start engaging in more cognitive activity than they would with traditional methods. By using web technology to design distance learning courses, you can build unlimited wide branches, such as those found in dictionaries, reference books, etc. creating new conditions for clarifying particular concepts or entire sections, expanding the student's intellectual activity, and deeper insight.

Teachers now pay particular attention to this sort of knowledge control, like assessments, which are now widely used in education, including distant learning, owing to the advancement of information technology. Tests are defined by the notion that they evaluate knowledge of the subject matter, practical abilities, and the level of critical thinking required for higher education (depth, flexibility, consistency, realism, analytical thinking; stability, concentration, concentration, and attention span; semantic memory, that is, understanding, and not Remember). The test assignments' content forces pupils to think deeply and not guess [9]

Conclusion

Due to the pandemic, distance learning is currently the primary way of instruction, but its caliber ought to be higher[10]. Since distant learning is still generally thought of from a technical standpoint at this level of development, tertiary education should run into certain special issues related to the didactic and course delivery[11][12]. Since high-quality learning is impossible without relying on the principles of pedagogy, we must acknowledge that the responsibility of the teacher in today's distance learning is paradoxical and is still not apparent. [13]Understanding the significance of the subject matter being studied in distant learning also aids in keeping control over student understanding.

Bibliography:

1. https://coursemethod.com/online-classes-vs-traditional-classes.html; Top Advantages and Disadvantages of Online Classes vs. Traditional Classes; Lisa Parmley; August 1, 2021;
2. "Distance Education for Teacher Training: Modes, Models, and Methods" Mary Burns, Education Development Center, Inc. Washington, DC; EDC; 2011
3. EURASIA Journal of Mathematics Science and Technology Education; ISSN 1305-8223 (online) 1305-8215 (print) 2017 13(6):2733-2748; DOI 10.12973/Eurasia.2017.01250a; "Levels of Interaction Provided by Online Distance Education Models", Mohammed Alhih, Ebba Ossiannilsson, Muhammet Berigel
4. E3S Web of Conferences 273, 12031 (2021) INTERAGROMASH 2021 (https://www.e3s-conferences.org/articles/e3sconf/abs/2021/49/e3sconf_interagromash2021_12031/e3sconf_interagromash2021_12031.html) "Distance education didactic principles application in teaching;" Boris Soldatov, Natalya Soldatova
5. EURASIA Journal of Mathematics, Science and Technology Education, 2018, 14(10), em1578 ISSN:1305-8223 (online) OPEN ACCESS Research Paper https://doi.org/10.29333/ejmste/92284; „Modern Distance Learning Technologies in Higher Education: Introduction Problems" Irina A. Leontyeva
6. GEORGE LUCAS EDUCATIONAL FOUNDATION; Edutopia ADMINISTRATION & LEADERSHIP "Helping Teachers Feel More Confident About Distance Learning" Melissa Roy.September 8, 2020
7. "Helping Teachers Feel More Confident About Distance Learning", https://www.edutopia.org/article/helping-teachers-feel-more-confident-about-distance-learning
8. Higher Education Studies; Vol. 6, No. 3; 2016 ISSN 1925-4741 E-ISSN 1925-475X Published by Canadian Center of Science and Education; "Computer Literacy and Online Learning Attitude toward GSOE Students in Distance Education Programs" Lung-Yu Li & Long-Yuan Lee
9. "Remote teaching and learning in Office 365 Education", Microsoft Teams for Education; https://support.microsoft.com/en-us/topic/remote-teaching-and-learning-in-office-365-education-f651ccae-7b65-478b-8366-

---

8   Mohammed Alhih et al., 2017.
9   Parmley, 2021
10 Andrew Miller, 2020.
11 Leontyeva, 2018
12 Helping Teachers Feel More Confident About Distance Learning
13 Remote teaching and learning in Office 365 Education

51bb884025c4

10. The Effect of Geographic Distance on Distance Education: An Empirical Study July 2014Journal of Educators Online 11(3):1-26 DOI:10.9743/JEO.2014.3.1; Spatial Learner, Heng Luo; Central China Normal University Anthony C. Robinson Pennsylvania State University

11. The Online Educator. A Guide to Creating the Virtual Classroom, M. McVay Lynch; March 2004; Education and Information Technologies 9(1):91-93

12. Situation analysis on the effects of and responses to COVID-19 on the Education sector in East Asia: Sub-regional report; Corporate author: UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific [1006], United Nations Children's Fund [1268] Document code: TH/C4-6226/IQE/21/038-EASR; ISBN: 978-92-9223-681-6 (UNESCO), 978-92-806-5262-8 (UNICEF) 2021; https://unesdoc.unesco.org/ark:/48223/pf0000379496

13. "Summative Assessment in Distance Learning", Andrew Miller; April 28, 2020; https://www.edutopia.org/article/summative-assessment-distance-learning

MINI-MOBILE MACHINE WITH ELECTRIC CONTROL

Roman Kenkishvili
Doctor of Engineering Sciences,
Head of Heat Power Installations Department of
LEPL Raphael Dvali Institute of Machine Mechanics

Paata Dolidze
Ph.D., Chief Research Scientist of
Heat Power Installations Department of
LEPL Raphael Dvali Institute of Machine Mechanics

Pridon Mshvildadze
Ph.D., Head of Engineering Department of
LEPL Raphael Dvali Institute of Machine Mechanics

Mikheil Sharmiashvili
PhD Student, Department of Transportation and
Mechanical Engineering, Georgian technical University
LEPL Raphael Dvali Institute of Machine Mechanics

Abstract

The article discusses a mini-mobile machine of hybrid type designed in the Raphael Dvali Institute of Machine Mechanics. Mini-mobile machine is an intermediate link between two-wheel tractor and mini-tractor. The machine uses an electric system of control, which enables smoothly starting and stopping of machine, its maneuverability with independent changing rotation frequency and rotation direction of wheels, machine movement in forward and backward direction and braking. The machine is controlled by an operator with electrical panel both remotely and as well as sitting on the machine, which frees the operator from doing the hard work. Placing the operator directly on the machine increases adhesion power, allowing the machine to perform heavy agricultural operations. The construction of the machine provides for its operation with one or two active axels and is designed to perform various agricultural works. The represented construction of mini-mobile machine by simple alteration enables to work with one or two axles, to change the location of aggregates and units placed in the machine, and to equip it by different hanging equipment and devices. Thus, it is possible to build up the mobile machine with cross-country capability of different kind and purpose. In addition, it must be noted that the hybrid type power installation with an internal combustion engine, generators and electric drives was used for the first time for mobile vehicles of small mechanization in agriculture.

Introduction

Following from specificity of agriculture (very many technological processes), all types of agricultural works need corresponding machinery. All these problems are found on small farms where ground areas do not exceed 4-5 hectare and manufacturers aim to produce different agricultural products, which demand a realization of many technological operations. Such demands can be met by using universal and mechanized two-wheel tractors, which are equipped with low-powered internal combustion engines and have a replaceable hanging equipment of different kinds.

Two-wheel tractors with their functions and possibilities keep an intermediate position between motor cultivators and mini-tractors. Distinction between the two-wheel tractor and the mini-tractor is that the two-wheel tractor is monoaxial, foot-operated and the seat for the operator and the steering mechanism for maneuvering is provided on the mini-tractor. As for a motor cultivator, it performs one kind of operation – ground loosening only. Two-wheel tractors are classified by engine power. Two-wheel tractors with engine power 5,5 – 6.5 hp. belong to the light class, and two-wheel tractors with engine power 7 hp. and above belong to the heavy one. Two-wheel tractors of light class because of their low weight and accordingly small adhesion of wheels cannot perform heavy and complex agricultural works, their driving is very tiring and it demands great physical overloads from operator. Users of light two-wheel tractors try to fasten additional weight to the wheel disks or use wheels with iron spikes for increasing the adhesion of wheels and grasping of tires with the ground that is not a solution of the problem. Solving this question requires the mini-mobile machine of intermediate class between two-wheel tractors and mini-tractors in which the correction of mentioned negative moments will be taken into consideration. But there is a definite effort to have the two-wheel tractors with third, additional passive wheel, which only provides a transportation of the operator and has no influence on the adhesion of wheels. With such construction solution, there is an increased longitudinal dimension of two-wheel tractors that influence negatively the maneuverability of the machine.

Main part

The figure 1 represents the basic diagram of hybrid type mobile machine of original construction and the figure 2 shows an acting physical model of the machine designed on the basis of the same diagram in the Raphael Dvali Institute of Machine Mechanics.
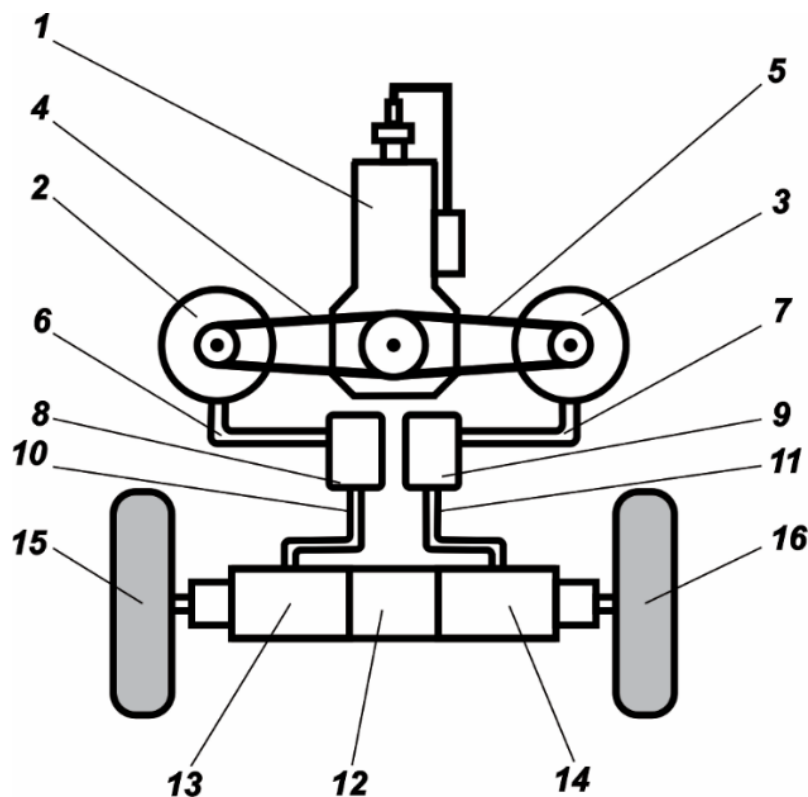
Fig. 1. Basic diagram of the hybrid type mobile machine.

1 – internal combustion engine; 2, 3 – direct current automobile generators;

4, 5 – belts for driving of generators; 6, 7, 10, 11 – electrical conductors; 8, 9 – electronic control blocks; 12 – axle; 13, 14 – direct current motors with planetary reduction gears;

15, 16 – wheels.

The basic power installation of the mobile machine is air cooling internal combustion engine with power 7,5 hp, working on the petrol, n = 3600 rpm, which activates two automobile generators type MD31395 with parameters: N = 1777 W., n = 6000 rpm., I = 132 A., U = 14,4 V., and as a drive, direct current motor-reducers of Italian firm "TRANSTECNO" are used, model ES350 with following parameters: N = 500 W., N = 500 rpm., U = 12 V., I = 58,5 A., planetary reduction gear with transmission ratio i = 64, axial load P = 2000 N.

Fig. 2. Acting physical model of the hybrid type mini-mobile machine.

Construction of mobile machine allows working with one or two axles. Axles are identical and they represent two independent direct current motors with planetary reduction gears located in the longitudinal tube (frame). The wheels are mounted on the axes outgoing from reduction gears (Fig.3).
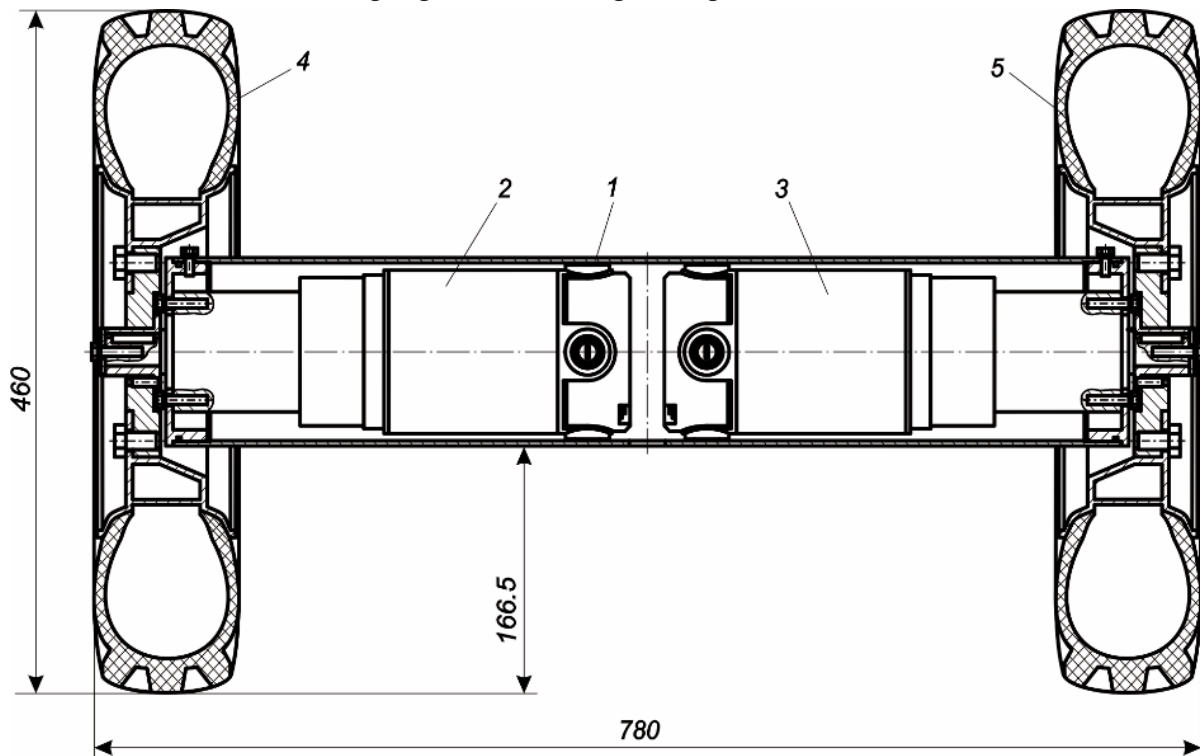
Fig. 3. Assemblage drawing of mobile machine axle.
1 – frame; 2 – DC motor-reducers; 4, 5 – wheels.

The classical differential mechanism is not provided in the axles. Its existence was excluded by electric system for independent starting and control of direct current motors, which are placed in the axle. In terms of maneuverability and cross-country capability of the machine, the mentioned system, as compared with classical differential model, has great advantages, particularly: firstly, the machine cannot slide on one wheel, as it happens in case of simple type differential drive, and it significantly increases the cross-country capability that is very important for such type of machines, and secondly, while maneuvering the machine, an independent control of electric motors allows us to change speed as well as the direction of rotation of the wheels. This last condition provides a high maneuverability of the machine and while using one axle, the machine can make u-turn with minimal radius around the center of the axle.

By increasing the adhesion of wheels, performing the heavy agricultural works by machine is provided by the aggregates and units located on the driving axle as well as the gravity force of the operator placed on the same axle. The hanging equipment (fig.4) or special simple support compensates the reactive moment arising on the axle when using only one axle in the machine. The operator can drive the machine both in a sitting position and by remote control, which makes his heavy physical work easier.

Fig. 4. Mobile machine with hanging equipment.

The purpose of the control system is to change the rotation frequency and rotational moment brought on the tire casing as a result of road condition and movement regime. Mobile machines with classical working scheme, whose basic power installation is internal combustion engine and force installation - gear box and axle with differential, have an independent steering and breaking system. Unlike them, the represented machine is equipped with electrical control system, two independent generators and driving gears. Electrical control system supposes: smooth start of machine, its driving with independent changing rotation frequency and rotation direction of wheels, remote control of machine, machine movement in forward and backward direction, braking of machine, and protection of the generators from overload.

The figure 5 represents an electrical scheme of machine feeding, control and moving start on the example of one driving gear, where number 1 is the 3-phase alternating current generator with rectifier, number 2 is a voltage regulator (provides uninterrupted voltage on board system at the different rotation of the generator); number 3 is a control block with operator control; number 4 is a direct current motor; number 5 is a double-pole switch (provides the switching of control block and drive of machine); number 6 is a double-pole switch of current phase inverter (provides the control of forward and backward movement of machine); and number 7 is changeable, regulated resistance (provides the rotational frequency of electrical motor i.e. to regulate the speed of machine).

Conditionally, control block can be divided in two parts. First is the electrical scheme of PWM-regulator, which provides the regulation of rotation frequency of motors; second is a current phase inverter, which inverts the current incoming to the electrical motors. Those operations are realized by two electrical relay.
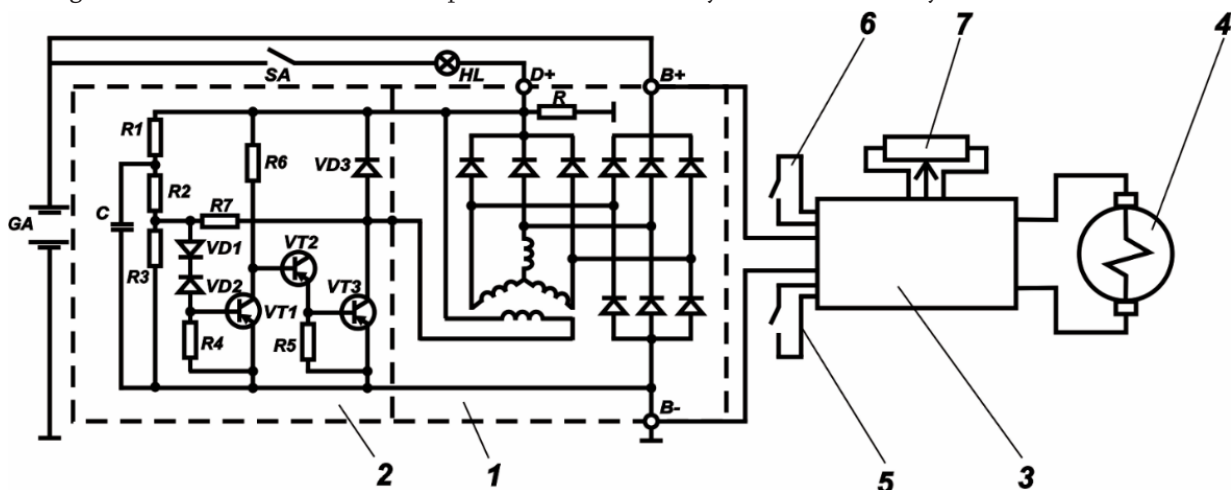
Fig. 5. The scheme of electrical feeding and control of machine.

When the machine is equipped by one axle, two such devices are necessary, but when the machine is equipped by two axles, in this case one drive is added (fig. 6). Application of mentioned control blocks enables to realize an electrical feed of motor from one generator with corresponding power. The figure 7 shows a block scheme of control of feeding from one generator of mobile machine.
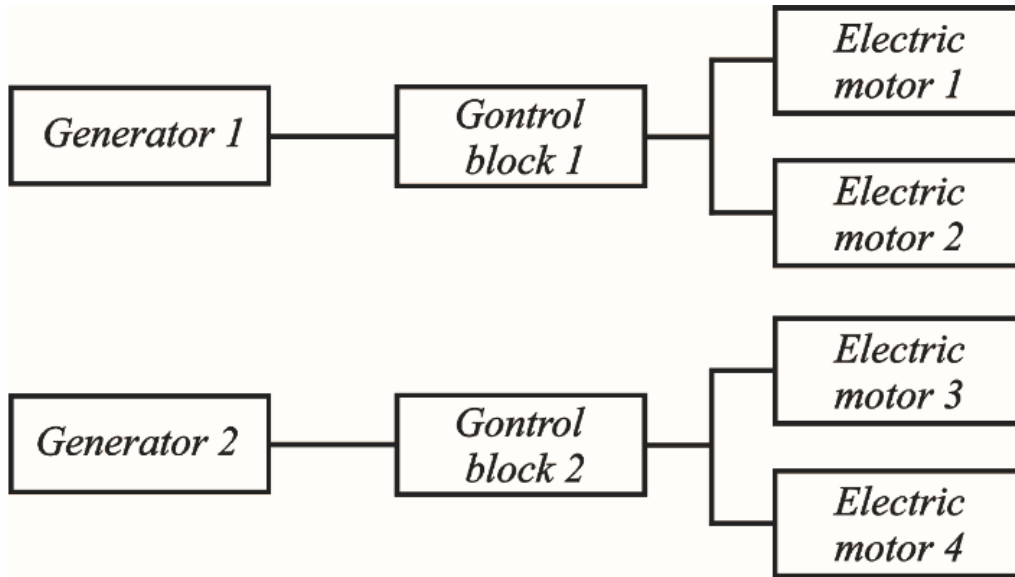
Fig. 6. Block scheme of control of machine with two generators and two axles.
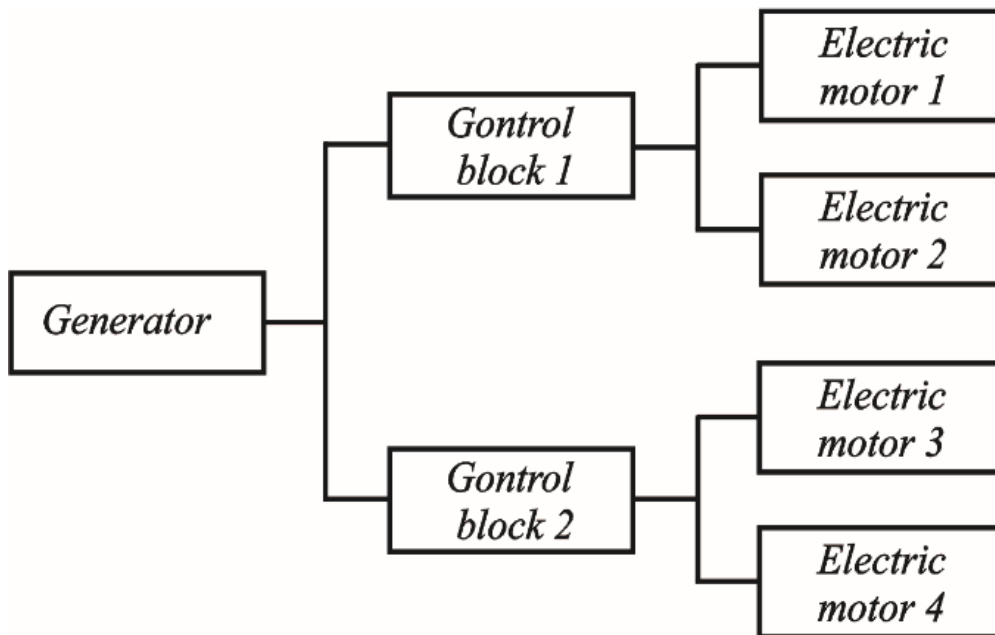
Fig. 7. Block scheme of control of machine with one generator and two axles.

The figure 8 shows the placing of control blocks on the mobile machine.
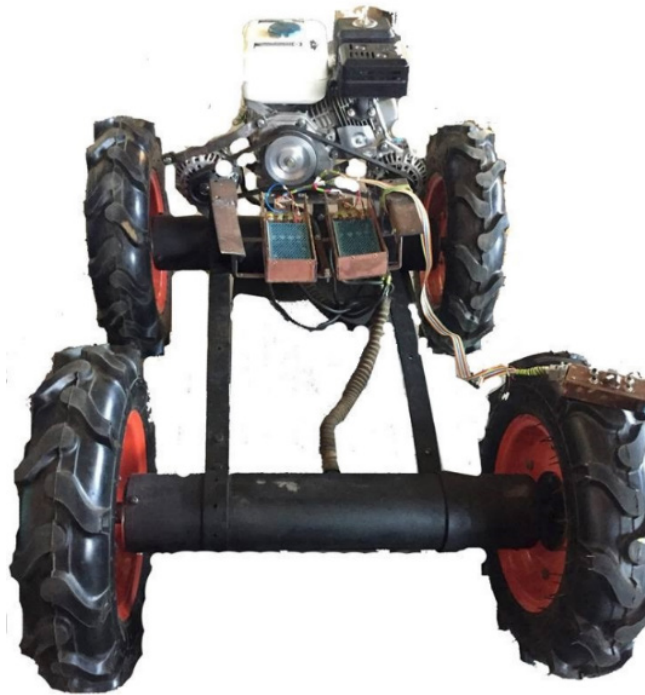
Fig.8. Placing of control blocks on the mobile machine.

The parameters of the represented mini-mobile machine are:

- Full weight – 400 kg;
- Effective power of the engine – 7.5 hp;
- Maximum speed – 4 km/h;
- Radius of wheel – 0,23 m.

