

## **Distance Learning in the Bundeswehr: Skills Are More Than Knowledge**

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As it is a military force that often conducts operations, the German Bundeswehr must always be prepared to cope with new tasks and challenges. This holds true not only for the organization as a whole, but also for each soldier and civilian employee. The diverse nature of these challenges imposes new and complex requirements on the Bundeswehr, requirements that must be met primarily through the competent action of Bundeswehr soldiers and staff. Therefore, the field of training holds a central position in the organization's diverse processes. The success of the overall organization in all fields depends heavily on the competence of its staff. As a result, it becomes clear that training that is appropriate in terms of tasks and their complexity has a considerable influence on the force's success at all levels and across the entire spectrum of tasks.

The Bundeswehr has long recognized the overriding importance of training, advanced training, and continuing education. Among other things, this is represented by the fact that the field of joint military training alone—that is, all training fields which are not specifically designed for the air force, navy, land forces, or the medical service—has been given the third-highest budget allocation in the field of education in Germany. Only the budgets of the Federal States of Bavaria and Baden-Württemberg (the two largest federal states in terms of area and population) are higher.

However, it is not only the financial aspect that displays the great importance placed on training, advanced training, and continuing education in the German military. Training and education also play a major role with regard to the attractiveness of the Bundeswehr as an employer. Particularly with their manifold possibilities of training and continuing education, which cover a great bandwidth from vocational training to fully recognized academic studies, the German Armed Forces, in the competition with other employers and in the view of an aging society, make a strong bid to win the “smart brains and skilled hands” of tomorrow for a career in their own ranks.

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## Why There Is No E-learning in the Bundeswehr

The Bundeswehr has only recently begun incorporating new media in its training and education efforts. This is an advantage rather than a hindrance, given that the great hopes that were placed on the new possibilities of e-learning in many fields in the 1990s have largely been dashed, leading to disappointment and frustration. For instance, many companies and organizations realized that the provision of new technologies did not automatically result in better-trained workers who were more qualified for their tasks. Quite the contrary, the level of frustration and demotivation has often clearly increased in response to education programs that allow for hardly any real interaction among real-life people.

The primary aim of introducing e-learning was often to save money in training and education efforts, by centralizing curriculum development and instruction. Hopes that the reduction of training personnel would lead to a clear reduction of costs without incurring any losses in the quality of the training were not fulfilled. What is the reason for this?

From an educational point of view, direct contact with other people in the learning process plays a central role. Communication between people helps to motivate and inspire them in their search for solutions to technical problems. Given that teamwork is an essential prerequisite for successfully accomplishing one's tasks in nearly all work environments, it also becomes clear that within the framework of training, advanced training, and continuing education, cooperation is of crucial importance in the process of acquiring new knowledge and skills.

This is where the educational concept of distance training has its roots. Distance training in practice is the Bundeswehr's further development of an alternative to the traditional forms of e-learning, in which the interaction between people and computers takes a central role, and where students are left alone with the technology (a PC, a learning software package, and possibly an anonymous network) and have to get along by themselves.

Instead, distance training adheres to the principle of *active learning* during phases of physical presence, and to the principle of *collective learning* during phases of remote cooperation. This means that the process of learning is primarily based on the active involvement of the students. This is done through so-called action simulations, during which tasks from real-life situations are simulated. In a given situation, the students then have to work out the solution to a problem themselves, not only by means of theoretical discussions, but also in practice. In this context, realistic action situations are generally characterized by the fact that the solution to a problem can only be found by cooperating with others. At that point it becomes clear that any preparation for a task that requires teamwork can only be done adequately if the learning process is based on teamwork as well.

It is equally important to appoint an instructor as a contact person in order to have him or her set the framework for the training so that it does not lead to a state of chaotic arbitrariness. On the other hand, active learning always requires intensive follow-up study and reflection when students return to their positions. This is always a part of distance training. The results of an action simulation are subsequently discussed and analyzed together with the other students and with the instructor. In this context, the students become aware of both the positive and negative aspects of their solution to the problem presented. In this way, all the students can understand the reasons for the success or failure of the approach to the problem, so that they can consider these aspects in future tasks.

### **The Teletutor: Presenting and Accompanying the Learning Process**

Unlike many e-learning concepts, the instructor plays a central role in the field of distance training as practiced in the Bundeswehr. However, the instructor's function actually is not to have comprehensive knowledge and competence of everything in related to the subject area of the course, and there is no need to be able to "explain the world" to the students. Rather, the instructor's primary function is to ensure that the activities in the distance training program are actually a realistic representation of applications in the real world, that the framework of the distance training program is being adhered to, and that the students can always contact him or her in case of questions and problems.

