



ORIENTEERING – A NECESSARY SPORTS DISCIPLINE FOR TRAINING THE MILITARY

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Today, the complexity of tactical operations and deployments is such that the body is essential for all military personnel, who must be able to interpret a map and be able to use a compass to move quickly and efficiently on the battlefield. Orienteering can be used to develop many of the qualities that are essential to a loyal, dignified, and honest military man. Finding your way to your destination gives you the guidance you need to navigate a complex and rugged terrain, while moving fast, combining orienteering skills and aerobic exercise capacity. To be competitive at this level, he must train regularly, not only to increase motor skills (such as speed and endurance), but also to acquire cognitive (mental) skills. Soldiers who engage in specific physical activity benefit from an increase in cardiovascular capacity, power, and energy that allow them to sustain physical or mental exertion for long periods of time, builds a certain level of self-awareness and develops a sense of team cohesion.

Keywords: military physical education; orienteering; land navigation; map; sports competition.

Field orientation has been an indispensable quality in human evolution. Without this capacity, primitive man would have found it impossible to survive in the immense unknown, in his eternal search for food. The construction of trade routes in antiquity also required thorough topographical knowledge, and the strategies of medieval wars involved the use of rudimentary "orientation maps" depicting settlements, massifs, and the water network.

Orienteering and the army have a long association over time. The history of orienteering begins in the late 19th century in Sweden. The current term "orientation" (derived from a root of a Swedish word meaning "to find direction or location") was first used in 1886 at the Karlberg Military Academy in Sweden, designating the activity of traversing an unknown terrain with the help of a map and a compass (Försvarmakten 2022). In Sweden, the orienteering has evolved from military training to land navigation, to a competitive sport for military officers, and later for civilians. The Swedish military used specific orientation activities as methods of training the military to learn and improve their navigational skills, skills that were also applicable in a number of military scenarios.

Developed rapidly in the early twentieth century and spread rapidly throughout the world,

orienteering is a competitive physical activity that combines the qualities of an athlete with the movement practiced in nature, bringing the sport much closer to the role it played at the beginning of its history: that of making strong characters in full harmony with the environment. Orienteering is the sport that consists in traversing a route, in an unknown terrain, materialized by a succession of control stations to be reached, the competitors choosing the route to move between the control stations, with the help of a map and a compass. Performance is determined by evaluating the two components, namely: reaching all control stations on the route (in the order established by the organizer) and the time in which the athlete travels the route.

Arriving in our country after the Second World War, orienteering gradually developed as a sport, now being known in the army, especially among military students. The military institutions to which they belong must form a representative orienteering team with which they have to participate in a Military Orienteering Championship, organized by the higher echelons. However, this does not mean that this sport is practiced organized by all military students, but only by a small group. Even if this competition is organized separately for the military within the military units, usually the groups of participating teams are mainly composed of graduates of military educational institutions, who have gained experience or obtained results when they were cadets/students. Orienteering is very suitable for use in military educational

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institutions, as the sport not only stimulates cadets' enthusiasm for physical training, but can also be used as an additional means to diversify practical military topography or military physical education sessions (especially those related to running in various terrains).

The benefits of orienteering

Orienteering offers many benefits, but its real attraction is that it is a fun physical activity. It is a joy to walk or run through the woods or across the fields. If you like to compete, there are many age groups and skill levels to fulfill this desire. The ultimate goal of the orienteer is to find the balance between mental and physical effort, to know how fast to move, in order to continue to interpret the terrain around him and to successfully choose the best route to the finish line.

Orienteering is a sport that can be practiced throughout life and that constantly challenges your mind. This provides obvious development of individual navigation skills as you solve problems in locating each checkpoint. Decision making is paramount: should I go left or right? Should I go up that hill or bypass a longer road? These choices, which must be made and which appear constantly during the competition, call for more thought than quick reaction speed or instinct; that is why orienteering is also called the sport of the mind. Moreover, these decisions are made under conditions of competitive stress and pronounced fatigue, which will help you in the future to become mentally tougher in other stressful situations. Orienteers learn to be autonomous, they are mostly individual orienteering competitions, but also in the forms of team organization, colleagues in that group of athletes usually practice individually to establish their soft skills.