As it is known, the power balance of mobile machine is expressed by the following equation:[1]

$$N\_e \cdot \eta\_m = N\_f + N\_\omega + N\_i + N\_j \tag{1}$$

Here, is output power of the power unit, hp;

- transmission efficiency;
- consumption power for overcoming the rolling resistance, hp;
- consumption power for overcoming the air resistance, hp;
- consumption power for overcoming the road inclination resistance, hp;
- consumption power for overcoming the machine acceleration, hp.

Due to the small size and weight and low movement speed, the powers spent for overcoming the air resistance and acceleration can be ignored, so the power balance equation (1) can be written like this:

$$N\_e \cdot \eta\_m = N\_f + N\_i \tag{2}$$

for its side[2]

$$N_f = \frac{G \cdot f \cdot v \cdot \cos \alpha}{270} \tag{3}$$

and

$$N_i = \frac{G \cdot v \cdot \sin \alpha}{270} \tag{4}$$

in the last expression:

   is a full weight of the mobile machine, kg.

   – a speed of machine, km/h.

   – wheel rolling resistance coefficient.

   – an inclination angle of the road.

Substituting (3) and (4) in (2) power balance equation assumes the view:

$$N_e \cdot \eta_m = \frac{G \cdot v(f \cdot \cos \alpha + \sin \alpha)}{270} \tag{5}$$

---

1   დვალი რ. ავტომობილის საექსპლუატაციო თვისებების თეორია. თბილისი, თბილისის უნივერსიტეტის გამომცემლობა, 1986.

2   Яковлев Н.А., Диваков Н. В. Теория автомобиля. М.: Высшая школа, 1962.

The meaning of wheel rolling resistance coefficient depends on the kind of road covering and machine speed. As the machine speed does not exceed 70 km/h, $f = f_0$, its meaning can be taken from the handbooks:[3,4]

- The road with asphalt concrete covering =0.014 0.0181;
- The miry soil =0.05 0.10;
- Snowy road =0.025 0.03;
- Dry sand =0.080,1.

Meaning of transmission efficiency is [9].[5]

According to the data of mini-mobile machine and 5th expression, we can calculate the theoretical meaning of eventual complete weight of the machine by different covering and inclination angle of the road. The results obtained by calculation are given in Table 1.

<div align="right">Table 1</div>

Theoretical meaning of eventual complete weight of the mobile machine by different covering and inclination angle of the road

Kind of road covering	Coefficient of rolling resistance (f_0)	Inclination angle of the road (^{0})					
		0	10	20	30	40	45
Asphalt concrete	0,018	7555	715	377	264	209	189
Miry soil	0,1	1360	503	309	234	192	176
Snowy road	0,03	4533	680	367	259	205	186
Dry sand	0,1	453	295	219	181	155	151

Conclusion

The represented construction of mini-mobile machine by simple alteration enables to work with one or two axles, to change the location of aggregates and units placed in the machine, and to equip it with different hanging equipment. Thus, it is possible to build up the mobile machine with cross-country capability of different kind and purpose. In addition, it must be noted that the hybrid type power installation with internal combustion engine, generators and electric drives was used for the first time for mobile machines of small mechanization in agriculture.

Bibliography:

1. დვალი რ. ავტომობილის საექსპლუატაციო თვისებების თეორია. თბილისი, თბილისის უნივერსიტეტის გამომცემლობა, 1986.
2. Скотников В. А., Мащенский А. А., Солонский А. С. Основы теории и расчета трактора и автомобиля. М.: Агропромиздат, 1986.
3. Иванов В. В., Иларионов В. А., Морин М. М., Мастиков В. А. Основы теории автомобиля и трактора. М.: Высшая школа, 1970.
4. Литвинов А. С., Фаробин Я. Е. Автомобиль. Теория эксплуатационных свойств. М.: Машиностроение, 1989.
5. Мирошниченко, А. Н. Основы теории автомобиля и трактора Томск: Издательство Томского государственного архитектурно-строительного университета, 2014.
6. Умняшкин В.А., Филькин Н.М., Музафаров Р.С. Теория автомобиля. Ижевск: ИжГТУ, 2006.
7. Чумаченко Ю.Т., Федорченко А.А. Автомо-бильный электрик. Электрооборудование и электронные системы автомобилей. Ростов-на-Дону: Феникс, 2006.
8. Яковлев Н.А., Диваков Н. В. Теория автомобиля. М.: Высшая школа, 1962.
9. http://www.transportpart.ru/pojds-796-1.html

---

3 Иванов В. В., Иларионов В. А., Морин М. М., Мастиков В. А. Основы теории автомобиля и трактора. М.: Высшая школа, 1970.
4 Литвинов А. С., Фаробин Я. Е. Автомобиль. Теория эксплуатационных свойств. М.: Машиностроение, 1989.
5 http://www.transportpart.ru/pojds-796-1.html

RESEARCH OF THE INTERNATIONAL EXPERIENCE OF ARRANGEMENT OF PROVING GROUNDS PASSABLE TERRAIN FOR WHEELED AND TRACKED MILITARY VEHICLES

Tamaz Natriashvili
Doctor of Technical Sciences,
Director of LEPL Raphael Dvali Institute of Machine Mechanics

Paata Dolidze
Ph.D., Chief Research Scientist of
Heat Power Installations Department of
LEPL Raphael Dvali Institute of Machine Mechanics

Roman Kenkishvili
Doctor of Engineering Sciences,
Head of Heat Power Installations Department of
LEPL Raphael Dvali Institute of Machine Mechanics

Vakhtang Mamaladze
Master of Science, Research Assistant of
Machine Building Department of
LEPL Raphael Dvali Institute of Machine Mechanics

Abstract

The article presents the project data of construction designs for an estimation of passability of wheeled and tracked military vehicles for checking the parameters that are accepted as obligatory within the North Atlantic Treaty Organization (NATO). In particular, the constructions for determining the following parameters of passability are considered: ground clearance; angles of approach and departure; angle of climb; minimum turning radius; corridor width while turning with minimum radius; maximum angles of overcome gradients and side slope; maximum width of overcome vertical-sided ditch; maximum heights of overcome vertical wall and step; drawbar pull, speed and acceleration during mobility on the soft soil; and maximum depth of overcome water during fording.

The project data is selected from the data of proving grounds for wheeled and tracked military vehicles and the relevant documents of the USA and the Russian Federation so that they don't come in a contradiction with publications of the NATO.

Introduction

It is known that the passability of the vehicle determines its ability to move at bad road conditions, on off-road terrain and overcome different obstacles. All vehicles must have a characterization of passability, but various types of vehicle require different passability depending on purpose. For example, high-class passenger car is intended for moving only on the quality roads; therefore, it does not require any special passability. Trucks that are used to work on both good and bad roads and off-road terrain must have increased passability. It is natural that the passability has particular importance for military vehicles. Until the present, there are no common criteria by which it could be possible to estimate the complete passability; therefore, passability is estimated by means of comparative estimation of the ability of the vehicle to overcome difficult passable areas and various obstacles. If a vehicle is more passable, than more its average speed of performing of transport work in bad road conditions, off-road terrain and overcoming an obstacle.[1,2]

Main part

The vehicle can lose a moving ability due to some factors such as touching of vehicle projection parts with uneven surface of the road, danger of overturning on side slopes, impossibility of climbing gradients, insufficient adhesion of wheels or vehicle sinkage in the surface, dampening of vehicle electrical devices or penetration of water in the air inlet during fording and so on. Taking the noted factors into consideration, nomenclature of the military vehicle passability parameters can be expressed by the following way: ground clearance; angles of approach and departure; angle of climb; minimum turning radius; corridor width while turning with minimum radius; maximum angles of overcoming gradients and side slopes; maximum width of overcoming vertical-sided ditch; maximum heights of overcoming vertical wall and step; drawbar pull, speed and acceleration during mobility on the soft soil; and maximum depth of overcoming water depth during fording.[3,4]

Parameters like ground clearance, angles of approach and departure, andw angle of climb are determined on a flat, level area, with hard cover (wood, concrete, asphalt and so on). If it is possible the area should be covered. The possible limits of the unevenness of the support surface is 3 mm, and inclination from horizontal - 5$^/$.[4,5]

Minimum turning radius and corridor width while turning with minimum radius can be determined on the area element shown on figure 1. Figure 2 shows section and plan view of this area.[4,6,7]

Fig. 1. An air photo of the area element for the determination of turning radii.

1 Dvali R. Theory of operational properties of the vehicle. Tbilisi, Tbilisi University Publishing House,1986

2 Агейкин Я. С. Проходимость автомобилей. М.: Машиностроение, 1981.

3 AVTP 1. Allied vehicle testing publications.

4 ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.

5 AVTP 01-10. Dimension and profile.

6 AVTP 03-30. Steering and Manoeuvrability.

7 TOP 01-1-011A. Vehicle Test Facilities at Aberdeen Test Center and Yuma Test Center.

The gradients to be overcome by vehicles are arranged on hard, equal ground. It is allowed to cover them by artificial materials. The gradient complex for testing the vehicle passability consists of different gradients with 30-60 percent slopes. The gradient slope must be constant in length – it must be no less than twice the overall length of the vehicle. Acceptable inclination from constant slope is 5 percent. The testing gradients must have areas for turning the vehicles at both sides. Figure 3 represents the orientation scheme of the proving ground gradeability slopes. The given scheme unites gradients for testing the passability on the 30-, 40-, 45-, 50- and 60 percent slopes and Table 1 gives their orientation project data. Figure 4 shows the illustration of gradients with different slopes.[8,9,10]

Fig. 2. Section and plan view of turning circle.
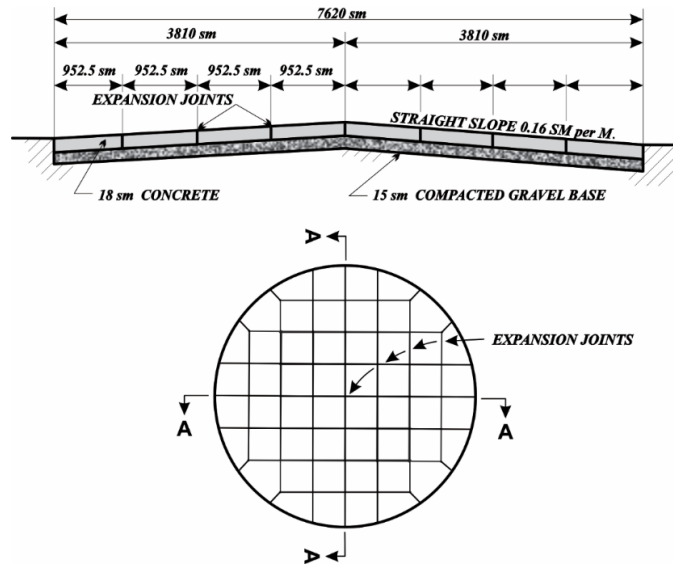
Fig. 3. Orientation scheme of the proving ground gradeability slopes.
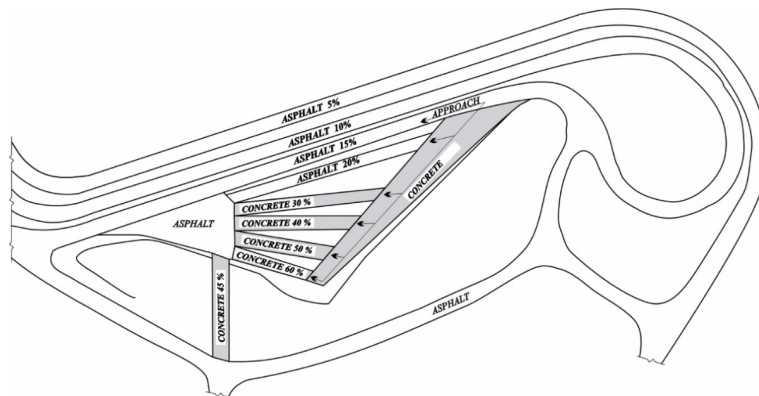
Table 1.

Orientation project data of the passability testing gradients.

№	Gradient slope (percent)	Carriageway length (m)	Material used for road cover
1	30	45	concrete
2	40	34	concrete
3	45	18	concrete
4	50	30	concrete
5	60	25	concrete

The side slopes to be overcome by vehicles are arranged on hard, equal ground. It is allowed to cover them by artificial materials. The side slope complex for testing the vehicle passability consists of different slopes with 20- 30- and 40 percent inclination. The side slope must be constant in the length and it must be no less than three

8 AVTP 03-90. Gradients and Slopes.
9 TOP 01-1-011A. Vehicle Test Facilities at Aberdeen Test Center and Yuma Test Center.
10 ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.

times the overall length of the vehicle. Acceptable inclination from constant slope is 5 percent. Figure 5 and figure 6 represent 30 percent side slope transverse section and its illustration. Table 2 shows the orientation project data of side slopes.[11,12,13]

Fig. 4. 30 - percent grade (left) and 40 and 60 - percent grades (right).
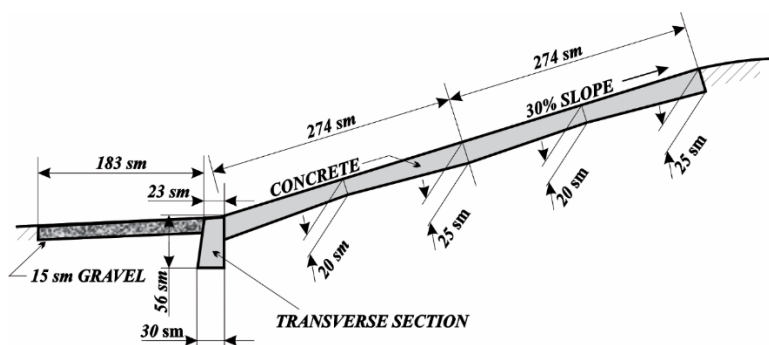
Fig. 5. Transverse section of the 30 percent side slope.

Fig. 6. Illustration of the 30 percent side slope.

---

11   AVTP 03-90. Gradients and Slopes.
12   TOP 01-1-011A. Vehicle Test Facilities at Aberdeen Test Center and Yuma Test Center.
13   ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.

Table 2.

Orientation project data of the side slopes.

№	Side slope (percent)	Carriageway length (m)	Material used for road cover
1	20	83	concrete
2	30	220	concrete
3	40	91	concrete

A vertical-sided ditches (fig 7,a), vertical walls (fig 7,b) and vertical steps (fig 7,c) are arranged on a flat, level area, with hard cover as an assemble of various construction of different sizes. It is permissible to construct them from concrete. Dimensions of area must be suitable for complete overcoming of obstacles by vehicle. The length of every ditch must be no less than 4 m. The depth (h) of ditches must be selected in such a way so that when overcoming them by vehicle the wheels must not touch the ditch bottom. The length of each vertical wall and vertical step must be no less than 4 m. The breadth of vertical wall does not exceed its height (a ≤ h).[14,15]
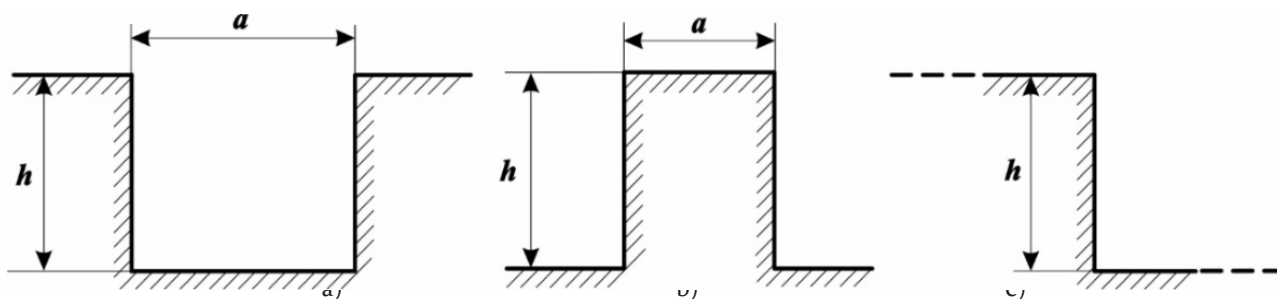
Fig. 7. Schemes of vertical-sided ditches (a), vertical walls (b) and vertical steps (c).

The vertical wall (Fig. 8) can be equipped with replaceable timbers at the top so that the wall can be maintained in a standard condition following damage from tests. Orientation scheme of arrangement of vertical steps with different height is given on figure 9.[16]

Fig. 8. Vehicle ascending the vertical wall.

---

14 AVTP 03-80. Standard obstacles.
15 ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.
16 TOP 01-1-011A. Vehicle Test Facilities at Aberdeen Test Center and Yuma Test Center.
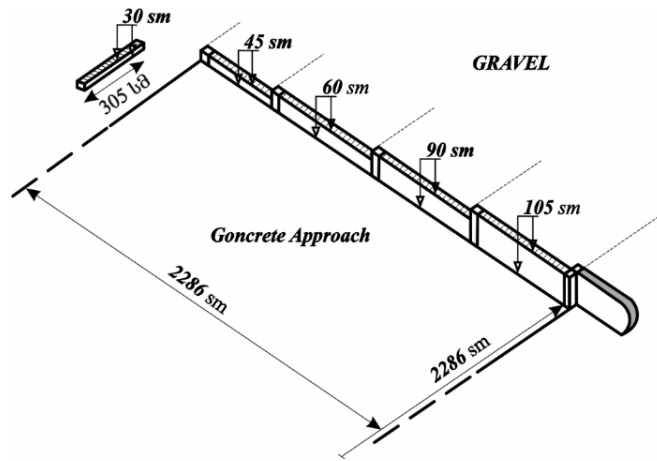
Fig. 9. Isometric view of the vertical walls.

The sand course is used during soft soil mobility of vehicle for determining the drawbar pull, speed and acceleration. The figure 10 shows project data of the sand course. Besides the above mentioned, the given parameters can be determined for fine-grained soil (for example loam, clay) as well as for natural terrain, as required. Parameters of testing areas (length, width) must not be less than parameters of sand course. Besides, there should be the means of irrigation and tilling in the depth to approximately 60 cm on the area of fine-grained soil. For irrigation, analogical construction can be used as given on figure 11.[17,18,19]
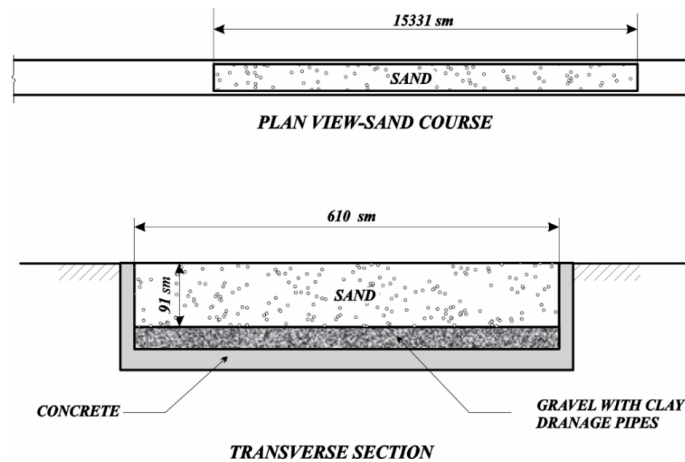
Fig. 10. Plan view and transverse section of sand course.

Fig. 11. Mud bypass course with sprinklers operating.

17 AVTP 03-100. Soft Soil Mobility.
18 TOP 01-1-011A. Vehicle Test Facilities at Aberdeen Test Center and Yuma Test Center.
19 ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.

Project schemes of the basins for fording tests of the vehicles are given on figure 12 and figure 13. The bottom of the basin is made of compacted sandy crushed stone or concrete. Length of basin area with the equal depth must not be less than three times overall length of the vehicle. After coming out of the water, it must be possible to functionally check steer control and braking ability of the vehicle. [20],[21],[22]
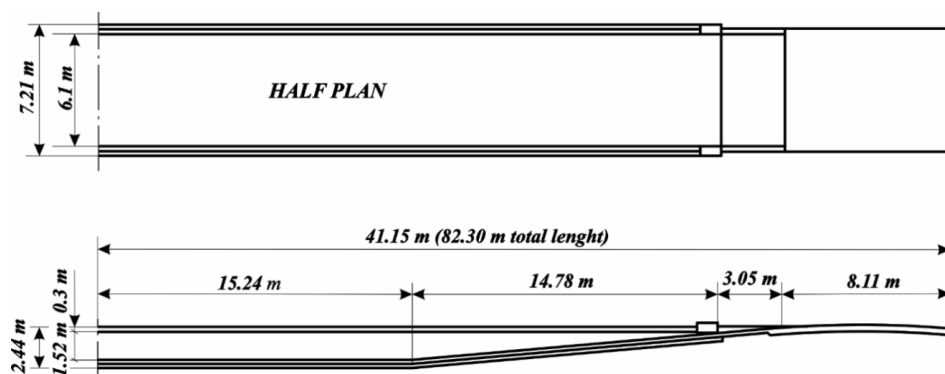
Fig.12. Half plan and section views of the fording basin.
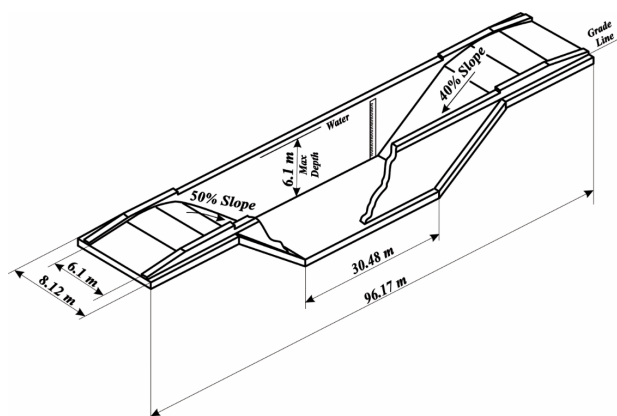
Fig.13. Underwater fording facility.

Conclusion

Thus, on the basis of corresponding normative documentation intended for military vehicles of USA and Russian Federation, the project schemes of building construction for estimation of passability of military vehicles have been developed. Mentioned schemes can be used for building the proving ground passability constructions and for checking the passability parameters of military vehicles by means of comparative estimation, which are obligatory in the frame of North Atlantic Treaty Organization.

Bibliography:

1. Dvali R. Theory of operational properties of the vehicle. Tbilisi, Tbilisi University Publishing House, 1986
2. AVTP 1. Allied vehicle testing publications.
3. AVTP 01-10. Dimension and profile
4. AVTP 03-30. Steering and Manoeuvrability.
5. AVTP 03-80. Standard obstacles.
6. AVTP 03-90. Gradients and Slopes.
7. AVTP 03-100. Soft Soil Mobility.
8. AVTP 03-110. Fording.
9. TOP 01-1-011A. Vehicle Test Facilities at Aberdeen Test Center and Yuma Test Center.
10. TOP 2-2-612. Fording.
11. Агейкин Я. С. Проходимость автомобилей. М.: Машиностроение, 1981.
12. ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.

---

20 AVTP 03-110. Fording.
21 TOP 2-2-612. Fording.
22 ГОСТ РВ 52048-2003. Автомобили многоцелевого назначения. Параметры проходимости и методы их определения.

ADVANTAGE OF MODERN EDUCATIONAL TECHNOLOGIES IN PERSONALITY FORMATION OF OFFICERS

Ramid Huseynov
PhD in Political Sciences,
Associate Professor
National Defence University,
Military Institute named after Heydar Aliyev
Baku, Azerbaijan

Abstract

The importance of personal development of young officers in increasing the professionalism of the army was explained in the report, and the role of modern military science was shown for this. Thus, the analysis of modern wars suggests that the states try to win more and lose less during the war. This fact in itself requires the modern technical equipment of the army to be equipped with professional officers. The presence of high-potential officer personnel ensures the power of the army, its flexibility, proper management and, as a result, reliable protection of the state's military defence. The formation of modern professional officer cards, without a doubt, actualizes the level of organization of education in military educational institutions of the country. Development of the institutional foundations of the education system, expansion of the application of innovative training methods and technologies, and the creation of a competency-based personality and result-oriented education model have been set as a strategic goal. According to this principle, we can say that, as in all countries of the world at the present time, this issue stands as a priority target for the higher military educational institutions of Azerbaijan. The urgency of the problem requires its scientific-theoretical investigation, giving some suggestions and recommendations for future practical work. During the research, it is determined that, as in other higher educational institutions, training in military educational institutions is focused on the personality development of young officers, which will allow them to become professional, highly intelligent, self-confident, , and flexible decision-making officers in the future with independent management skills. In comparison with other higher education institutions, special sensitivity to the above-mentioned issue in higher military educational institutions makes it more necessary to train strong-willed, visionary, and right decision-making personnel for the reliable provision of the national security and military defence of the state in general, in contrast to the training of personnel in a certain field.

Introduction

In modern times, "educational content" has a more modern character, including knowledge, skills, abilities and values. That is, it is understood as application activities consisting of more values than the content of education, which consists of a system of traditional knowledge, skills and habits. Although each subject comes up with its own specific concepts, ultimately it stands on the same level due to its functions in the process of formation of human personality and citizen. This level is the level of personality development and formation. It covers values manifested in the form of cultures in all parameters, starting from mental qualities to psychomotor activities.

Along with the training of those studying at the higher education level, which is the main level of education, as professional specialists, the importance of their formation as personalities with high moral values and humanistic qualities for our modern society and state is kept in mind. Treating the student as an individual encourages the formation of his self-confidence and great hope for his future.