Orienteering builds self-esteem, taking courage to walk alone through unfamiliar areas, especially unfamiliar forests. There are so many beautiful, easily accessible outdoor areas in our country and in the rest of the world that feeling comfortable outdoors triples the pleasure of being there. Every time you discover a checkpoint or reorient yourself so as not to miss the wrong route, your confidence will increase. The spatial-temporal relations help us to coordinate the action in a certain direction, to report the events in time and space. These become more developed as the guide needs to

plan how to get from one place to another, how to figure out if the chosen route goes up or down and how far the chosen landmark is. Experienced guidance counselors have learned to be aware of their surroundings while planning what they will see along the way to the checkpoint, a talent that is also useful in everyday life. But how do you plan what you are going to see? Conventional signs and contours represented on the map will make this description for your imagination. Orienteering learners learn to recognize and use new resources, such as material resources (map and compass), individual physical resources (level of fitness), or mental agility (Healthfitnessrevolution 2022).

In addition to the fact that it is very enjoyable to run through parks and forests or to leave the trails to experience nature, being a trained and experienced orienteer can obviously be a useful thing that can sometimes save lives. In short, we could say that it would not be good to go the wrong way (direction) and not know where you are on the map. A complete definition of wandering has two parts. First of all, you do not know where you are, and secondly, you do not know how to get to a known location. Even if the orienteers temporarily move in the wrong direction, they have the skills and techniques to reorient and continue on their way to their destination. If you get lost, go straight back to the last checkpoint you went to. Even if you do not know where you are, if you manage to do this, then you are not lost. You can throw the word "lost" out of your vocabulary because, as an orienteer, you will never need it again (Living Healthy, Wealthy&Wise 2022).

Another important result of guidance is increased self-confidence. You may be lacking in boldness, but if you want to be confident and become the best at a sport in your group of friends, or you may simply want to feel comfortable outdoors, when orienteering can be a good option in this regard. Acquiring skills and guidance techniques to always be able to find a way out of the forest builds and improves self-confidence and self-esteem with impact in all aspects of your life.

Athletes, who have cleaned up to run on an athletics track or along paved roads, to see that running on the field, to revive yourself, but at the same time is very good for developing endurance and muscular strength. Most areas where orienteering competitions are organized tend to be



hilly, the terrain configuration providing the right environment for both athletes and people with physical abilities to develop all their motor skills.

The instructors found that the orienteering also offers interdisciplinary training, establishing relationships with various sciences of education and training of the athlete, doing so in various new and interesting ways. Orienteering contests organized in historical, urban or rural areas, bring the past of the Romanian people right in your footsteps. By counting the double steps performed, measuring the distances on the map and transforming/calculating the various values obtained, one learns to operate with the international metric system, without obviously realizing this. Monitoring the personal performance obtained, in order to set goals and improve one's own training over time, involves the use of the notions of statistics on data collection and processing, logical thinking and continuous self-improvement. The game according to the rules offers a professional ethical training and compliance with fairness standards. (Human Kinetics 2022)

Eventually, people who like orienteering become interested (sometimes even passionate) in protecting the environment, in conservation, and in sustainable practices to enhance ecosystem resilience and human well-being. Orienteers believe in the motto: "Take nothing and leave nothing behind", another way of saying that they clean their garbage and do not pick flowers. Because orienteering protects the environment, orienteers do not damage the areas they cross or enter protected areas. Orienteering cartographers make sure to mark the forbidden areas (on the maps they draw for competition and training) where endangered plants and animals are found or which are private property. Event organizers and instructors work closely with foresters in forestry areas to protect local environments and fragile habitats.

Orienteering and ground navigation of the military

Orienteering is not only a sport in which competition is possible, but also a healthy activity, based on having a basic knowledge of the use of maps and compass and a good physical condition, thus combining intelligence and physical strength. Therefore, orienteers need solid theoretical knowledge about orientation, and its development

among the military should take into account both its competitive nature and social characteristics.

Over the years, the orienteering in our country has not enjoyed popularity, the main reason being the lack of teaching resources. There are few professional orienteering instructors, sports clubs to promote and develop the activity and specialized teaching materials. In addition, the development of the orienteering requires the possession of approved professional equipment (such as: large-scale topographic maps, equipment, installations and specific devices for marking a route, etc.) which require a rather expensive investment. Moreover, the orienteering is lacking in publicity and, although it is a popular movement in Western countries, it is little known in our country and, implicitly, among the military.

Orienteering can also be understood as an activity in which the basic knowledge of military topography is used, with the help of which you have to follow a route established by the organizers to discover in order all the checkpoints. Therefore, many military experts believe that the formal content of the military topography, which is taught in the military, is sufficient for military training, and orienteering as a sport is just a way to have fun, in the idea that very good results will be obtained anyway, by any military subunit that will participate in it. Judging by the performance of competitions over the years, the real situation is that most military teams that took part in such an activity (including cadets) were unable to achieve outstanding results in orienteering competitions organized by the federation or by the specialized sports clubs. This may reflect a problem with the military's lack of mastery of orientation techniques, which means that in order to better meet effective combat requirements; the military can develop this indicator with guidance. Analyzing this wide gap between skill levels, in terms of understanding and using maps within and outside the military, we conclude that the examination (in all respects) of the training methods used in orienteering and their application to surveying meetings military service can be a useful and necessary thing.

Many orienteers have practiced orienteering as a hobby since childhood, and through repetition they have perfected their skills. After much preparation in this regard, the use of maps and the compass, the sense of the map and the ability to understand a map



are obviously much stronger than those who know only a few basic notions. The thematic content of the military topography discipline within the military educational institutions is usually taught in a single school/university year. After teaching this course, there are few practical moments in which to apply the assimilated theoretical knowledge, as a result, even if they learned during teaching, most soldiers do not use it for a long time and forget everything when they need it.

The orienteering competition is one of the internationally recognized competitive events. Through its sports clubs, more and more military schools in NATO member countries are organizing their own orienteering competitions with a competitive character. Therefore, there are many methods of training in this regard, which instructors and athletes learn from orientation coaches or create themselves. With a wide variety and strong relevance, these training methods can be applied directly in the teaching of military topography, and can significantly improve the process of training military personnel in unknown terrain (Yunda 2011, 161).

The distance covered during an orientation training is generally between 3 - 15 km, in an area where there are between 6 - 15 checkpoints. When running in various terrains, it is necessary to look at the map image from time to time and stop at each checkpoint to validate it. Often, they run for a few minutes, then make stops, then accelerate again for a while, making it impossible for a long distance runner to cover the entire route without worry. Therefore, during the whole cross-country route, it is necessary for the body to perform a movement for a long time, with a certain number of repetitions, in a given rhythm (long distance endurance) and to perform motor acts and actions with the whole body, in the shortest possible time, with maximum speed, depending on the existing conditions (speed over short distances).

The sport itself is actually a run in various terrain combined with a long-distance run. Research has shown that orienteering is a traditional exercise of moderate intensity based on aerobic endurance, and improving endurance depends on the number of workouts, their intensity and duration, and the methodological procedures used (<https://www.dpi-proceedings.com> 2022). Therefore, in the long-term, orienteering training can fully mobilize the

circulatory and respiratory systems of the human body and can have a beneficial impact on the body by improving orienteering skills. The more educated the skill of recognizing the images on the map in the field, the faster the speed of travel and the shorter the duration. As long as systematic training is done for a long time, they will have a positive effect on cardio-pulmonary functions; will effectively develop aerobic and anaerobic exercise capabilities, thus improving the level of physical training of the military.

The analysis and evaluation of the relief is not only a prerequisite, but also the key to success in running through rugged terrain. With the help of training in running in various fields, the military can deepen and consolidate their topographic knowledge, building a good theoretical basis for graphic representations. Orienteering requires participants to continuously identify conventional signs on the map, keep the map northerly, determine the station point, determine the azimuth value of a visible landmark on the ground, plan the route, remember obvious road markings and travel the distance from the point of departure to the destination, in accordance with the route marked on the map.

The competition route is defined by start, checkpoints and arrival. Among these elements, which are precisely marked on the ground and on the map, respectively, are the sections traversed by the military, along which he must orient (navigate), depending on the pros and cons of the terrain on the site. The brain must always be active, and any slight weakness can lead to failure in competition. This process is similar to the army's objectives of training commanders. The new model of the commanding officer that the army is training must learn to keep an active mind and formulate the next battle plan, despite the hard physical effort to which it is subjected (Jinming 2014, 82 - 85).

Orienteering usually takes place on unfamiliar terrain in deserted areas, places not often walked by people. Before the start in an orienteering competition, the landforms, the hydrographic network, the vegetation, the roads, etc. they will only be understood through maps, as on-site reconnaissance cannot be performed. Once the competitors leave the starting point, they face the overcoming of the adverse effects of hills, forests, bushes, thorns, weeds, rivers, valleys,



depressions, steep slopes and moving on rough roads. These natural obstacles are encountered in various sections of running in various terrains, impeding the ability to maintain a certain speed and sometimes causing damage to bones, joints, skin or other parts of the body. This whole process is about combating various natural obstacles in the environment in order to minimize their impact on the movement in various terrains. In addition to the physical condition of the military, the movement will also depend on their abilities and willingness to overcome the obstacles encountered (terrain and vegetation).

Orienteering is a fun way to learn different land navigation methods and techniques. Military physical education sessions (with orienteering topics) are a fun way to learn and put into practice how to use a map and compass to navigate from one point to another. As this knowledge is assimilated, it will be applied to more advanced map reading skills (such as: navigation and terrain analysis) and can even reach competitive orientation. While orienteering can be a fun pastime, the map-reading and land-orientation skills that have been developed can be important skills in the military life of the military (University of Akron 2022).