Person-centeredness requires treating the learner as a whole person. He sets himself the task of forming the most necessary values he needs in life. It is considered important to expect this factor in the entire educational process. The learner is treated as a non-repetitive individual, a conscious, developing personality with the ability to perform free, independent and creative activities internally.[1]

The application of modern teaching methods has an important advantage in shaping the personality of students. The personality of students cannot be formed without humanizing, humanitarianizing, and democratizing education. The principle of humanization of education serves social, human and cultural ideas.

In the "State Strategy for the Development of Education in the Republic of Azerbaijan", the development of the institutional foundations of the education system, the creation of a competency-based personality and result-oriented education model by expanding the application of innovative training methods and technologies is set as a strategic goal.[2]

Orientation of modern training technologies and methods in higher education institutions to the personality-oriented development of students will allow them to be formed as professional, highly intelligent, self-confident personnel with independent management skills and flexible decision-making capabilities in the future.

Thus, the implementation of differentiation and individualization, cognitive activity, visibility, cooperation, and result orientation referred to in the training process is primarily determined by the competence and professionalism of the teaching staff. First of all, their professionalism should show them an individual approach in order to bring out personal qualities in the students. Experience shows that even the most effective means of influence lose their importance if the individual characteristics of trainees are not taken into account in educational work.[3]

The implementation of the modern educational paradigm based on the personality-oriented development of the student, the formation of the general culture, the moral environment and the correct social position in the educational system, the improvement of the system of social relations in educational institutions, and the increase of efficiency in the provision of relevant knowledge in the field of humanities are taken as the basis.[4]

As a result of the application of modern learning technologies, the main task facing the teacher is to motivate the students, encourage them to actively participate, and give the right direction to find a solution to the problem. The organization of the lesson in this form creates conditions for students to independently acquire the necessary knowledge, skills and habits, to develop their way of thinking, and to form independent decision-making skills.

Experience shows that even the most effective means of influence lose their importance if the individual characteristics of trainees are not taken into account in educational work.

Modern teaching methods aim to expand students' thinking, understanding and actively participate in the process of acquiring knowledge.

In the "State Strategy for the Development of Education in the Republic of Azerbaijan", the above-mentioned issue was set as a priority: modernization of human resources, creation of responsible, transparent and efficient management mechanisms for educational results.[5]

---

1 http:// www. tehsilproblemleri.com
2 State Strategy for the development of education in the Republic of Azerbaijan [Electronic resource] / URL: http:// www. prezident.az
3 Nazarov, A.M. Modern learning technologies. Textbook. Baku: ASPU-publishing house - 2012. - p.92
4 Alizada, A.A., Alizada, H.A. New pedagogical thinking: an introduction to psych pedagogy. Baku: ASPU, - 2008. p.289
5 State Strategy for the development of education in the Republic of Azerbaijan [Electronic resource] / URL: http:// www.prezident.az

Spirituality is related to a way of life based on values such as respect for the learner, love, mutual understanding, development and creativity. Therefore, as a result of the humanization of the modern lesson, it requires moving away from the pedagogy and psychology of forceful application. Therefore, the principle of humanization requires, first of all, to replace the object worldview with the subject worldview.

Let's consider the comparison of traditional and modern education in the personality-oriented formation of students.

Features of traditional classes:

- treating students as objects: all students are treated at the same level, conditions are not created for the development of talent and ability;
- the realization of the right to choose in the lesson is limited.[6]
- indifference, inactivity, reliance on someone else's help is formed in the students;
- non-democratic environment in the classroom: vertical communication, administrative-bureaucratic, subordination relations dominate;
- formation of knowledge and skills based on coercion and punishment is preferred;
- the development of personal qualities and professional skills of the teacher is limited;
- the demand for the development of critical thinking of educators and involvement in creative research is weakening.

Features of the modern lesson:

- approach to learners as subjects: the learner is treated as a non-repetitive individual, a conscious, developing personality with the ability to perform free, independent and creative activities;
- problematic, dialogic, reflexive learning technologies, collective (group) activities are preferred in class;
- the practical, vital and moral-pragmatic orientation of the lesson (the learner both develops and becomes a useful person for society) is strengthened;
- the intellectual and moral development of students is brought to the fore, and conditions are created for them to express their ideas in a clear, logical sequence;
- by ensuring the development of students' creative abilities, they develop high communication skills - speech culture, moral values, cultural-aesthetic taste, and a sense of humanism;
- communicative activities (listening and hearing), openness, sincerity, tolerance, the ability to respect the interlocutor develop.[7,8]

Modern learning technologies instill the following feelings in students:
- to think independently, make free judgments;
- the ability to analyze one's own experience and knowledge, self-evaluate;
- to cooperate, to work together with others;
- listening to others, respecting different opinions, having a tolerant attitude;
- to explain one's ideas with arguments and facts, to prove them in a justified form;
- to make a correct and clear decision.

As an important issue set in **the Strategy of Education in the Republic of Azerbaijan, "**...the principle of integration of the personality into the world experience of the preparation of a perfect person should be accepted as a necessary factor, and specific activities should be implemented in that direction...".[9] This does not mean to completely abandon the traditional teaching methods that activate students to a certain extent and allow them to succeed in training. Using the positive aspects of traditional methods, working out the pedagogical and psychological bases of new approaches, new learning technologies, innovations, and researching the scientific bases of the result-oriented, student-oriented educational process in accordance with modern requirements is considered as the most urgent problem facing the education system.

Thus, as a result of the application of modern training technologies, highly intelligent youth-personalities grow into thoughtful, intelligent, potentially energetic, have strong logic and are able to grasp the core of the matter and find a way out in all kinds of situations. Such individuals act as honest, moral, humane and professional personnel who are able to contribute to the political, economic, and cultural development of the state as a whole.

---

6 Pedagogy. Pedagogical theories, systems, technologies. (Under the editorship of S.A. Smirnov). Moscow: Academy – 2003. - p. 169-171
7 URL: http:// www.edu.gov.az
8 URL: http:// www.curriculum.az
9 State Strategy for the development of education in the Republic of Azerbaijan [Electronic resource] / URL: http:// www.prezident.az

Bibliography:

1. http:// www. tehsilproblemleri.com
2. State Strategy for the development of education in the Republic of Azerbaijan [Electronic resource] / URL: http:// www.prezident.az
3. Nazarov, A.M. Modern learning technologies. Textbook. Baku: ASPU-publishing house - 2012. - 103 p.
4. Alizada, A.A., Alizada, H.A. New pedagogical thinking: an introduction to psych pedagogy. Baku: ASPU, - 2008. - 479 p.
5. Pedagogy. Pedagogical theories, systems, technologies. (Under the editorship of S.A. Smirnov). Moscow: Academy – 2003. - 512 p.
6. URL: http:// www.edu.gov.az
7. URL: http:// www.curriculum.az

PROSPECTS OF Defence COOPERATION BETWEEN AZERBAIJAN AND GEORGIA

Vugar Mammadzada Mahammadali

PhD in Political Sciences
National Defence University of the Republic of Azerbaijan

Eljan Imamverdiyev Ramiz

Lieutenant Colonel
National Defence University of the Republic of Turkey

Abstract

This article examines the main factors determining defence cooperation between Azerbaijan and Georgia, the directions of Azerbaijan-Georgia and Azerbaijan-Georgia-Turkey defence cooperation, and the impact of this cooperation on the security environment of the South Caucasus.

Introduction

Taking advantage of the historical conditions created by the collapse of the USSR in 1991, the peoples of Azerbaijan and Georgia expressed their national will and regained their independence rights. After the restoration of their independence, the foundation of the national development policy, future socio-political, socio-economic, defence-security and cultural-spiritual development of both states were laid, including the main priorities of the internal and foreign policy.

After regaining their independence, both states tried to find a way out of the difficult geopolitical situation and to formulate pragmatic political courses for their foreign policies. Azerbaijan, which has rich oil and gas deposits, is vital for Georgia in order to eliminate its energy dependence on Russia; also when it comes to alleviaing the political and economic pressures of the powerful actors of the region, in terms of exporting the hydrocarbon reserves in the Azerbaijani sector of the Caspian Sea to foreign markets and diversifying export routes, Georgia is very important to Azerbaijan.

Ensuring the stability and continuity of the activities listed above, as well as the transport-energy-communication projects connecting Asia and Europe (Baku-Tbilisi-Ceyhan, Baku-Tbilisi-Erzurum, TAP, TANAP pipelines and Baku-Tbilisi-Kars railway, etc.) cooperation between the two countries in the field of defence and security is rational in terms of joint protection.[1]

The main factors determining the defence cooperation between Azerbaijan and Georgia

Institutionalization of defence cooperation between Azerbaijan and Georgia was made necessary by the following main factors:

➢ The expansion of relations between the two countries in all fields boosted our cooperation in the field of defence;

➢ Growing of separatist tendencies in the internationally recognized territories of the strategic partners located in the same region - the former Nagorno-Karabakh, Tskhinvali (South Ossetia) and Abkhazia regions and the occupation of approximately 20% of the territories of both countries (as a result of the Second Karabakh War, on November 10, 2020, based on the tripartite declaration signed by Azerbaijani, Armenian and Russian officials, Azerbaijani side liberated its occupied territories);

➢ A similar foreign policy strategy of both countries regarding security issues and reducing the influence on the region of other powerful actors in the South Caucasus;

➢ The desire to modernize the armies of both countries and strengthen defence-security cooperation with Euro-Atlantic security structures;[2]

➢ Expansion of cooperation within the framework of GUAM, as well as support for peacekeeping missions conducted under the auspices of NATO, UN and OSCE;

➢ The need to exchange experience in the field of military intelligence, as well as in other areas of defence, in order to prevent threats that may occur in the region;

➢ Joint protection of critical energy-transport-communication projects connecting Europe in the Caspian-Black Sea basins region and providing joint flexible response at any time of danger, ensuring stability and security in the region, etc.

Directions of Azerbaijan-Georgia and Azerbaijan-Georgia-Turkey defence cooperation

Bilateral and tripartite cooperation between Azerbaijan-Georgia and Azerbaijan-Georgia-Turkey is implemented annually, based on the "Bilateral Cooperation Plan between the Ministries of Defence of Azerbaijan and Georgia" signed by the parties, as well as a tripartite Memorandum of Understanding.[3]

Both countries contributed to the "Resolute Support" (RSM) peacekeeping mission in Afghanistan under NATO's Partnership for Peace Program (PfP). Georgia, which is integrating into NATO, participated in the "Resolute Support" international security mission with the largest contingent among non-NATO countries.[4]

1 Azad Garibov, Azerbaijan, Georgia, Turkey: Advancing the Military Dimension of the Trilateral Partnership/ Dans L'Europe en Formation 2018/1 (n° 385), pages 37 à 44.https://www.cairn.info/revue-l-europe-en-formation-2018-1-page-37.htm
2 Cooperation with NATO.https://mod.gov.az/en/cooperation-with-nato-028/
3 Bilateral Defence Cooperation. https://mod.gov.ge/en/page/40/bilateral-defence-cooperation
4 Cooperation with the United States. https://mod.gov.ge/en/page/119/cooperation-with-the-united-states

Within the NATO-Georgia substantive cooperation package, the NATO-Georgia Joint Training and Evaluation Center operates in Georgia, and the representatives of the Alliance member countries support Georgia in fulfilling its obligations.[5]

Azerbaijan-Georgia and Azerbaijan-Georgia-Turkey defence cooperation is carried out in the following directions:

➢ Implementation of high-level mutual visits between the parties in bilateral and tripartite formats;
➢ In order to ensure the safety of transport-energy-communication projects, holding a computer-supported joint team-headquarters "Eternity" tripartite training every year;[6]
➢ Conducting the tripartite exercise "Caucasian Eagle" by the special forces of the parties;[7]
➢ Participation of the parties in the "Noble Partner" and "Agile Spirit" multinational exercises held annually in Georgia under the leadership of the United States and NATO;[8]
➢ Participation of the parties in summer and winter seasons training courses on basic, intermediate and full, held at Sachkheri Mountain Training School of Georgia;
➢ Conducting exchange of experience between the National Defence Universities of the Armed Forces (in this context, holding bilateral and tripartite meetings between rectors of the National Defence Universities of the parties and conducting sports competitions among the students of those educational institutions);
➢ Exchange of experience between the parties in the field of cyber defence in a bilateral and tripartite format;
➢ Exchange of experience in the field of military medicine between the parties, and etc.

Conclusion

Bilateral defence cooperation of Azerbaijan-Georgia and trilateral strategic partnership platform of Azerbaijan-Georgia-Turkey based on mutual trust, protection of transport-energy-communication projects connecting Asia and Europe, and joint flexible response at the moment of any threat, including peace and sustainable stability in the South Caucasus region, is critically important in terms of ensuring sustainable development, as well as the well-being and security of our people.

Finally, referring to the famous Arabian sociologist, philosopher, and historian Ibn Khaldun's phrase "Geography is our destiny", we would like to emphasize that, considering that we can't change our geography and our neighbors, we should further develop our rational cooperation in bilateral and trilateral formats and form new cooperation priorities.

Bibliography

1. Azad Garibov, Azerbaijan, Georgia, Turkey: Advancing the Military Dimension of the Trilateral Partnership/ Dans L'Europe en Formation 2018/1 (n° 385), pages 37 à 44.https://www.cairn.info/revue-l-europe-en-formation-2018-1-page-37.htm
2. Cooperation with NATO.https://mod.gov.az/en/cooperation-with-nato-028/
3. Bilateral Defence Cooperation. https://mod.gov.ge/en/page/40/bilateral-defence-cooperation
4. Cooperation with the United States. https://mod.gov.ge/en/page/119/cooperation-with-the-united-states
5. Substantial NATO-Georgia Package (SNGP). https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2016_02/160209-factsheet-sngp-en.pdf.
6. "Eternity-2022" international exercises started. https://mod.gov.az/en/news/eternity-2022-international-exercises-started-43657.html.
7. Georgia, Azerbaijan and Turkey start joint military exercises.https://jam-news.net/georgia-azerbaijan-and-turkey-start-joint-military-exercises/
8. Azerbaijani servicemen to take part in exercise "Noble Partner 2018". https://azertag.az/en/xeber/Azerbaijani_servicemen_to_take_part_in_exercise_Noble_Partner_2018-1183640.

---

5 Substantial NATO-Georgia Package (SNGP). https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2016_02/160209-factsheet-sngp-en.pdf.

6 "Eternity-2022" international exercises started. https://mod.gov.az/en/news/eternity-2022 international-exercises-started-43657.html.

7 Georgia, Azerbaijan and Turkey start joint military exercises.https://jam-news.net/georgia-azerbaijan-and-turkey-start-joint-military-exercises/.

8 Azerbaijani servicemen to take part in exercise "Noble Partner 2018". https://azertag.az/en/xeber/Azerbaijani_servicemen_to_take_part_in_exercise_Noble_Partner_2018-1183640.

REGIONAL SECURITY TRENDS IN THE SOUTH CAUCASUS: AZERBAIJAN-GEORGIA-TURKEY TRILATERAL STRATEGIC COOPERATION

Lieutenant-Colonel Besik Jajanidze
Doctoral Student in International Relations
Caucasus University School of Public Administration

Abstract

The following article aims to determine the importance of trilateral Azerbaijan-Georgia-Turkey strategic partnership, which includes not only Black Sea and Caspian Sea countries, but also bears a great significance in broader security context. The subject of this survey is to theoretically and practically explain historical necessity of commencing trilateral cooperation, caused by geostrategic challenges in the region and in the whole world, that particularly became more intense after Cold War and it has been going on for thirty years. In this survey it is presented how the trilateral cooperation began and the stages of development it went through to ultimately result in whole security complex and includes cooperation in transportation, energy and military issues.

The **main purpose** of the survey is to show trilateral military cooperation, which is a major constituent part in large security theatre and is undoubtedly a regional security cornerstone.

The survey showed that in volatile international system, regional stability and long-term success, either in security or economic field is one of the most important challenges. This is why correctly selecting a political friend bears a huge significance, since today's friend and ally can be on the opposing side tomorrow.

The survey clearly showed that the trilateral cooperation format is an exemplary template for cooperation not only inside the region, but beyond it. Cooperation is based on national interests of each country, with internal and external factors, that do not extradite with common international political architecture, any third party interests or regional and global institutions.

Introduction

Before the establishment of modern international system, the primary mission for state authorities was creating politico-military alliances.

Since the end of Cold War Azerbaijan, Georgia and Turkey went through a rather interesting path of statehood development. Tough economic, social and political events of the region and the whole world, bloody Balkan Wars, ethnic conflicts of Transcaucasia, severe terrorism created such geopolitical environment, so that countries on the opposing political sides found a common ground for cooperation format that would respond adequately to regional challenges. Trilateral cooperation is the regional cooperation format that is frequently employed by neighboring countries.

According to the national interests, purpose of "Alliance" among three countries is regional peace, security, stability enhancement, economic prosperity and does not go against interests of other countries. The main mission of cooperation among armed forces, is securing communication infrastructure, oil and gas pipeline, railways in critical situations and in case of military escalation.

The purpose of this research is, in its theoretical part, to present alliances and alliance format geostrategic and historical basis, based on theories of two leading theories : **Theory of democratic peace of liberalism and realism, particularly neo-realism;** On the other hand, in practical part, employing qualitative content analysis method to overview trilateral Azerbaijan-Georgia-Turkey military cooperation format, which, of course, is not a classical, formalized alliance, but includes elements of alliance-inherent strategic cooperation.

This research project responds to following research subject: What geopolitical factors caused the establishment of trilateral format by the countries that once were on the different politico-military sides.

The president of the republic of Azerbaijan, Ilham Aliyev stated, after 2014 summit: "The major result of 2014 summit is demonstration of our trilateral friendship, which is important for whole region, this should be an example for other countries.[1]"

During any kind of research, it is essential to outline three major factors: a) Interest towards own subject, b) Demand of public opinion - theoretical and practical value of a research and c) Relevance of a subject in a specific geostrategic dimension.

Relevance of a subject is, indeed, increased by the factor of security of energy resources, which exceeds the cooperation platform of three countries and affects regional politics. Trilateral cooperation is a result of a big geopolitical game, played between political west and east.

Methodological framework of the research

Methodological framework of this academic paper is qualitative methods of researching, qualitative content analysis, and case-study. Research is based on secondary sources, subject-related materials, meeting proceedings, training plans, political and military authorities' statements, military reports of attaches', treaties were examined and studied, as well as in-depth interviews conducted with high-ranking military service members.

Analysis of literature, expert researches and conducted interview showed clearly, how important it is to maintain friendly cooperation within economic and security scope. Nowadays, we can state that trilateral format is an exemplary regional cooperation model, that provides defence, security enhancement and stability strengthening. Besides this, this format is a unique possibility not only for Georgian Defence Forces, but for relevant organizational units transformation of Ministry of Internal Affairs, that respond to regional security challenges.

Theoretical framework

There are multitude of international relations theories and approaches that explain details of relations among countries, although there is not a unified approach.

For the sake of stability and secure future of Caucasus, it is important to establish a tight social and economic relations. Through a geopolitical viewpoint, trilateral cooperation is bringing strategic goals of countries together, this is a model frequently used to maintain balance of power, also for response to regional and sub-regional challenges.

According to Neo-realist premises and concepts, status-quo power is hard to find in international politics, because countries are always trying to gain power at the expense of others. The main purpose is hegemony. Great countries, always oriented on offense, to increase their survival chance. If we compare theoretical part of this paperwork and main subject of research: trilateral cooperation format, we will clearly see that participant countries, in the

---

1 Statement of President Ilham Aliyev during summit. Tbilisi, 06.05.2014

light of their challenges and self-aid mechanism, created successful allied cooperation format (Alliance) for the sole purpose – swiftly respond regional security and other challenges. The question of creating alliances is explained by Professor Glenn Herald Snyder of North Carolina University, in his paperwork "Theory of Alliances". He states, that there is general phenomenon of relations/ aid among countries in the international system, called "Alliance", which is common interests, desires and anticipations of allied countries to support each other during politico-military and economic crises. Alliances are part of this. Snyder confirms that "Alliances" represent the set of bilateral relations, that they will have politico-military support during the wars or disputes with other countries. He states that "Alliance" is common interests, desires and anticipations of allied countries to support each other during politico-military and economic crises (Snyder 1990, 105).

Adherents of liberal peace theories, first of all, appeal that war among liberal-democratic countries is (will be) a part of history, they develop peaceful political, economic and cultural cooperation, which attracts the rest of the world. World democratic thoughts are mobilized around this idea and radical changes are just matter of time. Azerbaijan, Georgia and Turkey, who were on the opposing political and military sides, managed to identify existing political, economic and military challenges and realize, that outlined contours of unified defensive system of the region, quickly established social, economic and political ties. As of today, trilateral format countries aspire to follow international norms and resolve conflicts using negotiations and compromise. It is worth noting, that they support each other's territorial integrity and declare peaceful resolution of conflicts.

According to one of the postulates of liberal theory, all three countries acknowledge importance of states, as well as international organizations in international politics. This emphasizes the significance of mutual attitudes, mainly economic relations. To say differently, from liberal viewpoint, countries harm other countries less, when they are economically dependent on each other.

Trilateral military cooperation in the context of regional security

On the basis of coinciding strategic goals, in June of 2012, in Trabzon, ministers of foreign affairs of Azerbaijan, Georgia and Turkey signed an agreement "Trabzon declaration". The purpose of agreement was to support each others in international organizations. Parties agreed to foster development of relations in trade, energy, transportation, finance and banking, defence[2].

This cooperation has a potential of success, because it goes along with national interests and is not aimed at any third country.

I would like to emphasize cooperation in defence and security, which is regional security cornerstone. Mechanism of cooperation are high level visits, trilateral training exercises, expert meetings. Cooperation format, like formalized alliances, is less institutionalized, structured and integrated than other international organizations.

The motif of launching of trilateral cooperation was most likely political necessity and major moment to reinstate historical "Silk Road", providing it's an energy transportation "corridor" security that should enhance resilience of southern Caucasus geopolitics and outline its role in Europe's energy security[3].

High level visits format is a major political tool of regional cooperation. On May 2nd of 2015, In Brussels, during NATO ministerial, minister of defence of Georgia held the very first trilateral meeting with Azerbaijani and Turkish colleagues, where they discussed trilateral cooperation perspectives. Parties talked about planning and conducting joint exercises to secure strategic energy infrastructure. It was mentioned, that deepened cooperation would benefit national security of all three countries.

Azerbaijan-Georgia-Turkey cooperation was established in the light of continued territorial occupation of Georgia and endeavors of bringing whole Caucasus under its influence by Russian Federation. Azerbaijan, Georgia and Turkey, on the other hand, desired to develop trade and economic relations based on respect and principle of indivisibility of borders. These aspirations were strengthened by joint transportation and energy project[4].

Strategic partnership, trust and respect based relations bear utmost importance in common security context. According to theory of alliances, trilateral strategic cooperation main concept is defined by common interests and threats, pushing countries to create alliances, whose members agree to collectively respond to threats and other challenges. Common ideological, cultural and political values and cooperation in defence area created the level of interoperability between army and police units, which allows swift and coordinated response not only on threats of strategic infrastructure, but broader specter of challenges, such as terrorism, weapons of mass destruction, organized crime.

---

2 Trabzon Declaration. Trabzon, 12.06.2022
3 Author interview with Giorgi Kvirikashvili, Tbilisi, 19.08.2022
4 Author interview with Zurab Batiashvili, Tbilisi, 18.08.2022

Trilateral cooperation was created and developed as a joint defence organizations planning and coordination format to secure pipelines, but later range of cooperation expanded and today includes different types of training activities, experience sharing in defence area. Cooperation of three countries undoubtedly increases trust among them and supports regional energy and transportation corridor credibility. For Georgia and Azerbaijan this format is an opportunity to confirm status of reliable partner of Euro-Atlantic community and enhance interoperability with NATO" – Colonel Omar Begoidze, former 1st deputy chief of General Staff[5].

Emplacing strategic pipelines and transportation routes on the territory of Azerbaijan, Georgia and Turkey brought the subject of its security issues. There are important joint exercises, such as Special Operations Forces exercise "Caucasian Eagle" and staff exercise "Eternity". The latter is an interagency training exercise, which aims refining cooperation in securing strategic pipelines, scenario is based on peacekeeping operations, with an end state to provide security of Baku-Tbilisi-Ceyhan pipeline during crises.

Common geostrategic challenges generated tight cooperation in security and defence area, which must ensure regional stability and development in future[6].

In 2015, during the visit to Georgia, minister of defence of Turkey Ismet Ilmaz stated the importance of trilateral military cooperation and efforts to develop cooperation and relations for peaceful future. Trilateral meeting format is a good tool for developing welfare, peace and stability in South Caucasus, which can be achieved only by a tight cooperation[7].

During 2017 trilateral ministerial, minister of defence of the Republic of Azerbaijan, Colonel-General Zakir Hasanov stated, that trilateral format is aimed for regional security and stability, enhancing joint training exercises among armed forces would support development of our countries, regional security and stability[8].

Regional security, stability and development cooperation format becomes more important nowadays, when "new" world order contours and new geopolitical distribution is shaping. Therefore, trilateral format is a step ahead.

Eventually, implementing joint security enhancement efforts brought up the necessity of giving formality to the trilateral cooperation format. On March 31st, 2018, "Cooperation memorandum in the defence area among the governments of the Republic of Azerbaijan, Georgia and the Republic of Turkey" was signed[9].

There are some threats regarding the future of trilateral cooperation, although for today, trilateral cooperation platform has a strong political and economic influence on international politics that could even become fully structured. A fine example is November 13th, 2018, European Commission initiative " In second strategic energy review", regarding EU energy security and solidarity plan, where Azerbaijan, Turkey, Georgia, Turkmenistan and Kazakhstan were declared as partners[10].

Speaking of security context, amidst increased threats in region and whole world, cooperation and information exchange between intelligence units becomes the most important. Deputy Chief of defence forces, Brigadier General Irakli Tchitchinadze denotes, that regarding security issues, cooperation is a significant platform for information exchange in security area, also it allows combined involvement for threat identification and prevention. Besides that, format has an economic, energy and political parts that support development and deepening relations among three countries[11].

Increased geopolitical importance of region affected countries in this region. According to interviews, energy security is a major drive that enables regional cooperation in Southern Caucasus. Geopolitical importance of region, because of huge sources in Caspian Sea basin, became energy corridor between East and West.

Conclusion

The research confirmed, that energy policy established strategic dependency among trilateral format partners and tightly bound to each other according to countries national security "troubles".

According to **democratic peace theory** Azerbaijan, Georgia and Turkey have no desire and motif to conduct military operations against each other. Three regional neighbors exert their efforts to follow democratic principles,

---

5   Author interview with Omar Begoidze, Tbilisi, 27.08.2022
6   Author interview with Lela Aptsiauri, Tbilisi, 16.08.2022
7   Statement of minister of defence of Turkey, Ismet Ilmaz; 02.04.2015
8   Statement of minister of defence of Azerbaijan, Colonel-General Zakir Hasanov, 23.04.2017
9   Cooperation memorandum in the defence area, Tbilisi, 31.03.2018
10 "Second Strategic Energy Review", Brussels, 13.11.2008
11 Author interview with Irakli Tchitchinadze, Tbilisi, 24.08.2022

adding equally important positive and cultural values.

According to **Neo-realism** three countries of trilateral cooperation, upon creation of alliance format, in the view of general configuration of international system, according to increased various challenges and mechanisms of self-aid, agree to create "cooperation" that has a sole purpose – operatively respond to regional economic and security challenges.

From assessing theoretical part, we can say, that trilateral cooperation format is a unique cooperation, alliance and friendship phenomenon, creation of which was dictated by geostrategic situation after Cold War, common national, politico-military and economic interests.

According to common strategic principles of efficiency enhancement, trilateral cooperation format remains one of the primary ally and strategic partner for West, its energy security, prevents maintaining energy monopoly at global stage by Russian Federation.

Bibliography:

1. "Azerbaijan, Georgia and Turkey confirm partnership on Tbilisi summit". Civil.ge. 06.05. 2022. https://civil.ge/ka/archives/152948 (last access 18.10.2022)
2. "Minister of defence trilateral meeting". Ministry of Defence. 02.05.2014. **https://mod.gov.ge/ge/news/read/2932/minister-of-defence-holds-trilateral-meeting** (Last access 18.10.2022)
3. "Georgia, Turkey, Azerbaijan trilateral ministerial". Ministry of Defence. 23.04.2017. **https://mod.gov.ge/ge/news/read/5785/tavdacvaministeriali** (Last access 18.10.2022)
4. "Cooperation memorandum in the defence area among the governments of the Republic of Azerbaijan, Georgia and the Republic of Turkey". International treaty and agreement of Georgia. 31.03.2018. https://matsne.gov.ge/ka/document/view/4784201?publication (Last access 18.10.2022)

5. ''Trabzon Declaration of the Ministers of Foreign Affairs of the Republic of Azerbaijan, Georgia, and The Republic of Turkey joint Declaration.'' Republic of Turkey, Ministry of Foreign Affairs. 08 June 2012. http://www.mfa.gov.tr/Trabzon--declaration-of-the-ministers-of-foreign-affairs-of-the-republic-of-azerbaijan_-georgia-and-the-republic-of-turkey_-08-june-2012_-trabzon.en.mfa (Last access 18.10.2022)

6. ''EU Energy Security and Solidarity Action Plan: 2nd Strategic Energy Review,'' European Commission, 13 November 2008. http://europa.eu/rapid/press-release_MEMO-08-703_en.htm (Last access 18.10.2022)

7. Interview with Zurab Batishvili, researcher of Rondeli Foundation, professor.
1. Tbilisi, 18.08.2022
8. Interview with Lela Aptsiauri, Strategic Security Department, MIA. Tbilisi, 16.2022
9. Interview with Irakli Tchitchinadze, General, Deputy Chief of Defence Forces. Tbilisi, 24.08.2022
10. Interview with Omar Begoidze, Colonel, 1st deputy chief of General Staff, 2014-2015. Tbilisi, 27.08.2022
11. Interview with Giorgi Kvirikashvili, Colonel, former defence attaché in the Republic of Azerbaijan. Tbilisi, 19.08.2022

ON THE FOOTPRINTS OF AN UNDEFEATED GENERAL

Tatia Mardaleishvili
Mentor Teacher of English Language

Elene Kokhreidze
Leading Teacher of Georgian Language and Literature
LEPL General Giorgi Kvinitadze Cadets Military Lyceum

Abstract

The development of correct personal values is of great importance in human life. The mission of the Cadets Military Lyceum named after General Giorgi Kvinitadze is to bring up a free-thinking person with national and democratic values. The Lyceum aims to give the cadets basic military knowledge and skills, instill love and respect for military service in them, a desire for mastering a military profession, civic consciousness based on liberal-democratic values and respect for cultural values. To achieve these goals along with other activities, well-planned educational excursions and educational programs play a great role. We think that studying the heroic historical past of Georgia and the life and work of heroic ancestors will help the cadets to understand their rights and responsibilities as citizens of Georgia.

A personal example gives a lot to a young person, who is formed right in front of us and develops those qualities, which are vitally necessary and represent the basis for the right life decision. In order to achieve this goal we planned and implemented the project with the support of the Lyceum Directorate; "On The Footsteps Of An Undefeated General", dedicated to the life and work of General Giorgi Mazniashvili.

Introduction

Career choice is an essential stage for students to identify suitability, readiness, and development of the capacity to work. The teachers' role has been presented as a determinant in students' career. As we are the representatives of Military Lyceum, we aim to increase our students' patriotic spirit and enhance positive attitudes towards the military service.

Career selection is one of many important choices students make in determining future plans. Alberts, Mbalo and Ackermann[1] identified career choice as one of the major areas of concern for young people nearing the end of their schooling. It is important to students because this decision will impact them throughout their lives. Every student, at one time or the other, is faced with the challenge of making a choice of career. This was buttressed by Cicero quoted by Hoppock[2] saying "… we must decide what manner of men we wish to be and what calling in life we would follow and this is the most difficult problem in the world". Akomolafe[3] pointed out that the individual's career is one of the most important aspects of human endeavour because it determines a lot of things in human existence. It could make one's joy and happiness. He further contended that true joy, happiness and satisfaction are linked to proper choice of profession.

There are many significant ways through which teachers have a remarkable impact on the student's life. They are not only the role models but help the students with the right guidance to move their heads towards a better future. The teachers generally provide the right guidance for the students. They evaluate the strengths and weaknesses of the students and guide them to follow the best practices.

Traditionally teachers are the ones who motivate the students to do better in every domain and help them achieve life goals. Through their guidance, the students know to differentiate between right and wrong. Teachers are the ultimate role models in a student's life. Teachers are always supportive and compassionate towards their students and appreciate their achievements in every field.

Now we would like to talk about our educational establishment and its aims. The mission of the Cadets Military Lyceum named after General Giorgi Kvinitadze is to bring up a free-thinking person with national and democratic values. Cadets Military Lyceum is a Legal Entity of Public Law, established under the Ministry of Defence of Georgia. It implements educational and military programs, providing Cadets with the secondary educational level, according to the National and Local Educational Curriculum. The goals of Cadets Military Lyceum are the following ; Cadets intellectual, cultural, physical and moral development, creating the basis for serving the country in its military and civil areas, moreover acquiring primary military knowledge and skills among cadets, increasing their patriotic spirit, enhancing positive attitudes towards the military service as well as their ambition of becoming an Officer.

The development of correct personal values is of great importance in human life. A historical, literary or personal example gives a lot to a young person, who is formed right in front of us and develops those qualities, which are vitally necessary and represent the basis for the right life decision. We would like to add that the values recognized in the Defence Forces: Loyalty, Duty, Respect, Selfless Service, Dignity, Honesty, Personal Courage - should be an action principle for future military personnel and for all citizens of Georgia in general.

As we have already mentioned above, at General Giorgi Kvinitadze Cadets Military Lyceum, special attention is given to educating cadets with a patriotic spirit. To achieve this goal along with other activities, well-planned educational excursions and educational programs play a great role. We think that studying the heroic historical past of Georgia and the life and work of heroic ancestors will help the cadets to understand better their rights and responsibilities as citizens of Georgia and let them understand the truth of the words expressing the readiness in the Defence forces - I am Serving Georgia!

We - the teachers, the officers and the sergeants of the Lyceum aim to give the cadets basic military knowledge and skills, instill love and respect for military service in them, a desire for mastering a military profession, civic consciousness based on liberal-democratic values and respect for cultural values. In order to achieve this goal we planned and implemented the project with the support of the Lyceum Directorate; "On The Footsteps Of An Undefeated General", dedicated to the life and work of General Giorgi Mazniashvili.

General Giorgi Mazniashvili (6 April 1870 – 16 December 1937) was a Georgian General and one of the most prominent military figures in the Democratic Republic Of Georgia. On May 26, 2013, General Giorgi Mazniashvili

---

1   Alberts, C., Mbalo, N. F., and Ackermann, C. J. (2003). Adolescents' perceptions of the relevance of domains of identity formation: a South African cross-cultural study. Journal of Youth and Adolescence.32 (3), 169-84.

2   Hoppock, R. Spielger, S. Job Satisfaction. New York Harper, 1935. p 303.

3   Akomolafe. Relationship between fathers' occupational status and their children's, occupational preference. Journal of Research in Counselling Psychology 9, 2003. Pp. 127 - 131

was awarded the title of National Hero of Georgia.

General Giorgi Kvinitadze wrote about him: "General Mazniashvili was brave. I've seen him under fire a few times and I can testify. Giorgi Mazniashvili will cut himself off with his own hands rather than betray his homeland! He behaves bravely even when the situation is very difficult. It can be said that he is even harmed by excessive bravery. He often takes risks himself, he could have been died several times, which would be a great loss for us." [4]

The interest towards General Mazniashvili was really enormous from our Cadets. So, we – the headteacher of the class XII[2] – Elene Kokhreidze and me – an English language teacher – Tatia Mardaleishvili decided to help the cadets to study things about General's life and Military Career and raise the awareness about him. As the study of military history shows us that there are many lessons to learn from our history and similar events to evaluate. We can connect these events to many parts of different missions we conduct every day. More importantly, we can use the successful techniques our predecessors used to avoid failures. Preserving military heritage highly helps us understand societal values and traditions.

We used the following pedagogical approaches; integrative approach, collaborative approach and reflective approach to achieve these educational objectives to gain the knowledge about one of the most prominent military figures in the Democratic Republic Of Georgia.

After gathering all the information and sorting them out, we decided to visit the Museum of General Mazniashvili, which is located in the region of Kaspi. It was founded in 1990. The cadets had the opportunity to see 122 exhibits which were displayed in the museum: General's personal belongings, documentary materials related to his work, photographs, tools, maps, furniture, carpets, dishes, etc. It was very impressive to see all these things for the cadets. Even the environment was unforgettable too. As the main artistic effect of the balconies was created by the transparent railing and curtains. Semicircular, rhombic and circular faces were carved to create ornament on the railing, and triangular and irregular shapes were carved on the curtains.

During this visit the cadets have found out the following things; Georgian national hero Giorgi Mazniashvili was a great military commander and selfless fighter for his homeland's unity. He definitely holds a special place in the long and glorious military history of Georgia. He certainly was one of the architects of the modern Georgian army and a military commander famed for his strategic talent, he was also a role model of courage and steadfastness for his fellow fighters. They discovered that, MazniashvilI was a Military, who did not lose a single battle, he was a reliable patriot, amazingly brave and with extraordinary strategic talent: amazingly merciful and open-handed: the great plague lord of the freedom-lost homeland.

Furthermore, cadets were impressed by General Mazniashvili's following words; "I am neither a Bolshevik nor Menshevik general-I am a Georgian general", as these words best illustrate the life of a man who has joined the ranks of Georgia"s honorable sons and daughters.

After visiting General Mazniashvili Museum, one of our cadets – M. Gigiashvili pointed out the following: "Military service is a difficult and responsible job. Only the chosen ones can do this job. Since childhood, I have wanted to become such a chosen one, a military servant. As it is the best feeling to stand as the guard of your homeland and protect your own country. Personally, at the age of 15, I put on a uniform at Cadets Military Lyceum and I am going to continue wearing it at National Defence Academy. As it is one of the best Military Establishments and that is why the number of applicants to the academy is getting higher and higher every year. After visiting this museum I would like to point out my decision, to connect my future life to military career and become a prominent military figure".

"Life does not end with death. If one angry generation kills me, another one will raise me from the death" [5]We would like to be the exact generation who will be able to raise General Mazniashvili from the death.

Conclusion

To sum up, with the help of our visit to General Giorgi Mazniashvili's Museum we increased the patriotic spirit of the cadets and highly enhanced their positive attitudes towards the military service. We will do our best to bring up free-thinking students with national and democratic values and to provide the right guidance for the students while choosing the future career.

---

4 Sekniashvili, Z. "I am a General Of Georgia ",KvirisPalitra, August,29, 2012
5 Sekniashvili, Z. "I am a General Of Georgia ",KvirisPalitra, August,29, 2012

Bibliography:

1. Alberts, C., Mbalo, N. F., and Ackermann, C. J. Adolescents' perceptions of the relevance of domains of identity formation: a South African cross-cultural study. Journal of Youth and Adolescence.32 (3), 2003. pp169-84.
2. Akomolafe.Relationshipbetweenfathers'occupationalstatusandtheirchildren's,occupationalpreference.Journalof Research in Counselling Psychology 9, 2003. Pp. 127 - 131
3. Hoppock, R. Spielger, S. Job Satisfaction. New York Harper, 1935. p 303.
4. Kagan, Frederick, W. Why Military History Matters. American Enterprise Institute For Public Policy Research 2006
5. Matheny, M. Carrying the war to the enemy: American operational art to 1945, Norman, OK: University of Oklahoma Press.2011
6. Metz, S. 'Strategic horizons: U.S. professional military education on the chopping block', World Politics Review, 17 Apr [Online], 2013 Available: http://www.ndu.edu/Portals/59/Documents/BOV_Documents/2013/Metz–US%20PME%20on%20the%20Chopping%20Block.pdf [18 Mar 2015].
7. Paarlberg, Robert. Knowledge as Power: Science, Military Dominance, and U.S. Security.International Security Vol. 29, No. 1 (Summer, 2004)pp. 122-151.
8. Schifferle, P. America's school for war: Fort Leavenworth, officer education, and victory in World War II, Lawrence, KS: University Press of Kansas. 2010
9. Sekniashvili, Z. "I am a General Of Georgia ",KvirisPalitra, August,29, 2012

FACTORS DETERMINING THE COMBAT MOTIVATION

Tinatin Kropadze
Chief Scientist of the Scientific Research Center
LEPL – David Aghmashenebeli National Defence Academy of Georgia
Doctor of Social Sciences

Abstract

The article deals with the issue of combat motivation and generally defines motivation, its types, affecting factors, the so-called "demotivators", theories underlying motivation (D. Uznadze, A. Maslow, B. Newsome, S. Marshal, D. Grossman, etc.) as well as the mechanisms involved in giving preference to one activity over another. Among different types of motivation, combat motivation is discussed along with achievement motivation, which is of increasing interest to scientists and scholars.

The paper focuses on the similarities and differences between a soldier and a warrior as well as combat motivational factors, personal characteristics, personal traits and experiences, and gender-specific achievements and advantages.

As it is clear from the historical and scientific documents reviewed, the performance of a soldier significantly depends on the leader. The leader is the very person motivating him as the leader helps him to transform his needs into desires. Considering this argument, the paper discusses the so-called "Three Circles" concept.

As the article identifies, the warrior does not necessarily mean a leader. Being a leader does not indispensably imply that he will actively fight in the war, although people who have proved to be warriors in combat often become platoon leaders later on. Training, recent experiences and temperament are important factors in developing a warrior. Training can be considered as an extrinsic factor. As for recent experiences, it is a significant determining factor and those who would like to gain the same experience on their own initiative can be considered warriors. Temperament can be identified as will, inspiration of a warrior and the so-called intrinsic individual factor.

The warrior has a commitment to fight a war, and he conducts war himself. Skills and experiences are of paramount importance among his characteristics. However, their absence can be compensated by courage and bravery. A soldier refers to a person who serves in the army and receives a salary. Combat is a part of his activity but this commitment may not necessarily be his calling.

Keywords:
motivation, combat motivation, soldier, warrior, commitment.

Introduction

To this date, when the countries wage war using high technology, it is important to focus on the human role in combat. A person, at a certain stage of his life, analyses the question of the relationship between life and death. Throughout his conscious life, he avoids death and tries to prolong his life. As Dimitri Uznadze states in his "Philosophy of War", "All forms of our being are developed and caused by the fear of death. This fear is thus the governing principle of all our lives. It is the most important regulatory moment of a person's entire life." Even pessimistic people, who are ungrateful and dissatisfied with the current reality, avoid death, and the fear of death comes as no surprise to them. If a person had little respect for the death of an ant or other living being before, the death of another person is considered as a great sin, because the value of a living being is very important to human. However, people make their own choices and stare death straight in the eyes. This is what happens in war. This is the process when the previously existing solid value system and conscience are shaken up and the death of another living being is no longer understood as a sin and remorse. On the contrary, the death of the enemy is perceived as a praiseworthy and creditable, heroic deed. "Thousands of young people go fearlessly and proudly to meet death on their own. " At this time, the national spirit awakens in each member of the community in the measure never given before. This is unity, a common path to walk on, one common goal.

Building and maintaining unity is the ability and duty of a good leader. Notwithstanding that advanced technologies and optimized processes play a significant role in the success of warfare and business, the fact remains that the human factor is still a decisive point in both fields. It is people who can turn opportunities into success or failure. The legendary commander of the Israeli artillery brigade and the developer of new types of tanks, General Israel Tal, was once asked about which one was the best tank in the world: the Israeli Merkava, the American Abrahams, the German Leopard or the British Centurion. Tal answered: "The best tank is the one having the best crew".

Main Part. Human motives are driven by deeper human needs and values. To us, a conscious need is called desire. Frequently, the leader is the very person who helps to transform the needs into desires. In addition, he can individually work with each person to understand these desires in the context of the overall mission, collective or organizational life. Thus, the leader should take into account the so-called «Three Circles" concept at the beginning of his career.
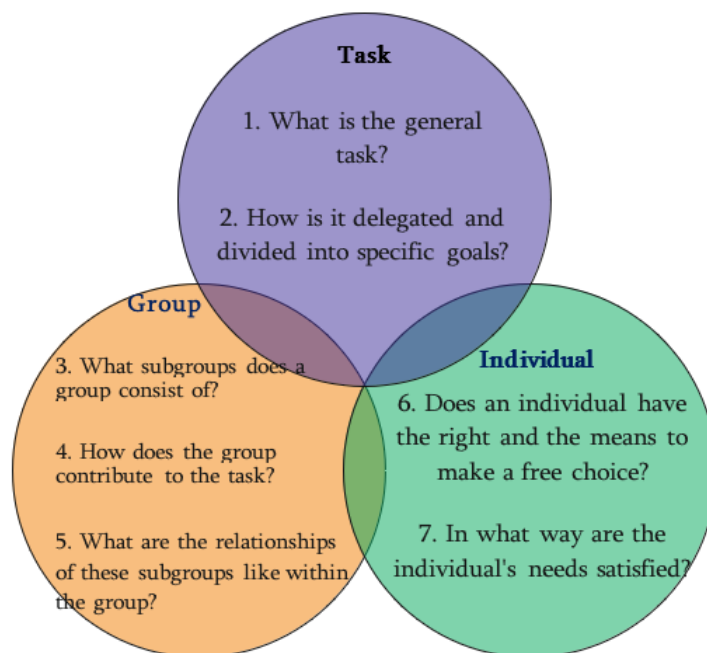
According to this concept, motivation should not be only limited to individual needs. It is also supported by the hidden sources of the task and the group. It is the leader's duty to manage the overlapping needs with individuals so that they are as productive as possible. This means that it is necessary to consider the satisfied physiological and safety needs of people, followed by "higher" needs. Depending on how desirable or undesirable a stimulus is, people either move toward or avoid certain stimuli and activities. Taking the motivation into account helps to explain and predict the behavior. Moreover, "Motivation encompasses the mechanisms involved in giving preference to one activity over another, providing energy and persistence to responses"[1].

---

1 ზიმბარდო ფ., გერიგი, „ფსიქოლოგია ჩვენს ცხოვრებაში", 2009., გვ. 461.

Theories of motivation attempt to find out which motivational force comes from internal sources of the body and which comes from external sources outside the body i.e. from environmental or cultural factors.

Achievement Motivation. Achievement motivation is defined as an attempt to maximize or maintain an individual's advanced skills in all areas of activity that can lead a person to success or failure. Success criteria can be applied in these fields where this type of activity can lead to either success or failure.

One of the important parts of a successful career is seeking for the workplace where the work to be performed and the payment for it will correspond to motivational needs. The scholars examine the overlapping issues of professional calling, personality traits of people, values and needs. In order to maintain the motivation for achieving professional success, it is desirable for a person to have a job that matches his interests and valuable goals. Psychologists measure the need for achievement to make predictions about how a person's life will go and what lies ahead.

Combat Motivation. Countries, throughout their existence, had to wage wars and still have to do so today. The theorist of war, Carl von Clausewitz, notes that "War is a field of physical exertion and suffering. These will destroy us unless we can make ourselves indifferent to them, and for this birth or training must provide us with a certain strength of body and soul".[2] Indeed, despite the technological achievements, combat actions remain a dangerous and shocking experience for many people. Here, Clausewitz remarks that "Strength of body and soul helps the soldier overcome this fear". It is interesting to figure out what makes some soldiers voluntarily go back to war again, if war is really so horrible? How does he manage to cope with all the challenges of combat?

Based on the experience of war from recent history, the experience gained in combat is overwhelmed with strong emotions. On the one hand, it is the greatest contribution to history, an exalted feeling of love and hatred at the same time. War is frequently perceived as something great and immense. The warrior's attitude towards war is heterogeneous because if we follow Uznadze's definition, "Every warrior, as a servant of realizing the essence of life, must somehow feel the greatness of his work, and this feeling must find its reflection in his heroism and self-sacrifice".[3] **A similar emotion is the motivator for a warrior in combat.** On the other hand, it is a devastating and brutal event where there is a lot of pain, corpses, and crippled people. Combat actions is a more compressed and intensive version of life events. This experience leaves two types of stamps on people: positive – aspiration (longing) and negative – trauma.

The war depends on various factors whether it is important or pointless to a person. These factors involve values, political situation, the expediency of this or that operation, trust in the leader as well as the experience of war that have different effects on people, leaving deep traces.

Bruce Newsome identifies **intrinsic** and **extrinsic** combat motivation. Intrinsic motivation is the one that encourages a civilian to go to military service. It is a genetic, cultural and socially conditioned motivation. As for the extrinsic motivation, it is established on the basis of different military activities after socialization in the military environment.[4]

The theories of intrinsic motivation focus on the values existed prior to the military life such as ideology, nationalism, warrior spirit, and rational service.

The theories of extrinsic motivation focus on the impact of military training, management, combat or anything that affects the process of military service. This approach encompasses many theories, ranging from the theory of mass behavior to small group dynamics, and focuses on the degree of unity and cohesion.