Orienteering can be used as a training tool for the military in order to form the practical and theoretical knowledge obtained from military topography, and orienteering competitions can be activities to improve the skills of fast navigation in different missions. The implementation of sports orienteering topics in military physical education classes can be a solution, at the same time, for the development of motor skills and abilities, the capacity of physical and intellectual effort of the military and the acquisition of topographic knowledge necessary to carry out combat actions (Ciapa 2015, 27).

Land navigation (field orientation) is an important skill for the military, because in carrying out their missions, they are often put in the position of navigating through unknown areas, often in difficult terrain under cover of darkness. As a soldier, one of the most important pieces of equipment is the map, and knowing how to read that map and where you are and where you need to go on the map will allow you to ask for artillery support by indirect fire, close air support from military aviation or medical evacuation. The use of

that map is critical to the survival of the military, even to the survival of a subunit, and the success of the mission will largely depend on it.

Orienteering helps military personnel to develop and practice at least two important transferable skills (those professional qualities acquired in a particular field, which are relevant in other fields as well) (ejobscariera 2022):

- the ability to move confidently and accurately in the field, without having to stop constantly to consult the map;
- the skills of reading a map and analyzing and interpreting the relief, to use these skills to your advantage from a tactical point of view.

You can never have too much practical experience in orienteering, and it is constantly being improved. Land navigation skills need to be systematically learned and practiced regularly to ensure that they will work reliably and under stress.

Undertaking activities (physical or intellectual) in an unknown operating environment, making difficult choices, having incomplete information available, adjusting the action plan to the middle of the mission, to adapt to changes, are just some of the challenges faced by a commander leading a subunit on a mission in unknown terrain. At first glance, it may seem that navigating the forest, using a compass and a map, has little in common with the efficient management of a military operation. However, there are striking similarities between the perspective and the tactics needed to navigate from point A to point B and those needed to succeed in military action.

In the military, moving on a route to a particular location is an essential part of a successful operation. The military must constantly improve their ability to find the direction of travel on a given route, using land navigation, activities similar to those used in orientation. In both cases, participants find several locations along the way, using only a compass and a map, as well as the human ability to guide themselves through unknown areas (orientation or intuition / instinct). Then, in most cases, there is a deadline to complete the activity, and not completing the route on time can lead to defeat. Finally, the route can be done individually or in a team, to the latter form adding the basic difficulty of the exercise and all the adaptive changes that occur in the overall structure of a group (group dynamics).



Although the details of each orienteering route are different, there are some basic principles that can improve the performance of any participant. Surprisingly, they can be translated into practical sessions, which all military instructors could use to improve their skills (Thayer 2022).

There is a tendency in a timed orienteering event to start from the starting line as if it were a speed race. Although time is a key factor, it is just as important to take a moment at the beginning to understand where you are (to be in tune with the environment), to know where you want to go, and to determine where you are the best way to get there. Military leaders must also take the time to reflect and gain an overview of how their subunit will operate.

A map is a great tool, as long as you know how to read it and understand its imperfections. A compass can be a lifesaver, but relying too much on it (consulting it too often) could cause you to lose sight of certain forms of relief you pass by. The technology is good, but imperfect if you do not know how to use it. Commanders, who realize both the best way to use emerging technologies and their limitations, can maximize the potential of subordinates and the fighting power of the subunit (<https://ro.wikipedia.org> 2022).

Each section of an orienteering path is an opportunity to build the path to victory, to solve certain problems, or to confirm a better way of doing things. A poorly run section should not spoil your morale for the rest of the route, as no one is moving perfectly the first time or every time. Faced with ever-changing situations in military operations, a commander cannot allow a wrong decision to derail the entire subunit. Therefore, constantly evaluate the plan as you move, learn from mistakes, build on your strengths, and dare to make changes to your system.

The error can occur at any time on an orienteering route. A few fallen trees after a storm, a stream coming out of its womb and pouring it over the banks after a heavy rain, etc. can cause good minutes of delay, forcing you to change your route. An intersection of paths, which is shown on the map, may not be as easy to see in the field (due to fallen leaves). For military leaders, understanding and covering these uncontrollable but predictable variables can make the difference between success and failure.