Newsome criticizes the theories of extrinsic and intrinsic motivation, arguing that it is difficult to draw sharp lines between them. He explains the extrinsic motivation by using the management theories. However, the conclusions Newsome made are insufficient to explain the fighting behavior.[5]

On the one hand, although he emphasizes the difference between combat motivation and the motivation of serving in the army, his conclusions fall somewhere in the middle: active combat actions and simply serving in the army. More precisely, it refers to being constantly at the front, regardless of whether the soldier fights or not. Newsome does not explain the phenomenon of what drives some people to actively fight and take action. He does not speak of the qualitative difference between combat and other activities of a military serviceman. Combat motivation implies the warrior's will to be constantly on the battlefield. While in military service, training only helps the warrior to overcome battle shock. There is no guarantee that he will actively fight, return to combat or have combat motivation. Training is never able to prepare a soldier for war. That is why it is assumed that the combat motivation

---

2   Clausewitz Carl Von, „On War"{1832], trans, and ad. Michael Howard and Peter Paret (Princeton UP 1976), გვ. 101.
3   უზნაძე, დ., ომის ფილოსოფია, „შესავალი თანამედროვე აზროვნებაში", წიგნი II, ილიას სახელმწიფო უნივერსიტეტის გამომცემლობა, თბ. 2014. გვ. 154.
4   Newsome Bruce, „The Myth of Intrinsic Combat Motivation", Journal of Strategic Studies 26/4(Dec.2003), გვ. 24.
5   Newsome Bruce, „The Myth of Intrinsic Combat Motivation", Journal of Strategic Studies 26/4 (Dec.2003), 24., გვ. 33.

is different from the motivation of serving in the army.[6]

On the other hand, ignoring intrinsic motivation completely (as Newsome suggests) is about to assume that once a person puts on a military uniform, he immediately becomes equal to other soldiers. This means that we must completely ignore the inherent factors that oppose the researches on war.

During World War II, Colonel Marshall evaluated hundreds of soldiers, both in the Pacific and in Europe, by interviewing them on the battlefield. He found that only a small number of soldiers fired on the front line.[7] He claims that the number of shooters was no more than 20-25%, despite the fact that firing from complex weapon (weapon that requires several soldiers) was done by almost 100%. However, during the Korean War, the firing level increased by 55%, and during the Vietnam War, it already reached 90-95%.

Before Marshall's study became known, military training involved activities and drills designed to make it easier for a soldier to kill. These activities increased the number of credible shooters in combat. However, this fact still does not help to account for the combat motivation, because the soldiers were fighting wars before this training was included to the military instruction. This implies that some soldiers, without any training, have the ability to kill the enemy without any trouble. In explaining the combat motivation, the main problematic issue is the point that individual differences are not taken into consideration. Even today, there are many people fighting in the military who are motivated to fight without any training. This is the argument for the individual, voluntary combat motivation.

A warrior does not necessarily mean a leader. Being a leader does not indispensably imply that he will actively fight in the war, although people who have proved to be warriors in combat often become platoon leaders later on. Marshall also found out that those who actively fight in combat and demonstrate the warrior skills become tactical leaders because they take the initiative to do so themselves. The qualities of a person who pulls the trigger, tosses a grenade, and takes the initiative are characterized by Marshall as willpower, determination, and mental and physical stability. All these are intrinsic, personal qualities.[8]

Dave Grossman believes that <u>training</u>, <u>recent experiences</u> and <u>temperament</u> are important factors in developing a warrior.[9] Training is an extrinsic factor (in developing the extrinsic motivation); although the experience of World War II has demonstrated that training does increase the number of combatants (those who actively fight in combat). However, it does not affect all military personnel by 100%. This means that training cannot be an extrinsic factor that uniquely determines the war-fighting capability.

As for the <u>recent experiences</u>, as we have already mentioned above, this is an important determining factor, and those who like to gain the same experience again on their own initiative, can be considered warriors.

<u>Temperament</u> is the same as will, the inspiration of a warrior and the so-called intrinsic individual factors. It involves the following: the concept of a «natural soldier», a person who gets his greatest satisfaction from his companions and the emotions accompanied by war – strong feelings, excitation, excitement, and conquering of physical obstacles. He is not eager to kill people as such, but he will have no objections if killing people in combat has a moral justification, like war and fighting for survival. However, such people are not many in number and they end up in defence system, forming small groups, for example, assembling in the Special Forces.

Differences between a Warrior and a Soldier - The Oxford English Dictionary defines a warrior as someone "whose occupation is warfare; a fighting man, whether soldier, sailor, or (latterly) airman; a valiant or an experienced man of war"[10]. The warrior has a commitment to fight a war and he conducts war himself. Skills and experience are of paramount importance among his characteristics. However, their absence can be compensated by courage and bravery. Also, the definition above makes it clear that a warrior can be a soldier too. A soldier refers to a person who serves in the army and receives a salary. Combat is a part of his activity but this commitment may not necessarily be his calling.

Another definition states that a warrior is a soldier who has a personal and existential commitment to war, has the willpower and ability to kill others and risk his own life.

It is necessary for a warrior to be a soldier as well, because this gives him the legal right to participate in combat and conduct hostilities. This is a right granted by the government. Being a soldier is not a determinant of war-

6   Matthews Michael D. and Laurence Janice H., „Military Psychology, " SAGE Volume 4. 2012 გ. გვ. 272.

7   Marshall S.L.A, Men against Fire: The problem of Battle Command in Future War [1947] (Univ. of Oklahoma Press 2000)., გვ. 54.

8   Marshall S.L.A, Men against Fire: The problem of Battle Command in Future War [1947] (Univ. of Oklahoma Press 2000)., გვ.58.

9   Marshall S.L.A, Men against Fire: The problem of Battle Command in Future War [1947] (Univ. of Oklahoma Press 2000)., გვ. 178.

10   Simpson J.A. and Weiner E.S.C., Oxford English dictionary, Second Edition, Volume XVII (Oxford: Clarendon Press1989), გვ. 935.

fighting capability. In addition, not all soldiers are warriors. The fact that a warrior must be a soldier at the same time means that a warrior is not a mercenary - he serves his nation.

Personal Commitment – Personal commitment is an individual quality. In this case, we are not talking about a fighting nation or cultures in general. Being a warrior is a personal aspiration and not a culturally determined trait (nations born and bred to be warriors). However, this commitment does not necessarily mean that the warrior possesses it from the very beginning. Commitment to war can develop after the instance when a person as a soldier has already gained experience in combat.

An example of upbringing a person as a warrior is the case when the father of a particular military serviceman or a representative of the previous generation was a military person and he was brought up in accordance with military rules. He was taught to fight, overcome obstacles and survive from the very beginning. When a person, even at an early age, is trained and taught to fight, he is considered to be raised as a warrior. However, it is not necessary to be raised as a warrior from a young age. This trait can be developed after the experience of war - an individual may have a commitment to fight, a desire to return to war.

Existential Commitment - Being a warrior cannot be reduced to material considerations – rather, it is beyond them due to some aspects such as:

- Combat experience encompasses physical sufferings such as hunger, cold, various diseases, wounds, lack of sleep, etc.;
- The status of a warrior in society involves both suspicion and admiration. This means that this status does not imply unequivocal acknowledgement. Many people even have a negative attitude towards the warrior;
- To sacrifice your life and repeatedly put yourself in danger cannot be derived from material interests.

Mastering War: In addition to professional knowledge, the combat experience develops personal skills such as keeping calm under stress, generating will, and aspiration.

His (Man's) Life: Most notably, men are mentioned as warriors. As for women, two questions arise regarding them: Were there female warriors in history? Are they physically fit for combat?

A Jewish military historian, Martin van Creveld, examines the stories of women warriors. He notes that women were mostly the victims of war, and frequently, the causes of war as well[11]. Moreover, Clausewitz remarks that only a small number of women participated in combat as mercenaries.

Thus, the historical records evidence that there have not been many female fighters in the world. Women participated in combat only during total mobilization. However, there were exceptions as well[12].

Willing and Able to Kill: Willingness and ability to kill is combined with the willingness to sacrifice life. Aggressiveness is an additional quality of a warrior. The ability to mercilessly kill the enemy does not mean killing without thought. The Vietnam War veteran Dave Nelson writes, "I had been taught. That made my decision to be a sniper. Killing clean shows respect for the enemy, but to kill civilians or to lose control of your self and your concepts in life in combat is wrong… that is respect for your enemy… that's the concept behind the warrior. Kill cleanly, kill quickly, kill effectively, without malice or brutality."[13]

On the other hand, while restraint in killing plays a crucial role, you have no guarantee that you will be able to kill, even being enlisted in Special Forces units. F. Miller reminds the reader: „Contrary to popular belief, not all Special Forces soldiers were 'bad to the bone'… I found out that not all Special Forces troops were shooters. These guys would go out on missions… but the fact that they couldn't bring themselves to shoot the enemy caused them grief. They'd take any job in the camp that prevented them from going out again."[14]

Willing to Sacrifice Life: It is difficult to identify this quality in a man, because it is demonstrated only when the warrior breathes his last. The warriors want to survive, not to die. As it was already mentioned, the willingness and ability to risk your life and the willingness to kill the enemy keep balance, conditioning one another. If killing is not in service of lofty goals and does not involve at least a minimal risk of your own life, it becomes simply murder, like a crime and massacre....

When it comes to attachment to war, quality is more important than quantity. It can be difficult to successfully accomplish the high-intensity warfare without qualified and professional warriors. Currently, the western wars are so complex that they involve both tactical and strategic difficulties. According to Clausewitz, experience is as important as talent to overcome all this.[15] Talent is the best substitute for experience, and the warrior we discussed here is in possession of both **experience** and **talent.**

---

11 Creveld Martin Van, Men, Women & War: Do Women Belong in the Front Line? (London: Cassell 2001), გვ. 69.
12 Matthews Michael D. and Laurence Janice H., „Military Psychology", SAGE Volume 4. 2012 წ., გვ. 279.
13 Hansen. J.T., A. Owen Susan and Madden Michael Patrick, Parallels - The Soldiers' Knowledge and the Oral History of Contemporary Warfare (New York: Walter de Grueyter 1992), გვ. 21.
14 Miller, Franklin D., Reflections of a Warrior (New York: Pocket Books, 1991), გვ. 89.
15 Creveld Martin Van, „Transformation of War" (London: The Free Press 1991), გვ. 108.

Conclusion

In summary, we can say that there is a soldier we can call a warrior by nature. This is the one who is much more motivated to experience combat than a private soldier. His attachment to war is most likely to be explained by personal factors and his personal commitment. This commitment is so high that many warriors repeatedly go back to war or fight even in case when victory does not appear possible - for instance, some Germans fought until the end of World War II, as did some Americans in Vietnam. Likewise, a vivid example can be given by the self-sacrificing battles of Georgian fighters against countless enemies not only to protect their own but also fraternal peoples.

Today, it is more important than ever for fighting people to hold positions of responsibility. The actions of many people may have serious strategic and political implications for the new armed conflicts. These situations are often very sensitive and involve the hearts and minds of civilians and the unemotional population. A lot can be said in favor of the fighters belonging to Special Forces, because they are always the first to go to the enemy's territory and to the sites where counter-insurgency and counter-terrorism operations are performed. It is necessary that the first contact with the population is not careless and devoid of sympathy. Instead, it must be sensitive, flexible, precise and cautious, but aggressive at the crucial moment.

Bibliography:

1. ზიმბარდო ფ., გერიგი, „ფსიქოლოგია ჩვენს ცხოვრებაში", 2009.(Zimbardo P., Gehrig, «Psychology in our lives», 2009);
2. კოლენდა ქრისტოფერ, „მეთაურობა: საბრძოლო ხელოვნება", ბაკურ სულაკაურის გამომცემლობა, თბ. 2007. - Kolenda Ch., «Leadership: Martial Arts», Bakur Sulakauri Publishing House, vol. 2007;
3. უზნაძე, დ., **ომის ფილოსოფია,** „შესავალი თანამედროვე აზროვნებაში", წიგნი II, ილიას სახელმწიფო უნივერსიტეტის გამომცემლობა, თბ. 2014. - Uznadze, D., Philosophy of War, «Introduction to Modern Thought», Book II, Ilia State University Publishing House, Vol. 2014;
4. Адаир Д. <Искусство управлять людьми и самим собой>. М., 2006. - Adair D. <The art of managing people and themselves>. M., 2006;
5. Хекхаузен Х. <Психология мотивации достижения> - Санкт-Петербург: Речь, 2001; 256 стр.- Heckhausen X. < Psychology of Achivement Motivation > - Saint-Petersburg: Речь, 2001; 256 p.;
6. Clausewitz Carl Von, „On War" {1832], trans, and ad. Michael Howard and Peter Paret (Princeton UP 1976)
7. Creveld Martin Van, Men, Women & War: Do Women Belong in the Front Line? (London: Cassell 2001)
8. Creveld Martin Van, „Transformation of War" (London:The Free Press 1991)
9. Hansen. J.T., A. Owen Susan and Madden Michael Patrick, Parallels - The Soldiers' Knowledge and the Oral History of Contemporary Warfare (New York: Walter de Grueyter 1992)
10. Marshall S.L.A, Men against Fire: The problem of Battle Command in Future War [1947] (Univ. of Oklahoma Press 2000).
11. Matthews Michael D. and Laurence Janice H. , „Military Psychology", SAGE Volume 4. 2012 წ.
12. Miller, Franklin D., Reflections of a Warrior (New Yourk: Pocket Books, 1991), 89.
13. Newsome Bruce, „The Myth of Intrinsic Combat Motivation", Journal of Strategic Studies 26/4 (Dec.2003), 24.
14. Simpson J.A. and Weiner E.S.C., Oxford English Dictionary, Second Edition, Volume XVII (Oxford: Clarendon Press, 1989)

READINESS AS A Defence PERFORMANCE INDICATOR

Ivan Okromtchedlishvili
PhD Student in Business Administration,
International Black Sea University;
Associate Lecturer, MA Programme in Defence Management,
Ilia State University; Tbilisi, Georgia

Abstract

Understanding the limits of a nation's ability to build and deploy mission-ready armed forces is a fundamental element of national security. The determination of optimal defence (military) capabilities to be developed and maintained, along with the associated states of readiness, is the major challenge to defence planners. Those involved in security and defence policymaking and planning processes usually stress the importance of keeping a state's military capabilities ready. While they generally agree that every function of the defence enterprise should directly or indirectly support the formation of a mission-ready military now or in the future, their views on what readiness is, and therefore, how to manage it and use it as a resource management and performance measurement tool, often diverge. In this article, the use of readiness as a defence performance indicator has been discussed, and a performance framework for a major force program has been proposed as well. Despite its shortcomings, it is very important to include the "readiness level" as an output indicator in the defence program structure of the Ministry of Defence. The target readiness levels of the military units should also be specified in the defence strategy and planning documents, as well as procurement objectives and descriptions of acceptable risk. Evaluation of the performance of managers at all levels should be directly related to the achievement of the specified (planned) levels of readiness or to the contribution to the achievement of the latter. The Ministry of Defence is only successful to the extent that it produces one primary output: military capability - organized, equipped, trained, and sustained mission-ready defence forces that can be verified and confirmed by using readiness assessment methods. Therefore, military readiness should be of great importance to the Ministry of Defence, the Government, and the Parliament of a state as a key factor in determining defence funding needs when debating on defence budget issues.

Introduction

Junor noted that "there will never be enough resources to be ready for everything, especially everything at once."[1] Understanding the limits of a nation's ability to build and deploy mission-ready armed forces is a fundamental element of national security. Policymakers and members of the defence community usually stress the importance of keeping military capabilities ready. They also largely concur that every defence enterprise function should directly or indirectly assist in the development of military forces that are prepared for missions now and in the future. However, they often have very different ideas about what readiness is and therefore how to manage it and use it as a resource management or performance measurement tool.[2]

According to Betts, the term "readiness" has often been used in two senses: one too broad, merging the concept with that of military capability as a whole, and one too narrow, much more focused and technical. The latter usage refers not to capability in general, which includes the desired size and types of forces, but to the status of whatever forces do exist, that is, their immediate capacity for combat. Are they provided with means and up to efficient employment in battle, or do they need time to be organized, supplied with essentials, repaired, or retrained?[3] For many purposes, e.g., for the tactical needs of commanders who could face battle in a short time as well as measuring the performance of the defence program and subprogram managers, this more specific concept of readiness looks like the most appropriate one.

As Van Dooren et al. noted, "Performance can be defined as outputs and outcomes."[4] There are two distinct aspects to the activities of the defence sector. The first relates to efficiency ("doing things right") and is concerned with the products and services (outputs) created by defence organizations through the use of resources. Effectiveness (or "doing the right things") is related to the second aspect, which is concerned with the influence of the generated products or services (outputs) on the defence objectives (outcomes) established (see Figure 1).
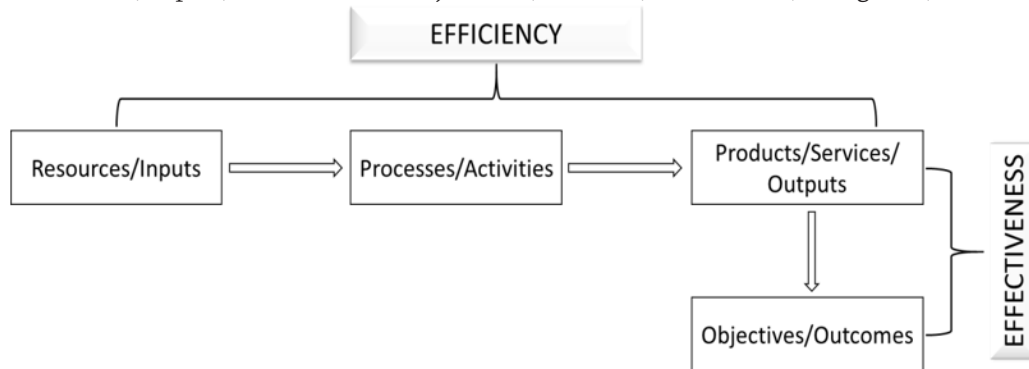

Figure 1. Visualization of Efficiency vs. Effectiveness

As Webb & Angelis noted, "to measure efficiency, we must understand the relationship between the cost of inputs and the amount of outputs […] to measure effectiveness, we must understand the relationship between the organization's goals and objectives [or outcomes] and its outputs […]."[5]

In the case of defence organizations as well, the proverb "you can't manage what you can't measure" holds true. It is impossible to assess the success of the defence sector without defining and monitoring success. Only with clearly defined primary defence outputs and outcomes as well as specified success metrics can progress be measured and the process adjusted to deliver the intended outputs and outcomes. Defence organizations run the risk of becoming mired in a state of perpetual uncertainty without clear and measurable objectives.[6]

In this article, the use of readiness as a defence program performance indicator has been discussed, and a performance framework for a major force program has been proposed as well.

Due to the general lack of detailed information and limitations in obtaining primary data on the defence sector in terms of the secrecy of information, especially on the main output of the defence program, namely, military capa-

1 Laura J. Junor, Managing Military Readiness, (Washington, D.C.: National Defence University Press, February 2017), 3, https://tinyurl.com/mvzdex8p.

2 Ibid, 1-2.

3 Richard K. Betts, Military readiness: concepts, choices, consequences, (Washington, DC: Brookings Institution, 1995), 25-26.

4 Wouter Van Dooren, Geert Bouckaert, and John Halligan. Performance Management in the Public Sector, 2nd ed. (London: Routledge, 2015), 20, https://doi.org/10.4324/9781315817590

5 Natalie Webb and Diana Angelis, "Improving Performance Measurement in Defence Organizations," The Journal of the American Society of Military Comptrollers, (Winter 2009): 16-21, https://tinyurl.com/4ufr9rzr.

6 Ivan Okromtchedlishvili, "Performance Measurement Issues in the Defence Sector in the Face of Global Security Challenges," FROM A SERIES OF MONOGRAPHS "GLOBAL CHALLENGES OF THE WORLD", Publishing House Technical University, (2022): 285-292, https://doi.org/10.36073/978-9941-28-871-5.

bility and its indicators – readiness levels of units – the study mainly relied on information and data available from open sources.

Readiness: Definition and Concepts

Readiness is a very broad topic. The term "readiness" is formally defined as "the ability of military forces to fight and meet the demands of assigned missions" in Joint Publication 1 by the U.S. Department of Defence (DOD). [7] The ability of such forces to fight and prevail anywhere and at any time is the broader background for this term, which highlights the DOD's emphasis on military forces.

The ability of the United States to develop, deploy and maintain armed forces that will perform well in war is referred to as readiness. The goal of readiness is to create "ready" military forces. [8] Since at least the 1830s, the DOD and its predecessors, the Departments of War and Navy, have used the term to describe the condition of military personnel, supplies, training, and other associated activities. [9]

DOD states that military units carry out assigned missions in support of the implementation of the approved national strategy of the United States of America, which from a military point of view, includes three strategic documents: (1) National Security Strategy (NSS), (2) National Defence Strategy (NDS), and (3) National Military Strategy (NMS). [10]

The readiness production process is complex, differs across various circumstances, and consists of three main parts:

1. **Building initial readiness.** This includes initial training and testing and adequate funding (resourcing) to enable warfighters to progress to a higher level of training.

2. **Increasing readiness.** This includes advanced individual and unit training, testing and adequate resourcing so that warfighters have the qualifications and resources to deploy with their operational units.

3. **Sustaining readiness.** This includes ongoing training and supply of units before and after deployment to ensure that units remain ready for their assigned missions in the future (see Figure 2).
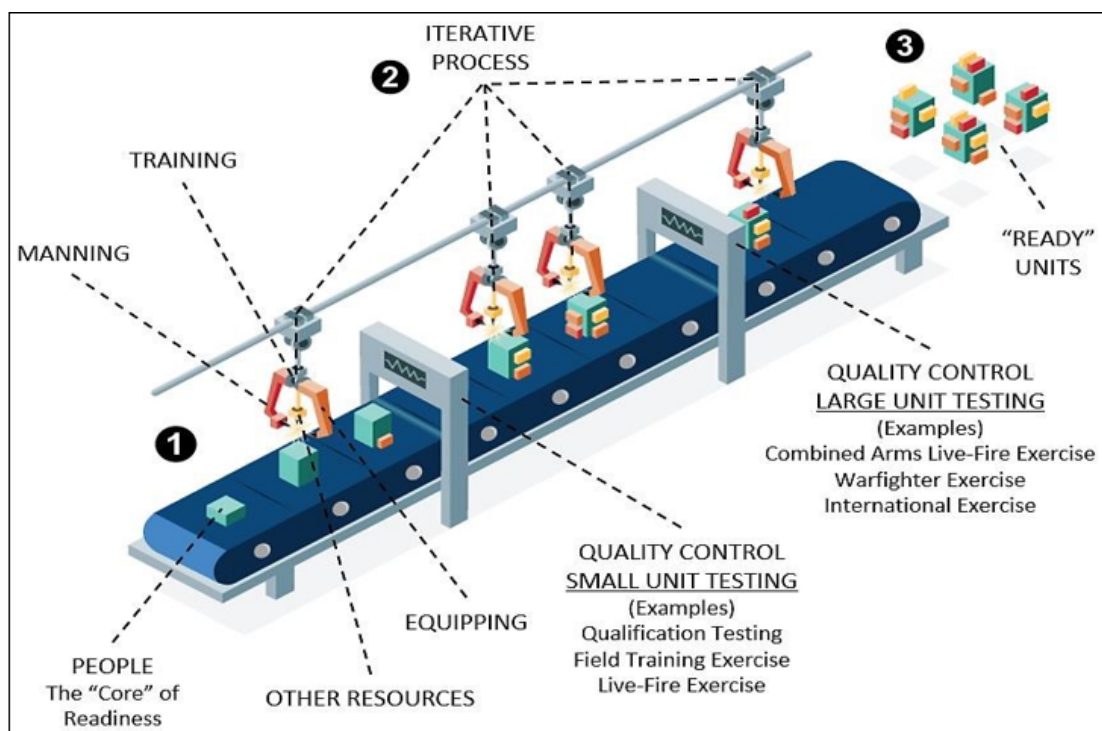
Figure 2. Unit Readiness Production Process.

---

7   Joint Chiefs of Staff, Joint Publication 1, Doctrine for the Armed Forces of the United States, (Washington, DC: Joint Chiefs of Staff, 2013): GL-10, https://irp.fas.org/doddir/dod/jp1.pdf.

8   G. James Herrera, The Fundamentals of Military Readiness (Washington, DC: Congressional Research Service, 2020): Summary, https://crsreports.congress.gov/product/pdf/R/R46559 .

9   Ibid, 1.

10   Ibid, 3.

Source: G. James Herrera, The Fundamentals of Military Readiness, 15.

Military readiness is of great importance to Congress and is often at the center of much of the defence budget debate. In particular, Congress often uses the "readiness levels" reported by the DOD as a key factor in determining defence funding needs. [11]

Reporting Readiness

Information related to military unit readiness is reported to the senior leadership of the US Department of Defence using two interconnected systems: Department of Defence Readiness Reporting System (DRRS) and Chairman Readiness System (CRS).

The aforementioned systems report the capability of the military to carry out the tasks (complete missions) required to execute national strategy. Typically, this includes an assessment of the resources of units and their ability to carry out essential tasks, whether as an individual unit (for example, an army battalion, a naval destroyer squadron, or an air force squadron), service, or other component/agency of the DOD, or their combination. [12]

DRRS Processes, Indicators and Ratings

DRRS makes extensive use of two separate but related readiness assessment processes that involve several separate assessments, each of which uses different metrics and measures to determine the overall readiness of units. Unit commanders can also use an overall mission capability evaluation, also known as the "rating system," to combine the two assessment procedures and meet OSD information requirements. [13] Together, they ensure a miscellaneous view of the unit's readiness status. [14]

DRR/SORTS

The first assessment process, which is based on "inputs or resources", is reminiscent of the older Status of Resources and Training System (SORTS). It enables unit commanders to assess their units' capacity to carry out intended missions in light of the unit's available resources. The "C-level ratings" provided by this assessment process convey the units' overall readiness while evaluating resource deficiencies.[15]

DRRS/METs

The second assessment process, based on "output or mission/task", allows unit commanders to assess the ability of their units to perform both designed and assigned missions based on the unit's ability to perform tasks. It focuses on the mission-essential task list[16] (METL) construct, where commanders evaluate the unit's ability to perform a set of METs for which the unit was created. This DRRS/MET evaluation process includes the conditions under which each task must be performed and a set of standards that reflect success.[17]

Assessing Resources

Four input resource categories (referred to as "resource areas" in DOD doctrine) make up the SORTS-derived process within DRRS. Each is initially evaluated individually and then collectively: people (P), equipment availability (S), equipment readiness (R), and training (T). Unit commanders oversee the DRRS/SORTS evaluation process and evaluate readiness levels in accordance with the guidelines established by the Service Regulations.[18] When it comes to training assessment, the rules sometimes demand that the commander use a lot of professional military judgment; in other situations, the commander's latitude is considerably more constrained.[19]

Overall Resource Availability (level C)

The C-level rating - or the overall DRRS/SORTS readiness rating - is derived from the ratings of the four previously discussed resource areas (P, S, R, and T) and is equivalent to the lowest of the four levels. However, the

11 Herrera, The Fundamentals of Military Readiness, 2.
12 Ibid, 18-19.
13 Department of the Army, Army Regulation 220–1, Army Unit Status Reporting and Force Registration – Consolidated Policies, (Washington, DC: Department of the Army, 2010), 13-18, https://tinyurl.com/4bwc5pxj .
14 Junor, Managing Military Readiness.
15 Ibid.
16 A mission-essential task is a collective task on which an organization trains to be proficient in its designed capabilities or assigned mission. A mission-essential task list is a tailored group of mission-essential tasks. (FM 7-0) https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN32648-FM_7-0-000-WEB-1.pdf
17 Department of the Army, Field Manual (FM) 7-0, Training, (Washington, DC: Department of the Army, 2021), 2-1, https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN32648-FM_7-0-000-WEB-1.pdf
18 Department of the Army, Army Regulation 220–1, Army Unit Status Reporting and Force Registration – Consolidated Policies.
19 Herrera, The Fundamentals of Military Readiness.

commander has the option to upgrade or downgrade based on his professional military judgment. The rating is intended to reflect the unit's ability to perform its core functions, deliver on its planned capabilities, and accomplish its designed missions based on an aggregate resource estimate. [20] Table 1 provides an explanation of each C-level.

Table 1: Understanding Readiness Ratings in DRRS, "C-Level" Ratings

C-1	C-2	C-3	C-4	C-5*
The unit possesses the required resources and is trained to undertake the **full wartime missions** for which it is organized or designed.	The unit possesses the required resources and is trained to undertake **most of the wartime missions** for which it is organized or designed.	The unit possesses the required resources and is trained to undertake **many, but not all, portions of the wartime missions** for which it is organized or designed.	The unit **requires additional resources or training to undertake its wartime missions**, but it may be directed to undertake portions of its wartime missions with resources on hand.	The unit is **undergoing** a Service, Combatant Commander, Defence Agency, or other **DOD-directed resource action** and is not prepared, at this time, to undertake the wartime missions for which it is organized or designed. However, the unit **may be capable of undertaking nontraditional, non-wartime related missions**
The status of resources and training in the unit **will not limit flexibility in methods** for mission accomplishment.	The status of resources and training in the unit **may cause isolated decreases in flexibility in methods** for mission accomplishment.	The status of resources and training in the unit **will result in significant decreases in flexibility** for mission accomplishment		
The status of resources and training in the unit **will not** increase vulnerability of unit personnel and equipment.	The status of resources and training in the unit **will not** increase the vulnerability of the unit **under most envisioned operational scenarios**	The status of resources and training in the unit **will** increase the vulnerability of the unit **under many, but not all, envisioned operational scenarios.**		
The unit **does not require any compensation** for deficiencies.	The unit **would require little, if any, compensation** for deficiencies.	The unit **would require significant compensation** for deficiencies.		

Source: Joint Staff, CJCSI 3401.02B, Force Readiness Reporting,

Note. *There are several C-5 unit restrictions listed within CJCSI 3401.02B.

Assessing Missions

Unlike DRRS/SORTS, created to evaluate designed missions, the DRRS/METs process allows commanders to evaluate both designed and assigned missions. It is a two-stage assessment process that starts with individual MET assessments and ends with a unit METL assessment.

There is a three-tiered assessment used by commanders to rate each MET and METL as well as their Service's own established rating system to determine the readiness of a unit to complete the assigned mission (s). [21]

Unit commanders assign each MET a "Yes" (Y), "Qualified Yes" (Q) or "No" (N) rating (Table 2).

Table 2: DRRS Three-Tiered Readiness Assessment

Rating	Definition
Y	Unit can accomplish task to established standards and conditions.

---

20 Department of the Army, Army Regulation 220–1, Army Unit Status Reporting and Force Registration – Consolidated Policies.
21 Department of the Army, Army Regulation 220–1, Army Unit Status Reporting and Force Registration – Consolidated Policies.

|	
Q	Unit can accomplish all or most of the task to standards under most conditions. The specific standards and conditions, as well as the shortfalls or issues impacting the unit's task, must be clearly detailed in the MET assessment.
N	Unit cannot accomplish the task to prescribed standards and conditions at this time.

Source: G. James Herrera, The Fundamentals of Military Readiness, 48.

Readiness Inputs

Although readiness is frequently associated with training, other important readiness inputs include people, equipment, supplies, and maintenance. Because a mission-ready force requires units with a sufficient number of qualified military staff, people are a critical component. Additionally, units must have enough equipment and supplies on hand, including key weapon systems, ammunition, and support equipment. This equipment must be able to fulfill the missions and match the threats that the forces are expected to confront. To keep the equipment functioning reliably and effectively when needed, periodic maintenance is also required. People need training to be able to use their equipment and complete their tasks under actual circumstances.

As illustrated in Figure 3, practically every component of the defence budget makes some kind of contribution to increased readiness. As a key element of readiness, Use of Goods and Services accounts provide money for supplies, equipment upkeep, and training. Accounts for Compensation for Employees and Social Benefits provide the funding for wages and benefits required to attract and keep a sufficient pool of skilled (qualified) personnel. The acquisition of supplies and equipment is funded by the Use of Goods and Services, Increase in Nonfinancial Assets, and Other Expenses accounts, which provide the forces with weapons that are both numerous and effective enough to support them. These financing sources work together to supply the fundamental components needed to develop armed forces that are mission-ready.

Figure 3: Mapping Budget Lines to Readiness Inputs
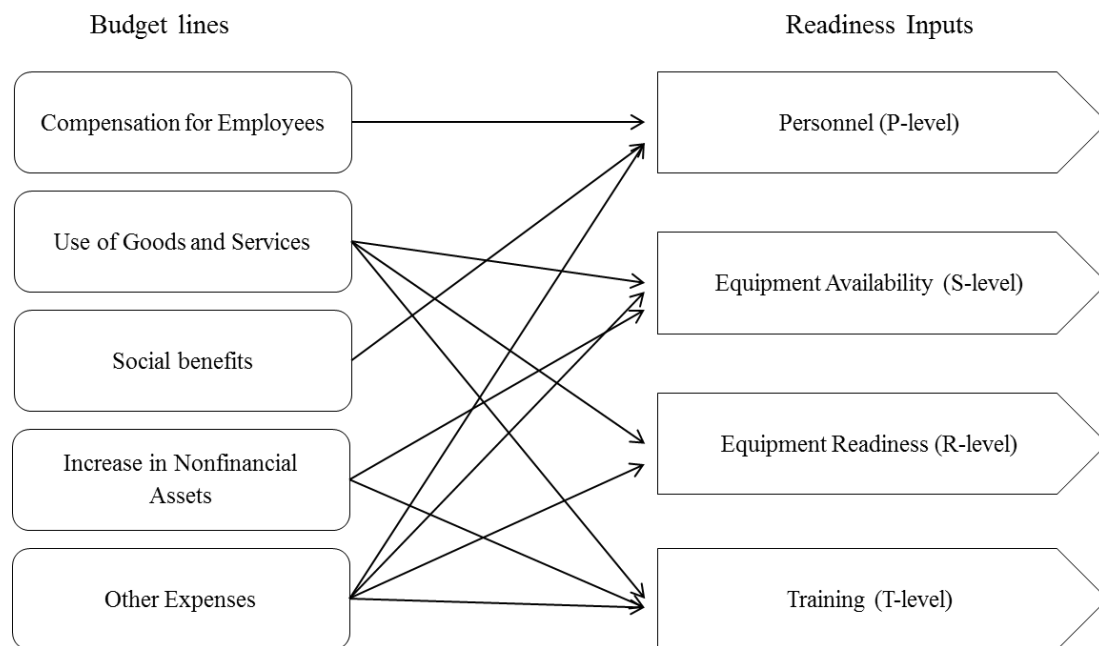
The challenge for the Ministry of Defence (MOD) is to balance readiness inputs while trying to meet the resource constraints required by law and still support the strategy. When the inputs to readiness are out of balance, the result is what General Edward C. Meyer, Chief of Staff of the Army (1979–1983), called "hollow force". In his 1980 testimony to Congress, General Meyer used the term to refer to the insufficient number of soldiers available to reinforce army divisions, but the use of the term has expanded since then. [22] A force element must possess an overall balanced mix of capability components (DOTMLPF) otherwise, it risks to "go hollow". Figure 4 depicts the mapping of capability components to readiness inputs.

---

22 Andrew Feickert and Stephen Daggett, A Historical Perspective on "Hollow Forces," (Washington, DC: Congressional Research Service, 2012), https://sgp.fas.org/crs/natsec/R42334.pdf

Figure 4

Mapping Capab

Capability Components	Readiness Inputs
Doctrine	Personnel (P-level)
Organization	Equipment Availability (S-level)
Training	Equipment Readiness (R-level)
Materiel	Training (T-level)
Leadership and education	
Personnel	
Facilities	

Force Element
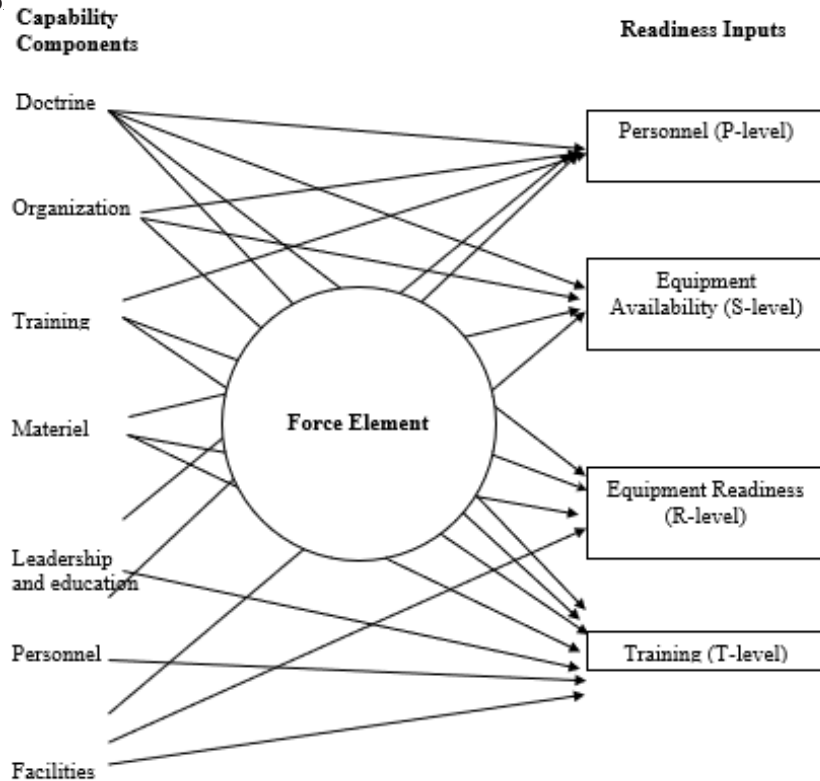
Inputs to readiness are non-linear variables working together to produce mission-ready forces. For example, a brigade conducting field exercises may improve readiness in terms of its personnel and their ability to fight, but at the end of the exercise, the equipment will be less readily available, requiring repair and maintenance. The same goes for naval ships and aircraft returning from combat deployment. Conversely, forces that stow all of their equipment pending deployment will reduce their operational readiness as they cannot train on said equipment and combat platforms.[23] Therefore, defence program managers who are accountable for the resources provided must monitor the balance of inputs to readiness and the state of readiness achieved.

However, it should be noted that, despite best efforts, readiness metrics are not, and likely will never be ideal measures. Measuring the effectiveness of troops in realistic combat scenarios is not a perfect substitute for effectiveness in real combat. In a war, results are determined not only by the readiness of forces, or, more specifically, by the performance of the mission essential tasks. For example, in ground combat, success may depend on many factors besides the readiness of the ground forces, such as the discipline, morale of the soldiers (both friendly and enemy), weather conditions, etc. In addition, in times of war, forces are often assigned tasks for which they were not designed and may not have been adequately prepared. The results of hostilities can only be assessed in the course of actual warfare, and readiness is only one of many factors contributing to this. The best achievable with peacetime readiness assessments is a rough estimate, excluding actual military operations.

Thus, readiness metrics can never accurately predict the performance of troops in real combat. Efforts should be focused on developing effective metrics to measure relevant force characteristics, continually improving and refining these metrics over time, and with respect to the most important criteria for readiness metrics: They should (1) measure outputs, not inputs, (2) be related with a strategy, (3) be quantifiable, and (4) avoid subjective assessments (especially self-assessments) as much as possible. It is most important to develop readiness indicators to help answer the question: How can armed forces most effectively achieve the readiness required by their strategy? [24]

In addition to the metrics mentioned above and measures, commanders can also use the information on staff turnover, language qualifications, professional military education completion, and other additional qualifications. They can also take into account factors such as discipline, morale, and certain aspects

23 Daniel Sukman, "Military Readiness: Thinking About the Three Big Questions," Real Clear Defence, (July 03, 2019) https://tinyurl.com/4zm3bdw4

24 Todd Harrison, "Rethinking Readiness," Strategic Studies Quarterly 8, no. 3 (Fall 2014): 38–68, https://tinyurl.com/e3fea6wn

of leadership. Insight into the best way to resource readiness is provided by improved metrics and a better understanding of the relationship between inputs (resources) and outputs (readiness). With this understanding, inputs can be adjusted to create more capable and mission-ready forces for a given level of resources. [25]

Performance Framework for the Major Force Program[26]

"How many and what types of forces (and ground, air, sea, space, cyber, and other capabilities) are called for, and why?"[27] Answering this question is the burden of defence planning, which uses analytical, planning, and programming efforts to determine which armed forces are right for the state. The goal of defence planning is to translate national security and defence policy, as well as related defence strategies and guidance documents, into a set of realistic and affordable capability requirements, spending priorities, and ultimately into a comprehensive and capable force structure that will allow the execution of the designated defence tasks as well as the achievement of the country's security and defence objectives.

Betts articulated the main policy and strategy questions that need to be answered in order to develop achievable and acceptable capability requirements, prioritize defence spending, and create a comprehensive and capable force structure with an appropriate level of readiness as follows:

- Readiness for when? What about the time available for conversion? Should we focus in peacetime on active units or reserves?

- Readiness for what? What kind of war and enemy should the forces be ready for? What about the conditions and strategy?

- Readiness of what? What are the time requirements for the marshaling and deployment of the Air Force, Navy, Ground Forces, and their various elements, since they all have different tasks to achieve or maintain readiness?

[28]As Omitoogun et al. state, "The determination of optimal defence [military] capabilities to be developed and maintained, along with the associated states of readiness, is the major challenge to the defence planner." [29]

According to the Strategic Defence Review (SDR) for 2021-2025, the GDF must be able to ensure deterrence; support civil agencies to handle various emergencies; and contribute to strengthening regional and international security. If deterrence fails, the GDF must be capable of providing defence against the enemy. [30]

To ensure the availability and combat capability of the Defence Forces, based on capability requirements (1 in Figure 5) and resource constraints, the government through the Ministry of Defence allocates budgetary funds (2) to the defence programs (in our example, the Major Force Program). The allocated funds are spent within the framework of subprograms (3) to develop the capability inputs/components (4) of force elements (5) and provide resource inputs in readiness (6). The performance (efficiency) of the subprograms can be measured through an assessment of overall resource readiness (C- level) (7) and a three-tiered assessment (8) of the force elements.

However, it should be noted that, as stated above in the study, due to the "fog of war"[31], readiness metrics can never accurately predict the performance of troops in real combat, and the best that can be achieved with peacetime readiness assessments is a rough estimate, excluding actual military operations. Efforts should be focused on developing effective metrics to measure relevant force characteristics, continually improving and refining these metrics over time and with respect to the most important criteria for readiness metrics such as: measuring outputs, not inputs; be

25 Ibid.

26 Proposals for an updated structure of the defence program (including the Major Force Program) are presented in the article "PROPOSALS ON Defence PROGRAM STRUCTURE: THE CASE OF THE MINISTRY OF Defence OF GEORGIA," Journal of Defence Resources Management (JoDRM), Volume 13, Issue no. 1 (24): 88-105, http://www.jodrm.eu/issues/Volume13_issue1/06_OKROMTCHEDLISHVILI.pdf

27 Michael J. Mazarr, Katharina Ley Best, Burgess Laird, Eric V. Larson, Michael E. Linick, and Dan Madden, The U.S. Department of Defence's Planning Process Components and Challenges, (Santa Monica, California: RAND Corporation, 2019), 1, https://tinyurl.com/2524uxw8

28 Betts, Military readiness: concepts, choices, consequences, 33.

29 Wuyi Omitoogun, Eboe Hutchful, and Stockholm International Peace Research Institute, Budgeting for the military sector in Africa: The process and mechanisms of control, (Oxford: Oxford University Press, 2006), 43, https://tinyurl.com/2prert7v

30 Ministry of Defence of Georgia, Strategic Defence Review (SDR) 2021-2025, (Tbilisi: Ministry of Defence of Georgia 2021), https://mod.gov.ge/uploads/2021/november/Strategic_Defence_Review_2021-2025.pdf

31 A phrase now much used to describe the complexity of military conflicts (The Fog of War was the title of Errol Morris's 2004 award-winning documentary about Robert S. McNamara, US Secretary of State during the Vietnam War). Fog of war is often attributed to Clausewitz, but is in fact a paraphrase of what he said: 'War is the realm of uncertainty; three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty.' https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095826962#:~:text=Fog%20of%20war%20is%20often,'

tied to the strategy; be quantifiable and avoid subjective assessments (especially self-assessments) as much as possible. Most importantly, readiness indicators should help answer the question: How can the GDF most efficiently and effectively achieve the readiness required by the strategy? [32]

Positive results (9) assume that the mission-ready Force Elements/Capabilities (10) and, therefore, the mission-ready Defence Forces/Military Capability (11) have been created, the resource inputs in the Major Force Program have been purposefully expended to produce the required capabilities (1) and the desired efficiency (12) has been achieved. Mission-readiness of the GDF implies their availability and capacity (13) to carry out their assigned tasks (14) and achieve or contribute to the achievement of the outcomes/national defence objectives (15) and high-level outcomes/national security objectives (16), which means the impact of the produced defence outputs on the objectives set for the defence and relates to effectiveness ("doing the right things").

Negative results of the assessment (17) mean that the "production" of the mission-ready Force Elements/Capabilities (10) and, therefore, the mission-ready Defence Forces/Military Capability (11) has failed; the resource inputs in the Major Force Program to produce the required capabilities (1) were not sufficient, or were wasted leading to inefficiency (18) and ultimately ineffectiveness (19) - unavailability and incapacity of the Defence Forces.

The confrontation (20) of required capabilities (1), produced capabilities (outputs) (10, 11) and outcomes (15) allows assessment of the sustainability and utility of the defence program or the defence organization.

In conclusion, it should be noted that the final assessment of the effectiveness of the Major Force Program can only be carried out in the event of a crisis: Were the Defence Forces (force elements/capabilities) available and capable of providing defence successfully in the event of an attack on the country? Did they effectively support the authorities during natural disasters? Were they available and capable of participating effectively in international security operations when needed? It is also crucial for defence decision-makers to choose and apply the right mix of the Major Force Program's subprogram outputs (force elements/capabilities) to perform the assigned tasks and achieve or contribute to the achievement of the outcomes/national defence objectives and high-level outcomes/national security objectives, as inefficiencies in the output mix may lead to reducing the overall effectiveness of the Defence Forces (or the Major Force Program). Moreover, according to the Law of Georgia "On the Defence of Georgia"[33] , in times of crisis, the Chief of Defence Forces is authorized to create, depending on the objectives, temporary operational or tactical groups for completing assigned operational- or tactical-level tasks.

---

32 Todd Harrison, "Rethinking Readiness," 52.

33 Parliament of Georgia, Law of Georgia on the Defence of Georgia (Tbilisi: Parliament of Georgia, 1997), https://matsne.gov.ge/en/document/view/28330?publication=20

Figure 5 Performance Framework for the Major Force Program
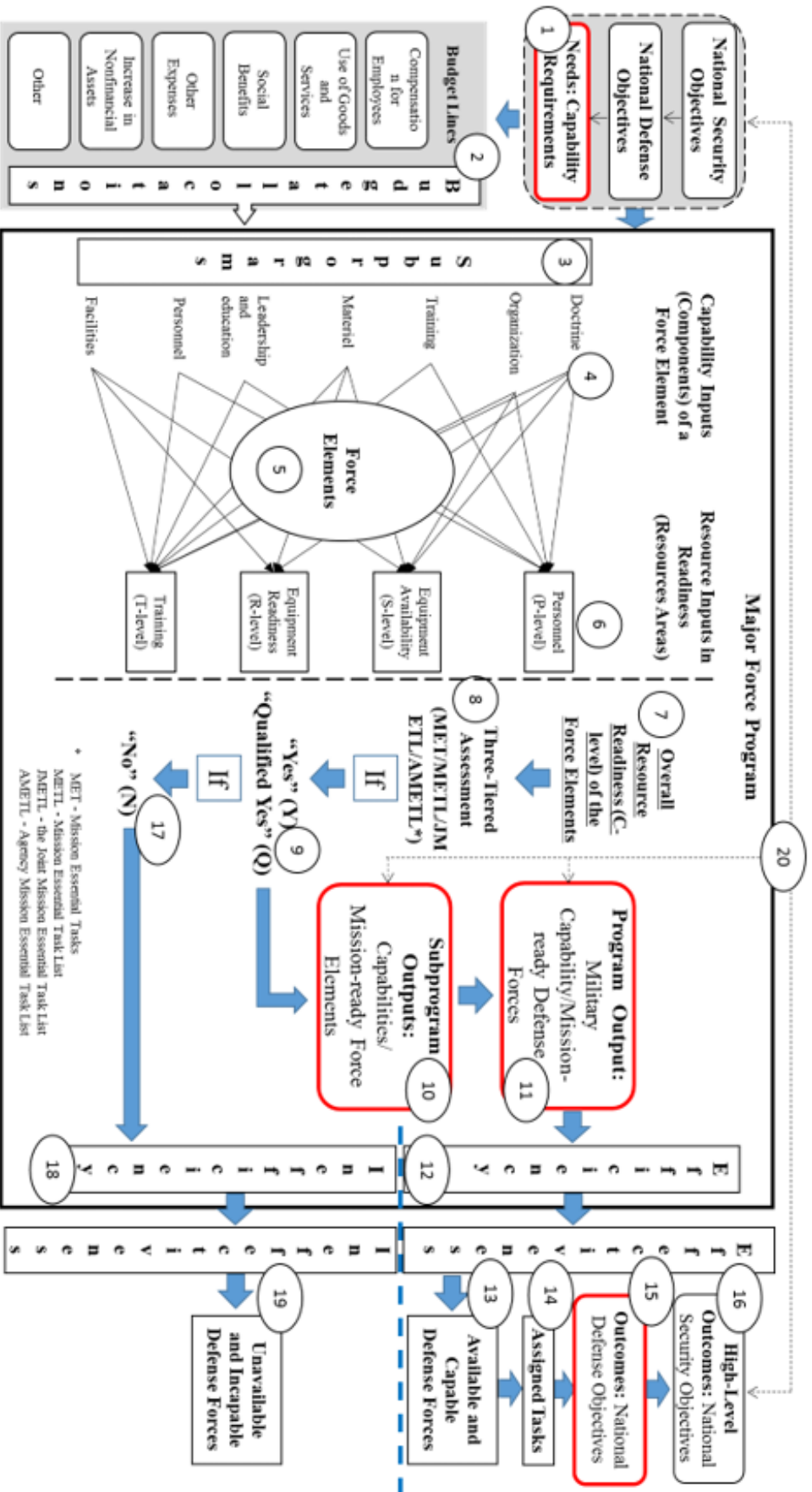
Conclusion

The fundamental element of national security is understanding the limits of a nation's ability to build and deploy mission-ready armed forces. Those involved in the security and defence policymaking and planning processes usually stress the importance of keeping a state's military capabilities ready. While they generally agree that every function of the defence enterprise should directly or indirectly support the formation of a mission-ready military now or in the future, their views on what readiness is, and therefore, how to manage it and use it as a resource management and performance measurement tool, often diverge.