Before leaving on a section of the route, look at the map, analyze the surrounding terrain

and establish a route. Along the way, however, moments of doubt begin to appear and you begin to ask yourself questions such as: is that intersection the one on the map?; have I already covered the 200 meters or do I still have to walk about 50?; all these hilltops look alike, am I heading for the right one? The best way to deal with hesitation is to not panic. Rely on your own plan, use the tools at your disposal, trust your instincts, and keep moving toward your goal. In the same way, military leaders must continue to personally go through those moments of doubt and inspire confidence in their subordinates in times of uncertainty.

Conclusions

After all, due to the comprehensive effects of orienteering training, the military can observe, analyze, and judge the various forms of the earth's crust at any time during rapid maneuvers and accurately determine their current position in a very short time. In addition, given the location to be reached, they will determine the relationship between the enemy's situation, the relief in the area, the direction of maneuver and the combat target, so as to select the best route of maneuver and the most effective plan action, preventing long consultation of maps, misdirection or loss of direction. Thus, the military will improve its ability to make quick and correct decisions in new situations when operating in unknown areas.

The growing popularity of the orienteering is closely linked to military topography. Awareness of the importance of guidance for the military system and the promotion of the implementation of specific training for guidance in topography courses in military educational institutions will mobilize the enthusiasm of instructors and the military for involvement in training sessions. Knowing how to use maps and a compass, moving quickly through unknown areas with the individual weapons provided, survival in isolation are activities of great importance for improving the general military training of cadets.

Today's military leader, like the commander who leads his subunit to a goal, needs to know not only where he wants to go with it, but also what the best way to get there is; orienteering is just one of many interactive activities and challenging, experiential learning.



REFERENCES

Băițan, George Florin și Gabriel Constantin Ciapa. 2013. *Orientarea sportivă*. Bucharest: Military Technical Academy Publishing House.

Burns, Bob și Mike Burns. 2015. *Wilderness Navigation: Finding Your Way Using Map, Compass, Altimeter & GPS. Mountaineers Outdoor, 3rd Edition*. Seattle – USA: Mountaineers Books.

Caudill, Craig și Tracy Trimble. 2019. *Essential Wilderness Navigation*. Salem – USA: Page Street Publishing Co.

Ciapa, Gabriel Constantin. 2015. "Military Topography Versus Sports Orientation In The Army". *The 11th International Conference „Strategies XXI”, Technologies – military applications, simulations and resources*. Bucharest: "Carol I" National Defence University.

DEteck Publications.Inc. 2022. Accessed on 02.01.2022. <https://www.dpi-proceedings.com/index.php/dtem/article/viewFile/35235/33817>.

ejobscariera 2022. Accessed on 02.02.2022. <https://cariera.ejobs.ro/cum-sa-folosesti-abilitatile-transferabile-la-interviu>.

Ferguson, Charles și Robert Turbyfill. 2013. „Discovering Orienteering: Skills, Techniques, and Activities.” Champaign – USA: Human Kinetics.

Försvarsmakten 2022. Accessed on 02.01.2022. <https://www.forsvarsmakten.se/en/about/organisation/training-units-schools-and-centres/military-academy-karlberg>.

Hawkins, Pete. 2013. "Map and Compass, A comprehensive guide to navigation." Kendal - Great Britain: Cicerone Press.

Healthfitnessrevolution 2022. Accessed on 02.05.2022. <https://www.healthfitnessrevolution.com/top-10-health-benefits-orienteeing>.

Human Kinetics 2022. Accessed on 02.06.2022. <https://us.humankinetics.com/blogs/excerpt/learn-the-benefits-of-orienteeing>.

Jinming, Zeng. 2014. „Reform and Thinking of Orienteering Cross-country Teaching.” *Journal of Military Transportation Academy*: 82 - 85.

Lattanzi, Mark. 2020. "Squiggly Lines: Map and Compass Navigation in Adventure Races and Rogaines." Blacksburg – SUA: Tanz Navigation.

Living Healthy Wealthy & Wise 2022. Accessed on 02.05.2022. <https://www.livinghealthywealthywise.com/orienteering>.

McNeill, Carol. 2014. "Orienteering: Skills – Techniques - Training." *Crowood Sports Guides*. Ramsbury - Great Britain: The Crowood Press Ltd.

Thayer 2022. Accessed on 02.02.2022. <https://www.thayerleadership.com/blog/2017/finding-your-way-the-basics-of-land-navigation-can-help-you-overcome-the-ch>.

The University of Akron. 2022. Accessed on 02.03.2022. <https://www.uakron.edu/armyrotc/MS1/11.pdf>.

wikipedia 2022. Accessed on 02.04.2022. https://ro.wikipedia.org/wiki/Tehnologii_emergente.

Yunda, Hu. 2011. *Military Topography and Orienteering*. Wuhan: Wuhan University Press.