In this article, I discussed the use of readiness as a defence program performance indicator, as well as proposed a performance framework for the major force program.

Despite the shortcomings of "readiness" mentioned in the study, I consider it very important to include the "readiness level" as an output indicator in the defence program structure of the Ministry of Defence. The target readiness levels of the GDF units should also be specified in the Defence Program Guidance (DPG) and other planning documents of the MOD (in the secret part of the documents), as well as procurement objectives and descriptions of acceptable risk.

Defence program and subprogram managers who are accountable for the resources provided must monitor the balance of inputs to readiness and the state of readiness achieved. Evaluation of the performance of managers at all levels should be directly related to the achievement of the specified (planned) levels of readiness or to the contribution to the achievement of the latter.

Military readiness should be of great importance to the MOD, the Government and the Parliament of Georgia when debating on defence budget issues. Parliament should request from the MOD information regarding readiness and use it as a key factor in determining defence funding needs.

In conclusion, as mentioned above in the article, the MOD is only successful to the extent that it produces one primary output: military capability - organized, equipped, trained, and sustained mission-ready defence forces that can be verified and confirmed by using readiness assessment methods.

Disclaimer

The views represented in this paper are those of the author and don't reflect the official policy or position of the Ministry of Defence of Georgia.

Bibliography

1. Betts, Richard K. Military readiness: concepts, choices, consequences. Washington, DC: Brookings Institution, 1995.

2. Department of the Army. Army Regulation 220–1, Army Unit Status Reporting and Force Registration – Consolidated Policies. Washington, DC: Department of the Army, 2010. https://tinyurl.com/4bwc5pxj

3. Department of the Army. Field Manual (FM) 7-0, Training. Washington, DC: Department of the Army, 2021. https://tinyurl.com/23z34a4d

4. Feickert, Andrew, and Stephen Daggett. A Historical Perspective on "Hollow Forces." Congressional Research Service, 2012. https://sgp.fas.org/crs/natsec/R42334.pdf

5. Harrison, Todd. "Rethinking Readiness." Strategic Studies Quarterly 8, no. 3 (Fall 2014): 38–68, https://tinyurl.com/e3fea6wn

6. Herrera, G. James. The Fundamentals of Military Readiness. Washington, DC: Congressional Research Service, 2020. https://crsreports.congress.gov/product/pdf/R/R46559

7. Joint Chiefs of Staff. Joint Publication 1, Doctrine for the Armed Forces of the United States. Washington, DC: Joint Chiefs of Staff, 2013. https://irp.fas.org/doddir/dod/jp1.pdf

8. Joint Staff. CJCSI 3401.02B, Force Readiness Reporting. Washington, DC: Joint Staff, 2011. https://tinyurl.com/ycyuaz6f

9. Junor, Laura J. Managing Military Readiness. Washington, D.C.: Institute for National Strategic Studies, National

Defence University Press, 2017. https://tinyurl.com/mvzdex8p

10. Mazarr, Michael J., Katharina Ley Best, Burgess Laird, Eric V. Larson, Michael E. Linick, and Dan Madden. The U.S. Department of Defence's Planning Process Components and Challenges. Santa Monica, California: RAND Corporation, 2019. https://tinyurl.com/2524uxw8

11. Ministry of Defence of Georgia. Strategic Defence Review (SDR) 2021-2025. Tbilisi: Ministry of Defence of Georgia, 2021. https://tinyurl.com/ya6bbe3p

12. Okromtchedlishvili, Ivan. "PROPOSALS ON Defence PROGRAM STRUCTURE: THE CASE OF THE MINIS-TRY OF Defence OF GEORGIA." Journal of Defence Resources Management (JoDRM), Volume 13, Issue no. 1 (24), (2022): 88-105. http://www.jodrm.eu/issues/Volume13_issue1/06_OKROMTCHEDLISHVILI.pdf

13. Okromtchedlishvili, Ivan. "Performance Measurement Issues in the Defence Sector in the Face of Global Security Challenges." FROM A SERIES OF MONOGRAPHS "GLOBAL CHALLENGES OF THE WORLD", Publishing House Technical University, (2022): 285-292. https://doi.org/10.36073/978-9941-28-871-5

14. Omitoogun, Wuyi, Eboe Hutchful, and Stockholm International Peace Research Institute. Budgeting for the military sector in Africa: The process and mechanisms of control. Oxford: Oxford University Press, 2006. https://tinyurl.com/2prert7v

15. Parliament of Georgia. Law of Georgia on the Defence of Georgia. Tbilisi: Parliament of Georgia, 1997. https://matsne.gov.ge/en/document/view/28330?publication=20

16. Sukman, Daniel. "Military Readiness: Thinking About the Three Big Questions." Real Clear Defence, (July 03, 2019). https://tinyurl.com/4zm3bdw4

17. Van Dooren, Wouter, Geert Bouckaert, and John Halligan. Performance Management in the Public Sector. 2nd ed. London: Routledge, 2015. https://doi.org/10.4324/9781315817590

18. Webb, Natalie, and Diana Angelis. "Improving Performance Measurement in Defence Organizations." The Journal of the American Society of Military Comptrollers, (Winter 2009): 16-21, https://tinyurl.com/4ufr9rzr

NATIONAL SECURITY PROBLEMS RELATED TO ETHNO-RELIGIOUS GROUPS IN THE SOUTH CAUCASUS (GEORGIAN CASE)

Kakha Putkaradze
PhD in Social Sciences
Associate Professor
LEPL - David Agmashenebeli National Defence
Academy of Georgia

Ioseb Japaridze
PhD in Social Sciencies
Head of the MA Programs
LEPL - David Agmashenebeli National Defence
Academy of Georgia

Tamaz Putkaradze
PhD in History,
Associate Professor
Batumi Shota Rustaveli State University

Abstract

Georgia is a polyethnic country. Armenians, Azeris, Russians, Greeks, Kurds, Kists, Dagestanis and other ethnic-confessional groups live next to Georgians. Thus, the traditions of inter-ethnic relations have a long history in Georgia.

Multiethnicity is one of the most important factors in the democratic development of a society, but in certain geopolitical conditions it can also be dangerous. For centuries, the invaders pursued anti-Georgian demographic policies in Georgia, compactly displacing members of other ethnic groups to the border areas of states inhabited by the same ethnic group, and deliberately creating micro-islands of ethnic minorities. It is in these two micro-islands that conflict has already erupted, while the other two regions carry the risk of the conflict.

Identifying the risks facing the state, justifying the need for preventive measures, and integrating ethno-religious minorities into the common state is the main task of our research.

The methodological basis of the research is the universal scientific principles of objectivity, comprehensiveness and systematics, historical-comparative and historical-typological methods.

The factual materials presented in the article make clear the factors hindering the general state integration, the problems related to the functioning of the state language, the different foreign policy orientations of the ethnic groups.

The article highlights the qualitative issues of integration of ethnic minorities in Georgia, strengthening the teaching of the state language, protection of cultural values of ethno-religious minorities, raising the degree of their involvement in public, political and cultural life.

Introduction

Georgia is a polyethnic country. Armenians, Azeris, Russians, Greeks, Kurds, Kists, Dagestanis and other ethnic-confessional groups live next to Georgians. Thus, the traditions of inter-ethnic relations have a long history in Georgia.

The pursuit of mono-ethnicity is a prerequisite for the emergence of extreme forms of ultranationalist sentiments, multiethnicity is one of the important factors in the democratic development of society. Over the centuries, with the participation of various ethnic groups living in Georgia, a common national culture acceptable to all was created (Sayatnova, S. Parajanov, Hovhannes Tumanyan ...), the best traditions of inter-ethnic relations, and tolerance were established. This cultural diversity gives Georgia a special charm, although in certain geopolitical conditions it can also be threatening. In this case, take into account the low level of economic development (such conflicts occur mainly in weak countries), where for centuries the invaders pursued anti-Georgian demographic policies, for the purpose of colonization, settling members of other ethnic groups to the border areas of states inhabited by the same ethnic group, namely: in Javakheti by Paskevich in 1828-1832. The settled Armenians border the state of Armenia, in Kvemo Kartli the Azerbaijanis - Azerbaijan, in Kakheti the Leks - Dagestan, the Kists in the Pankisi Gorge - Chechnya, in Shida Kartli the Ossetians - in the north. Ossetia, etc. On the principle of "divide and rule", ethnic minority micro-islands have been deliberately created in Georgia, in two of the region conflict has already erupted, while the other regions carry the risk of the conflict.

Reasoning and implications: The state, including the dominant nation, has a special responsibility towards ethnic and religious minorities. The country should promote their development, bring together all ethnic groups and integrate into the nation-state because of civic awareness. At the same time preventive measures should be taken to avoid possible dangers.

To better understand the problem, we consider it necessary to present the ethnic composition of the Georgian population in a quantitative context. According to the 2014 census, there were 3,713,804 citizens living in Georgia, of which 13.2% of the population belong to ethnic minorities. The largest ethnic minority group - 6.3 percent - is made up of Azerbaijanis, 4.5 percent - Armenians, and the remaining 2.54 percent - Russians, Ossetians, Kurds, Kists and other ethnic groups[1].

The compact settlement of ethnic minorities, along with many other factors, is a significant impediment to integration with the rest of the population of the country, which is also facilitated by problems with the functioning of the state language throughout the country. According to 2002 data, only 30% of the non-Georgian-speaking population spoke the state language[2]. Added to this there are the different political orientations of Georgia, Armenia, and Azerbaijan. The multi-vector political orientation of the political units of the Caucasus creates a different picture of their political interests. Georgia aspires to the West, Armenia remains Russia's reliable partner in the Caucasus. The political orientation of Azerbaijan is also different. The picture is similar from a religious point of view[3]. All this may affect the attitudes of ethnic Armenians and Azerbaijanis, citizens of Georgia.

In the process of building a democratic state, it is important for ethnic minorities to participate in the civic and political life, to integrate into society and to preserve their cultural, traditional, and everyday elements. It is necessary to analyze the role and place of ethnic minorities in the state-building process. Emphasis should be placed on strengthening the state language proficiency, protecting the rights of ethnic minorities, their integration problems with the rest of the Georgian population, strengthening their involvement in civic and political life, and encouraging and increasing access to economic, social, and educational projects, providing objective information about the processes in the country and the region through the media. The named factors were fairly described in the State Strategy for Civic Equality and Integration (2015-2020). The document raised the issue of the need to implement the following strategic goals:

- Equal and full participation of ethnic minorities in civil and political life;
- Creating equal socio-economic conditions and opportunities for members of ethnic minorities;
- Access to quality education for ethnic minorities at all levels, improving the quality of state language knowledge;
- "Preserving the culture of ethnic minorities, encouraging a tolerant environment"[4].

To solve the problems related to ethnic minorities, important decisions have been made by the state at different levels of the executive power in different periods. Back in 2005, the Office of the State Minister for Civic Integration was established in the Government of Georgia. Zinaida Bestaeva, a Georgian citizen of Ossetian nationality, was

---

1 National Statistics Office of Georgia, 2014: 9

2 Decree of the Government of Georgia №1740, State Strategy for Civic Equality and Integration and 2015-2020, 2015 and State Department of Statistics of Georgia, 2002:118-123

3 Khutsishvili, Q., 2002:9.

4 Decree of the Government of Georgia №1740, 2015

appointed State Minister. Following the abolition of the agency, in 2008 the Office of the State Minister for Reintegration was established, which developed the "National Concept of Tolerance and Civic Integration"[5]. In 2012, the agency changed its name to the Office of the State Minister for Reconciliation and Civic Equality.

The separation of state policies related to ethnic and religious minorities should also be considered a positive step. The Office of the State Minister for Reconciliation and Civic Equality charge of coordinating activities with ethnic minorities and the State Agency for Religion is responsible for Religious Affairs, established in 2014. It was also tasked with managing and coordinating the state's religious policy[6]. The integration of ethnic minorities and their participation in socio-political processes was aimed at initiating ethnic minority internships in the public sector. In order to access the education system, ethnic minorities were allowed to take general skills tests in their mother language, after which they completed a one-year Georgian language course and continued their studies in relevant specialties in Georgian higher education institutions[7]. To strengthen the work on the issues of ethnic minorities, an advisory service was established under the Public Defender, whose main function was to establish communication between the state and ethnic minorities, to discuss issues related to ethnic minorities and to develop appropriate recommendations[8].

Despite the positive steps taken by the state, the following key problems facing ethnic communities have been identified:

1. Relations of ethnic minorities with administrative bodies;

2. Delays in the integration of ethnic minorities into society due to language barriers;

3. Involvement of ethnic minorities in the electoral, civil, and political process[9];

4. "Problems related to economic and social issues"[10];

5. Low level of civic education"[11];

6. Frequency and popularity of usability of foreign media[12];

7. Opportunity for limited access to information disseminated by Georgian media[13];

8. Problems related to their integration in the Georgian-speaking population. In the context of this problem, the Munich Security Research Center discusses issues related to Georgian identity. Part of Georgian identity discusses religion (Orthodox Christianity) and ethnicity (Georgian)[14];

9. Skepticism of ethnic minorities regarding European integration"[15].

The problems faced by ethnic minorities are not new to the state. Over the years, the involvement of ethnic minorities in political processes has not been fully realized or has been unsystematic. The involvement of ethnic minorities at both the legislative and political levels, as well as local self-government, is also a significant challenge. Despite local self-government reform and the adoption of Georgia's organic law, strengthening the involvement of ethnic minorities in municipal decision-making remains a challenge. Deficiencies in the education system, which do not fully address the systemic problems of state and mother language knowledge among ethnic minorities also remain challenge. Access to general and higher education in the state language remains relevant. Ethnic minorities were allowed to take general national examinations in their mother language, although further improvement was needed to improve the one-year state language training program, which failed to fully address issues related to state language learning in ethnic minorities. All the above affects the quality of study as well. Access to health, social, education or economic services is also related to issues related to the knowledge of the state language.

The official working language in state institutions is Georgian. Strengthening state language literacy programs will facilitate ethnic minorities' access to state and municipal services. It will be an important contributing factor to accelerate their integration with the Georgian population.

---

5   Open Society Foundation, 2019: 13/17
6   E. Marikashvili, M. Gigineishvili, 2017: 6/7
7   CRRC, Council of Europe, 2018
8   A. Adamia, K. Kiknavelidze, G. Lashkhi, 2017
9   A. Ullmann, Ed. M. Bieri 2016
10 N. Samkharadze, 2020
11 Georgian National Security Concept, 2011:29/7
12 National Security Policy Planning and Coordination Rule
13 Report of the State Security Service of Georgia 01.01.2017-31.12.2017
14 Report of the State Security Service of Georgia 01.01.2018-31.12.2018
15 Hoffman, F. 2009:52

Citizens of Georgia's low level of state language proficiency in ethnic minorities and the popularity of the use of foreign media may be perceived by external forces as a contributing factor to the use of soft power, the likely purpose of which may be:

- Violation of the constitutional order of the country;
- Attempt to change the Euro-Atlantic course of Georgia and incite nihilistic views of the population towards European integration;
- Discrediting the government and the political spectrum;
- polarization of society;
- Expanding political and economic influence.

The following actions are likely to be taken by stakeholders to achieve the named tasks:

- an attempt to incite ethnic strife;
- providing targeted misinformation from foreign media;
- Possibility to use the political spectrum;
- Trying to gain influence in the economic and energy spheres;
- Opportunity to offer education and economic projects to non-Georgian speaking population.

Article 17 of the Georgian National Security Concept aims to strengthen multiculturalism, integrate ethnic minorities, and increase their involvement in public and political life. It focuses on the need for ethnic minorities to be involved in civic and political life, the need to know Georgian as the state language, and the preservation of ethnic minority culture and identity. Article 11 raises issues related to civic integration. According to the document, all citizens of Georgia should have an equal opportunity to participate in the political, economic, cultural, social life of the country and to participate in achieving and strengthening national unity and consent[16]. The issues of civic integration, involvement of ethnic minorities in public and political life, protection of cultural values of ethnic minorities are also addressed in the rules of national security policy planning and coordination. The document considers the civic integration of national and religious minorities living in the country as one of the important priorities of the state. The same document pays special attention to cyber security, civic awareness, establishment, FC VBN, and development of the relevant educational base[17].

The existence of future hybrid threats from hostile states to Georgia is not hidden from anyone. The SSU reports emphasize that the target of hybrid operations of foreign special services is the population of Georgia, including ethnic or religious minorities in the country. These threats include:

- Stirring up anti-Western sentiments in Georgian society; Tarnishing Georgia's image as a reliable partner at the international level; The emergence of mistrust, uncertainty, hopelessness, and nihilism in society;
- Creating centers of destabilization on ethnic and religious grounds to develop disintegration processes in the country and to polarize Georgian society;
- Use of propaganda media and disinformation components, cyber-operations and individual cyber-attacks, destructive political groups, and public-populist associations[18].

SSU reports focus on the possibilities of hybrid wars against Georgia. Hybrid so-called Fourth generation war is a combination of complex methods (conventional capabilities, asymmetric tactics, formations, terrorist acts, violence, coercion, blackmail, crime, chaos), which can be carried out by both state and non-state actors, separate groups. Their main goal is to influence the final outcome of the conflict, including in the physical and psychological dimension[19]. Both conventional and unconventional methods are used in hybrid operations to ensure the achievement of military-political goals[20]. Hybrid warfare also involves a combination of coercive and sabotage actions carried out by state / non-state actors to achieve the desired goal[21].

The Georgian SUS 2019 report directly addresses the problems of hybrid actions taken against Georgia by the Russian Federation and other states, namely: 1. Occupation forces and de facto regimes; 2. Information war; 3. Soft power; 4. Economic leverage; 5. Covert operations[22].

It is no secret that hostile states use disinformation methods to try to provide the population with unobjective and biased information. By manipulating public opinion, under the guise of cultural, educational, economic projects, to inspire confrontation between ethnic and religious groups, incite anti-Georgian sentiments, and distance oneself

---

16 Miklaucic, 2015
17 Report of the State Security Service of Georgia 01.01.2019-31.12.2019
18 Galiskan, 25/2019, Gunneriusson, 2021
19 Chivvis, 2017
20 Nilsson, 2018
21 White, Overdeer, 2020:355/359
22 Report of the State Security Service of Georgia, 2019:24/29.

from the state. The incident related to Davit Garej is also discussed in the mentioned context. Individuals / organizations using soft power and the media to try to damage Georgian-Azerbaijani relations, to portray Azerbaijan as an occupier state, to facilitate distance of ethnic Georgians and ethnic Azeris Georgian citizens.

Georgia also came under hybrid threat during the Second Karabakh War. The possibility of Georgia's artificial involvement in the conflict has been identified. To prevent possible damaging actions against Georgia, the authorities have the following tasks on their agenda:

- Preventing the possible involvement of ethnic Azerbaijani and ethnic Armenian citizens in the conflict;
- Prevention of attempts to artificially confront Georgian ethnic Azerbaijani and Armenian citizens;
- Strengthening border sectors;
- Strengthen communication with neighbouring states;
- Prevention of artificial tension between Georgian-Azerbaijani, Georgian-Armenian, and Azerbaijani-Armenian citizens;
- Identifying and preventing the stirring up of radical views among Georgian citizens on ethnic and religious grounds and the presentation of everyday issues on ethnic or religious grounds. Measures to prevent threats related to these issues are discussed in the 2020 report of the SSU.

The Russian hybrid war against Georgia has been going on for years. It is one of the components of Russia's aggressive policy against Georgia and its strategy, which is reflected in its strategic-political doctrines.

The hybrid war waged by Russia against Georgia is fully in line with the approaches proposed by Mark Galeot, a well-known scientist on the Russian hybrid war, namely:

- Non-kinetic operations, production of information wars;
- Deepening and establishing contacts with non-state actors;
- Existence of a command structure that directs the conduct of political and military operations[23].

The hybrid war waged by Russia is nothing more than an attempt to gain influence and control over the media in Georgia in order to shape the relevant public mood, manipulate the public and influence the decisions of the state.

Hybrid scenarios are part of a unified Russian strategy that focuses on Georgia's economic, psychological, moral, political, and technological processes. Accordingly, Russian hybrid actions in Georgia are expressed in military, economic, diplomatic, intelligence, intelligence aspects. Its goal is to create an image of an enemy in the form of Georgia, to worsen the country's institutions and socio-economic background by exporting crime, corruption. All this is a tried and tested method of disrupting and forcibly changing the constitutional order of the country. The target group (Georgian population) is sorted by economic, social, ethnic, religious, political, and angular factors.

One of the targets of the Russian information war is ethnic and religious minorities living in Georgia. The degree of popularity of television and news sources of Russia and other countries among ethnic minorities is largely due to the low level of knowledge of the state language. Consequently, one of the main tasks of Russia's information operations is to create a negative attitude towards the Euro-Atlantic course among ethnic minorities and Georgian society in general. It also aims to highlight the weaknesses and inefficiencies of the country's government and institutions, and to inspire ethnic and religious strife.

By appealing to moral norms based on traditional values, they try to form a negative or nihilistic attitude towards anti-Western and Euro-Atlantic structures.

The Russian hybrid war has three main characteristics:

- Saving forces and using them rationally, considering the available resources;
- Continuity and systematization of hybrid actions;
- Constant focus on the target group / population.

Given these characteristics, the following main tasks of the Russian hybrid war are:

- Changing the political course of Georgia, bringing Russian-oriented groups to power, and trying to return the country to the Russian vector;
- If appropriate, occupy the territory of the country without the use of a direct, clearly defined military component;
- Dissemination of narratives and implementation of actions that further legitimize military operations (distribution of Russian passports in the occupied territories, presentation of Georgia as an aggressor state after the August war, etc.);
- Using of the hybrid methods to Influence on country policies and decision-making processes. Russia is actively

---

23 White, Overdeer, 2020:355/359

using the following hybrid methods in Georgia to accomplish these tasks: A) information operations; B) cyber-space operations; C) proxy forces; D) economic impact; E) political influence; F) secret operations; G) diplomatic channels; H) military operations.

The following actions are especially noteworthy from the named activities:

1. **Creeping occupation**. It is a constant leverage of influence on the Georgian government. Its purpose is to show that the threat posed by Russia is real, and if it is expedient, it can fully occupy Georgia. With this action, Russia is trying to show its strength and the inability of the Georgian government to protect the state from creeping occupation, from the kidnappings of its own citizens. The purpose of this action is to be constantly blackmailed in order to discredit the government and to have an influence on the decision-making process. The named action is a clear example of how the military component of a hybrid operation responds and is transformed to political needs.
2. **Create proxy forces**. It is reflected in the support of pro-Russian forces in Georgia, including in the political and economic spheres, and in the creation and financing of pro-Russian non-governmental and media outlets;
3. **Covert operations**, psychological operations, operations produced in cyberspace. These actions include terrorist acts against Georgia, including the deployment and organization of intelligence activities in the region, cyber-attacks on Georgia's critical infrastructure, the dismantling of critical infrastructure, and the extraction of information.
4. **Information operations**. Information provided by Russian and satellite TV / mass media is intended to disseminate to the international community, on the one hand, the views of Georgia as a corrupt country, an unreliable partner, and, on the other hand, to disseminate information to Georgian society that contributes to polarization, ethnic and religious hatred. Such actions detrimental to national security could be the information campaign around the Davit-Gareji monastery complex, the blockade of the Kartsakhi border post during the Second Karabakh War, attempts to hold ethnic rallies in Tbilisi, to dismantle strategic cables, the events in Dmanisi, attempts to portray strategic partners, including Turkey and Azerbaijan, as unreliable allies, and other actions.

Conducting information warfare is one of the most prominent components of hybrid warfare to incite ethnic strife in a democratic society. This is due to the following circumstances:

➢ In a society based on democratic development and pluralism, everyone is equal before the law, regardless of the dominance of the ethnic group. It is possible for the government to justify its actions towards ethnic / religious minorities, However, manipulation of public opinion (as we have seen many times in the recent history of Georgia) is not ruled out among some Georgian citizens in order to dominate the view of discriminatory treatment of ethnic / religious minorities.
➢ Through intelligence and covert operations to incite ethnic and religious strife, narratives that seem unacceptable to the dominant nation because of the ethnic and religious affiliation.

Conclusion

the ethnic and religious diversity of Georgia as an expression of poly-culturalism is one of the contributing factors to the democratic development of the country, although it also carries certain risks in a specific geopolitical context. To avoid and prevent the above-mentioned threats, it is important to qualitatively increase the process of integration of ethnic minorities in Georgia, strengthen the teaching of the state language, protect the cultural values of ethnic minorities, improve the degree of their involvement in public and political life.

Russia's hybrid operations will be further expanded and refined in the future in parallel with Georgia's gradual integration into Euro-Atlantic structures. Accordingly, the agenda includes the development of countermeasures for the threats posed by the hybrid war, as well as the timely prevention of possible conflicts on religious and ethnic grounds.

Bibliography:

1. National Statistics Office of Georgia, Main Results of the Universal Census of Georgia, 2014;
2. Decree of the Government of Georgia №1740, State Strategy for Civic Equality and Integration and 2015-2020. On approving the action plan, St. Tbilisi, 2015;
3. State Department of Statistics of Georgia, Results of the First National Census of the Population of Georgia in 2002, Volume I, 2002;
4. Khutsishvili, Q. Caucasus from a Geopolitical Perspective, Pankisi Crisis, Tbilisi 2002;
5. Decree of the Government of Georgia №1740, State Strategy for Civic Equality and Integration and 2015-2020. Approval of the Action Plan, 2015;
6. Foundation of the open Society, Research on the participation of ethnic minorities in political life, 2019;

7. Marikashvili, E., Gigineishvili, M., Improving the rights of minorities through strategic litigation, Democratic Initiative of Georgia, Tbilisi, 2017;

8. CRRC, Council of Europe, Hate Crime, Hate Speech, and Discrimination in Georgia: Public Attitudes and Awareness, 2018;

9. Adamia, A., Kiknavelidze, K., Lashkhi, G., INTEGRATION OF NATIONAL MINORITIES IN GEORGIA, POLICY PAPERS, Tbilisi, 2017, ISBN 978-9941-0-9921-2, Netherlands Institute for Multiparty Democracy, © OSCE High Commissioner on National Minorities, 2017;

10. Ullmann A., Challenges to coexistence in Georgia, CSS analysis in security policy, №186, Editor: Matthias Bieri, 2016, http://www.css.ethz.ch/en/publications/cssanalyses-in-security;

11. Samkharadze, N. "Ethnic Minorities in the Context of Georgia's European Integration: Is There Space for Skepticism?", Policy Essay # 30, Georgian Policy Institute, July 2020;

12. Concept of National Security of Georgia, 2011;

13. Rule of national security policy planning and coordination;

14. Report of the State Security Service of Georgia 01.01.2017-31.12.2017;

15. Report of the State Security Service of Georgia 01.01.2018-31.12.2018

16. Hoffman, F., Hybrid Warfare and Challenges. Joint Forces Quarterly. 1st Quarter 2009;

17. Miklaucic, M., NATO Countering the Hybrid Threat. NATO, 2011, ACT. Available from: http://www.act.nato.int/nato-countering-the-hybridthreat [Accessed 18 February 2015;

18. Galiskan, M., Hybrid warfare and strategic theory, ISSG, April, 2019;

19. Report of the State Security Service of Georgia 01.01.2019-31.12.2019;

20. Gunneriusson, H., Hybrid warfare, development, historical context, challengers, and interpretations. Mid Sweden University risk and crisis research centre, 2021;

21. Chivvis, C., S., Understanding Russian "Hybrid Warfare" and What Can be Done About It, The RAND Corporation2, March 22, 2017;

22. Nilsson, N., Russian Hybrid Tactics in Georgia, Central Asia-Caucasus Institute & Silk Road Studies Program – A Joint Transatlantic Research and Policy Center, 01/2018;

23. White, J., Overdeer, D., "Exploiting Ethnicity in Russian Hybrid Threats", Strategos, 4(1), 31-49 UDK 32 UDK 355/359 Scientific review, 2020.

AN ADVANTAGE OF TEACHING MILITARY COLLOCATIONS IN MILITARY CLASSES

Megi Sabanashvili
PhD Student, International Black Sea University,
English language Teacher, Language Training School
Training and Military Education Command

Abstract

Since the early 1960s English for specific purposes (ESP) has rapidly developed and has taken a major part in English language instruction and research. It refers to the teaching and learning of English where the learners' aim is to use English in a specific domain. The purpose of ESP in a military context is to help students become communicatively competent in a military environment. The present study demonstrates an empirical research of explicit corpus-aided military collocation instruction and raises their importance in English language acquisition for military specialty students.

A 20 - week intensive instruction of collocations was given to the military students learning English at the language training school in the Training and Military Education Command in Georgia. The pre-, mid-, and post-tests on collocation competency as well as the questionnaire were administered to the participants during the experiment. The data were collected and analyzed with qualitative and quantitative research methods. The results from the tests and questionnaire collaboratively prove that the corpus-based collocation instruction is more effective for pre- intermediate / intermediate level military students. The findings have pedagogical implications for EFL teachers and students. The study recommends the teachers play a more active role in raising their students' military collocation awareness through appropriate guidance.

Keywords:
ESP, military collocations, collocation awareness, communicative competence

Introduction

The primary goals of language learners for learning ESP English are to communicate a set of professional skills and to accomplish specific job-related tasks. Today military specialty students study English not only to understand everyday language, but also to use the language in a specific context for job opportunities. As a result, the objectives of the language training should be based on the needs of military personnel and their future language use in accordance with their national defence interests and international relations. These category students require teaching methods and resources that focus on the development of specific vocabulary.

The present study aims to raise awareness of the role of military collocations in ESP instruction. It also aims to give emphasis to the military collocations and design proper collocation teaching methodology (strategies /activities) that the instructor can incorporate in the teaching process. In order to help military students develop their communicative competence in English language, the instruction needs to be focused on regular teaching of military collocations in ESP context.

Due to limited research and the lack of emphasis on collocations in teaching and learning in English for the military specialty students in Georgia, this study will help encourage the prominence of learning collocations among military students as well as increase awareness among Georgian military instructors to focus more attention on teaching collocations. These two key objectives of the study will promote mastering military collocations and consequently develop their communicative competence in English language.

1. English for Specific Purposes (ESP)

Since the 1960s, there has been an increase in the need for English for Specific Purposes (ESP), particularly in EFL countries where English is used for instrumental purposes. As Javid states ESP puts the emphasis on "Specific English" related to any particular discipline, occupation or activity. To realize your students' need in ESP you need to be familiar with their targets (the writing and speech that learners are expected to produce and comprehend in specific contexts)[1].

The students who receive ESP instruction already speak and understand English at an intermediate level. Military English uses a specific linguistic corpus and emphasizes particular types of communication in a military context. In order to communicate with their international partners during a variety of trainings, joint military exercises and multinational missions, the professional soldiers, the officers, non-commissioned officers should master the military terminology used in their branch specialty: land, air or naval force. What words and phrases should be learned to boost their lexical knowledge is given a close attention. The speaking and writing skills are of utmost importance for ESP students.

2. What is collocation?

The word "collocation" is derived from the Latin verb "collocare. The British linguist Firth was the first who initially used this term to describe the habitual co-occurrence of lexical items[2]. According to McCarthy "in vocabulary teaching there is a high importance of collocations", as well as "the relationship of collocation is fundamental in the study of vocabulary, and collocation is an important organizing principle in the vocabulary of any language." [3].

Thornbury (2002) also declares that idioms, phrasal verbs and collocations and are some of the most important chunks of language. It's crucial to consider the context in which a collocation is used. Native speakers instinctively predict what is going to be said by using of phrases. It will be simpler for native speakers to guess what a non-native speaker is saying if they make use of collocations.[4] As maintained by some of the most well-known linguists (Benson et al. 1986, Hausmann 1989, Hill 2000)[5] collocations can be divided into seven different syntactic types:

---

1 Javid, Choudary. Z. "English for Specific Purposes: Its Definition, Characteristics, Scope and Purpose" European Journal of Scientific Research, 112(1) (2013): 131

2 Firth, J. R. Papers in Linguistics . London: Oxford, 1957:196

3 McCarthy, M. Vocabulary. Oxford: Oxford University Press. (1990) :12

4 Thornbury, S. How to teach vocabulary. Harlow: Longman, 2002.

5 Benson, M., Benson, E. and Ilson, R. The BBI Combinatory Dictionary of English. Amsterdam: John Benjamins , 1986.

Hausmann, F.J. 'Le dictionnaire de collocations', in Worterb ¨ ucher: ein Internationals Handbuch zur ¨, Berlin: Lexikographie, de Gruyter, (1989): 1010–1019.

Hill, J. "Revisiting priorities: From grammatical failure to collocational success". In M. Lewis (Ed.), Teaching collocation: Further development in the lexical approach. London: Commercial Colour Press Plc., (2000): 47-69.

verb + noun / noun + verb: accumulate knowledge, break a law, a bomb explodes

verb + adjective: sound strange, feel excited, stay awake

verb + adverb / adverb + verb: act accordingly, happen spontaneously, hardly expect

verb + prepositional phrase: take into consideration, bear in mind, be under investigation

adjective + noun: bright idea, heavy rain, outdoor game

noun + of + noun: bar of chocolate, twist of fate , sense of humor

adverb + adjective: blissfully ignorant , fully aware, perfectly healthy

3. The significance of military collocations in ESP

In the modern era of communication, English language has emerged as the lingua franca for communicating the fundamental ideas in a variety of fields, including the military. As a result, it is essential to motivate military students to achieve English communicative competence. Teaching professional vocabulary in ESP setting needs to be a main aspect of English language instruction. Coxhead provides two explanations for the significance of vocabulary acquisition in ESP: firstly, both teachers and students must be aware that valuable classroom time is completely related to their language needs. They ought to be reading texts that include the vocabulary and key concepts of their field and writing applying those concepts and vocabulary. […] Secondly, these students' knowledge and use of this vocabulary for special purposes illustrates that they are part of a particular group.[6]

The vocabulary needs of ESP students and courses affect the tasks that they do in their professional field, their aims in doing these tasks, and their level of specialized knowledge. In accordance with the scholars in applied linguistics, the mastery of collocations in both oral and written forms is an important element of natural fluency in English. For example, Lewis asserts: "fluency is based on the acquisition of a large store of fixed or semi-fixed prefabricated items, which are available as the foundation for any linguistic novelty or creativity."[7] From this point of view, it is important for military students to identify and acquire military collocations. They need to be aware of military collocations in order to improve their receptive skills, which will enable them to speak and write more fluently, naturally and correctly in their professional field. To sum up, teaching military collocations have a great importance for each language skill of English language proficiency:

Reading : to understand a variety of military authentic texts, correspondence and newspaper articles.

Listening : to understand relevant conversations, military news , reports, briefings

Speaking : to communicate effectively with native speakers in job interviews as well as in military environment ; giving presentations

Writing : to write resumes, informal / formal letters and e-mails, military reports and orders.

However, military students in Georgia often encounter collocation problems for a variety of reasons. The Studies have shown that collocations typically present a challenge for non-native speakers due to the interference of their native language. The most common is a direct translation from their native tongue. They struggle to understand the figurative meanings of word combinations and frequently do not know how each word goes properly in context.

In addition, military students are particularly concerned about expanding their vocabulary. Many students waste hours on memorizing thousands of words in isolation simply from the dictionary. Unfortunately, they forget the fact that language fluency depends less on isolated words and more on having a quick availability to a store of lexical chunks, among which collocation is the most important type of lexical unit. Lewis (2000) claims that the main reason why so many students are not making any apparent proggress is that they haven't been taught to recognize which words go together. They may know quite a lot of individual words, which they fail to use along with their grammatical knowledge, but they do not have the skills to use those words in a variety of collocations, which give more meaning into what they say or write.[8]

---

6 Coxhead, A."Vocabulary and ESP" in Paltridge B. and Starfield S. (eds.) The Handbook of English for Specific Purposes, Wiley-Blackwell, (2013) : 116

7 Lewis, M. Implementing the lexical approach: Putting theory into practice. Hove: Language Teaching Publications, 1997:15

8 Lewis, M. **Teaching Collocation.** Hove: Language Teaching Publications, 2000.

While teaching and learning collocations in English as a foreign language has gained a lot of interesting the last decade, it would be inappropriate for Georgian military specialty students to take the English language course without progressing in mastering English military collocations. Their ability to communicate effectively in the military field will be definitely increased by a deeper understanding of military collocations. If military students adequately learn them, they will be able to apply them accurately both in their daily lives and at work. The awareness of English military collocations will be beneficial for their future career and promotion as well. For example, Nizonkiza investigated how teaching collocations affected the growth of academic vocabulary and, consequently, improvement of academic writing skills. The study found that purposeful teaching collocations to university students enhanced students' productive use of collocations in both cued recall and essay writing[9]. Lee and Kim (2021) defined military students' collocational knowledge to what extent they understand recurring but arbitrary combinations of words like 'friendly fire' and 'surgical strike'. There were 1,637 participants in the study. The students in the experimental group received corpus-based instruction, which was discovered to be more effective than traditional vocabulary instruction.[10].

4. Methodology

Research goals

Considering the importance of collocations in the acquisition of foreign languages and the challenges that students face in learning them, the current study aimed to gather and analyze data regarding collocations teaching to military students at language training school in the training and military education command to find out whether they are aware of military collocations and if they precisely use these collocations in English language communicative competence. The experiment's secondary goal was to reveal whether or not participants' language proficiency would be impacted positively or negatively by an intensive teaching of military collocations. The study determined the further steps and recommendations in order to promote military collocation instruction in English language groups.

Research questions

The purpose of this study is to respond to the following research question:

- Do the military students have difficulties understanding the context even if they are familiar with the meaning of the individual words?

- Are collocations actively taught to military students while mastering English?

- Does the teaching of military collocations help military students in EFL classes to develop their Communicative Competence?

- Do the efficient language teachers put more emphasis on military collocations?

Methods

In recent years there has been a certain shift from rote learning and monotonous grammar rules to a more holistic approach. The goals of language learners, i.e. acquiring languages to communicate, have changed in response to changes in society. Given the significance of this issue, linguists and teachers have conducted a lot of research on foreign language teaching in order to discover and establish more realistic and effective language teaching methods and approaches to help teachers in perform their job effectively.

In the current study, collocations were taught using the communicative method. As Mustafa considers the Communicative Approach, the Task-based approach, even the outdated Audio-lingualism and its successor PPP (Presentation, Practice, and Production) help in vocabulary acquisition, even though it is not a planned activity, but rather results as a byproduct of other activities that focus on task solving, skill development and others, or is "incidental".[11]

The research employed a mixed-method technique to assess students' collocational understanding. Pre-test,

9 Nizonkiza, D. "Improving academic literacy by teaching collocations. Stellenbosch Papers in Linguistics". 47(2017): 153-179. https:// doi: 10.5774/47-0-267

10 Lee, H. and Kim, J. Improving military English education based on the analysis of collocational knowledge: A meta-analysis". Korean Journal of Military Art and Science, 77(2) (2021): 152-170.

11 Mustafaa, H.R., N. Sain and N.Z.A. Razakc. "Using Internet for Learning Vocabulary among Second Language Learners in a Suburban School", Procedia - Social and Behavioral Sciences, 66 (2012) : 425.

mid-test, post-test tests with the same format, as well as a questionnaire, were used as two qualitative research tools. Data from the pre-, mid-, and post-test results were examined to find out the students' level of knowledge and the effectiveness of vocabulary learning strategies. The data were analyzed by the SPSS software. The research was conducted during the academic year 2021-2022, at language training school of the training and military education command in order to gather the relevant findings. The total number of the participants was 40 intermediate English language learners from six groups and they were randomly divided into experimental and control groups. The experimental group underwent corpus based instruction which involved five 50-minute English classes per day for military specialty students and on average, 10 to15 minutes per day for teaching military collocations. The students in the experimental group were provided both 8-10 military collocations and a variety of collocation exercises. Sex was not a variable in the study by reason of the limited number of female students. The research participants were predominantly male military specialty students between the ages of 25 and 40. At the end of the experiment Likert-scale questionnaire (composed in English) was administered to the experimental group to measure participants' general attitude to the teaching of collocations. To learn more about military students' attitudes toward collocation training, the survey data were evaluated and the results were interpreted.

Figure 1: Number of students giving their opinion about learning vocabulary with individual words and collocations

What is a better method, learning English in collocations (1) or individual words (2)?
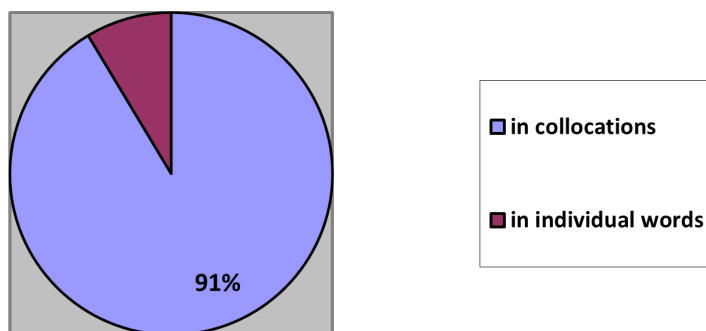
Based on the following survey question, 91.4 % of the students strongly preferred learning vocabulary in collocations rather than as individual words.

Figure 2: Number of students reviewing teaching military collocations

To what extent are the military collocations helpful in your professional field?

70
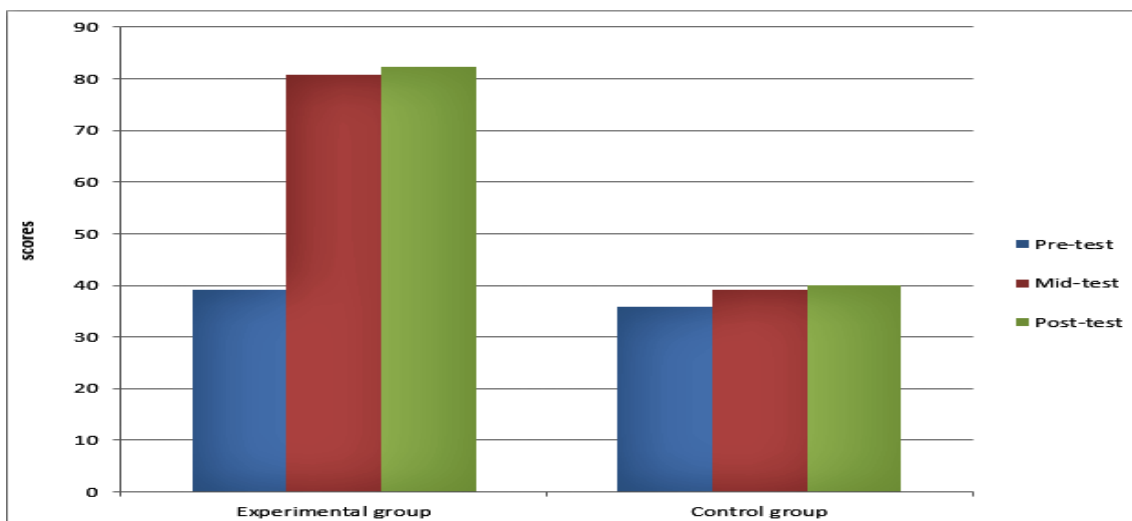
A total of 90 % of the survey respondents declare that military collocations are helpful or very helpful in their professional field as they acknowledge the importance of military collocations in their future career and promotion.

Figure 3: The test result showed a significant improvement in collocation knowledge
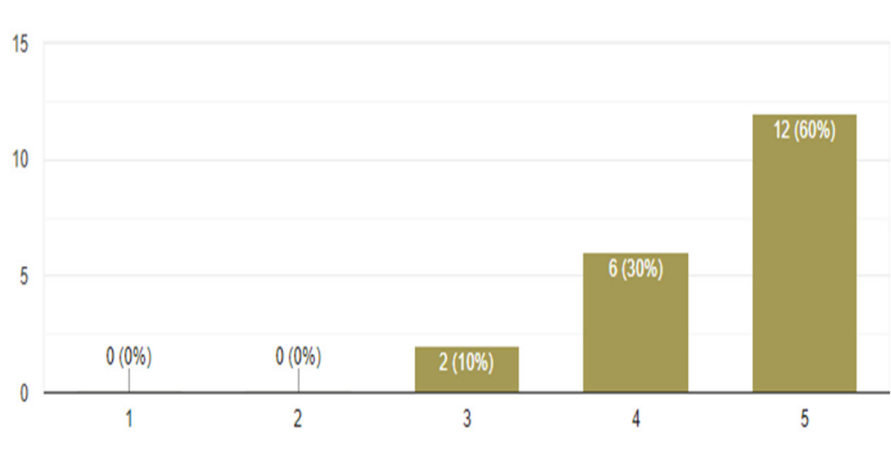
Intensive teaching of military collocations evidently changed the test outcomes in the experimental group from the pre-test to the post -test. The students in the experimental group showed a double improvement in collocation knowledge in both the mid-test and post- test.

Recommendations

Based on this study, it is essential that ESP instructors in Georgia to select and provide vocabulary in accordance with the needs and level of their military students. The class size and students' personalities should be taken into account while choosing the materials. Military students should be encouraged to learn vocabulary in phrases and set expressions rather than in isolated ones. First, the context helps them easily remember the meaning and makes it easier for them to apply the vocabulary naturally. Second, it is easier for human brain to remember and use language in chunks rather than as single words. For example, Nattinger believes it is relatively easier to remember a new word in a group of associations that means that language chunks help learners to accumulate information.[12] Besides, when words are combined in a chunk, they have the power to predict each other's occurrence. It shows that collocation competence can influence EFL learners' native-like performance. Thus, teachers should encourage military students to be more aware of military collocations in language reception skills and successfully use them in language production skills.

Conclusion

The current study investigated the effectiveness of military collocation teaching in ESP context in Georgia by measuring progress the students undergo after 20 weeks of intensive training. It also compared the English proficiency between an experimental group and a control group after receiving various teaching strategies. According to the research findings, the intensive instruction of military collocations obviously changed the test results in the experimental group from the pre-test to the post -test.

The outcomes from the mid test and posttest revealed that the learners in the experimental group did better than control group in vocabulary knowledge. The participants with intermediate English proficiency achieved a double improvement in their performance of military collocation tests. The various collocation activities significantly expanded participants' vocabulary knowledge. The questionnaire showed that 91.4 % of the survey respondents declared they preferred learning English vocabulary in collocations as opposed to as individual terms. 90% of them acknowledge the importance of military collocations in their future career and advancement and believe that they are beneficial or very beneficial for their professional field. The results obtained by this experimental study demonstrates that teaching military collocations improves vocabulary acquisition strategies. It also indicates that corpus-based English pedagogy is more successful for military specialty students in an ESP setting.

---

12 Nattinger, J.R. "A lexical phrase grammar for ESL. TESOL Quarterly". 14(3) (1988): 337-344.

Bibliography:

1. Benson, M., Benson, E. and Ilson, R. The BBI Combinatory Dictionary of English. Amsterdam: John Benjamins , 1986.
2. Coxhead, A."Vocabulary and ESP" in Paltridge B. and Starfield S. (eds.) The Handbook of English for Specific Purposes, Wiley-Blackwell, (2013) : 115-132 .
3. Firth, J. R. Papers in Linguistics 1934-1951. London: Oxford, 1957.
4. Hausmann, F.J. 'Le dictionnaire de collocations', in Worterb ¨ ucher: ein Internationals Handbuch zur ¨ Lexik-ographie, (1989): 1010–1019, de Gruyter, Berlin.
5. Hill, J. "Revisiting priorities: From grammatical failure to collocational success". In M. Lewis (Ed.), Teaching collocation: Further development in the lexical approach. (2000): 47-69. London: Commercial Colour Press Plc.
6. Javid, Choudary. Z. "English for Specific Purposes: Its Definition, Characteristics, Scope and Purpose" European Journal of Scientific Research, 112(1) (2013): 138–151.
7. Lee, H. and Kim, J. Improving military English education based on the analysis of collocational knowledge: A meta-analysis". Korean Journal of Military Art and Science, 77(2) (2021): 152-170.
8. Lewis, M. Implementing the lexical approach: Putting theory into practice. Hove: Language Teaching Publications, 1997.
9. Lewis, M. Teaching Collocation. Hove: Language Teaching Publications, 2000.
10. Lewis, M. "Towards a Lexical View of Language – A Challenge for Teachers", Babylonia,
11. 3(2005): 7-10
12. McCarthy, M. Vocabulary. Oxford: Oxford University Press,1990.
13. McIntosh, Colin, Francis, B., & Poole, R. Oxford collocations dictionary for students of English (OCD). Oxford: Oxford University Press, 2009.
14. Mustafaa, H.R., N. Sain and N.Z.A. Razakc. "Using Internet for Learning Vocabulary among Second Language Learners in a Suburban School", Procedia - Social and Behavioral Sciences, 66 (2012) :425 – 431.
15. Nattinger, J.R. "A lexical phrase grammar for ESL. TESOL Quarterly". 14(3) (1980): 337-344.
16. Nizonkiza, D. "Improving academic literacy by teaching collocations. Stellenbosch Papers in Linguistics". 47(2017): 153-179. https:// doi: 10.5774/47-0-267
17. Suleman, N., Deepa, S., Othman, H., Ahmed, A., Abbas, M.Z., Nawaz, M.Z., Nazar, U., & Shaheen, H. "A study on use of collocation in business class learners ". Colombian Applied Linguistics Journal, 22(2) (2020):183-193. https://doi.org/10.14483/22487085.16023
18. Thornbury, S. How to teach vocabulary. Harlow: Longman, 2002.

სსიპ - დავით აღმაშენებლის სახელობის საქართველოს ეროვნული თავდაცვის აკადემია
LEPL - DAVID AGHMASHENEBELI
NATIONAL DEFENCE ACADEMY OF GEORGIA