In distance training, the instructor is the "teletutor." The teletutor provides live support to the students, either personally during the phases of training when the students are physically present, or virtually when they have returned home. His/her task is to ensure that, particularly during the virtual training phases, the students do not "get lost." Thus, the teletutor actively attends to the students by having fixed appointments with them either as a group or individually in a virtual environment, and also by working with them via network-supported communication means on an individual basis.

Therefore, the role of the instructor as a teletutor has been changing from the omniscient teacher towards a facilitator of the learning process who accompanies the students, is partially responsible for their learning success, and ensures that the framework conditions for a successful distance training program are in place.

During a three-month distance training program, instructors in the Bundeswehr undergo further training to become teletutors. In this teletutor training, the instructor learns to plan a course that he/she has previously taught as an attendance-based course as a future distance training program. In this context, the relation of the virtual elements of the program to the real tasks becomes visible. The results and findings gained during distance training represent direct additional benefits for the actual occupational field of application.

## **Skills Are More Than Knowledge: The Realization of Action Orientation**

Distance training always connects virtual training periods with training phases of physical presence. Maintaining regular meetings when students are physically present helps to enable direct interaction and communication. It is much easier for a student to contact the teletutor or another student via chat or by means of a virtual video conference if one has met them in person before. Moreover, in many training fields, certain practice-oriented exercises that are important for the action simulation in distance training can only be realized in in-person meetings because they require special equipment and sometimes even higher security standards.

In this context, actions by the students themselves and, as a result, the acquisition of skills and knowledge always take center stage in distance training. We act on the assumption that competent action (= skills) requires more than having as much theoretical knowledge as possible about a topic. Finally, there is a great difference between having done something oneself already or having personal experience and simply knowing how something works.

Each distance training program begins with a kick-off meeting. During this meeting, the students and the teletutor get to know each other and the students are briefed on how to use the technical equipment available for the course. By doing so, the students overcome their reluctance to use the technology and do not feel inhibited in using the network for communication. Moreover, the students are given information about the sequence of events during the course, as well as what expectations the instructor has of them. The main focal points of the program are discussed, and the students are informed that they have to deal with the first action simulation right at the beginning of the first physical presence phase.

The following phase is the tutor-guided self-learning phase, in which the students prepare for their first action simulation while being supported by the teletutor. For this purpose, they are provided learning materials and tasks regarding the action simulation, which they can access via the network. Based on the work the students do on the learning tasks during the self-study phase, the teletutor obtains information regarding the students' initial baseline level of knowledge and possible areas of expertise, which enables him/her to tailor individual responses to each student's learning needs.

However, particularly during the action simulation, which marks the beginning of the first physical presence phase, the students' different states of knowledge will become readily apparent. Thus, active commitment is required right at the beginning. Subsequently, the results are discussed. For many students, this part of the training measure is an eye-opening experience, since they see a clear picture of their strengths and weaknesses in their approach to the given issue. Based on this experience, wor-

king groups are formed for the continuation of the distance training program. In this context, the heterogeneous composition of the group of students, which is often said to be a problematic phenomenon, turns into an advantage. If successful action can be better realized in a team (because it is impossible for one single person to know everything necessary to solve a complex problem), then it is even more probable that a comprehensive and successful solution to a problem can be found if there is a great variety of expertise available in a team when compared with a team made up of members with similar backgrounds and areas of knowledge. In the area of distance training, we call this “expert mix.” The fact that everyone is responsible for the group’s learning success by contributing his/her expertise is a motivation for all students. At the same time, the students can support each other, which lightens the teletutor’s workload and gives him/her the ability to individually deal with the students’ specific learning needs instead of applying the “sprinkler” method, and explaining the same content to all students in the same way.

The working groups then work jointly on the solution to more complex tasks in order to prepare the second action simulation. This is done in the tele-cooperation phase. For this phase, materials and information are provided online, and the teletutor supports and accompanies the students in their joint efforts to develop strategies for a solution. The main focus is on the joint acquisition of knowledge in the working groups. In the tele-cooperation phase, the teletutor’s main task is to ensure that teamwork also works via networked cooperation and communication, because the students are usually at their actual workplaces during the day and cannot meet in person to coordinate their efforts. As a side effect, the students also improve their media literacy, which should be considered an additional benefit of distance training.

In the second physical presence phase, the students assemble again in order to start with the second action simulation. At this point, the students can directly experience their increased competence when comparing it to the first action simulation. This contributes considerably to another boost of motivation, and at the same time it demonstrates that learning and working together in a team holds clear advantages over the traditional, solitary model of study. The evaluation of the results of the second action simulation is also done on a common basis. This marks the end of the “official” part of the distance training measure.

## **Facilitated Knowledge Management, or the Abolition of Course Completion**

However, the networks—personal as well as technological—will remain active after the end of the individual distance training program, so that they can also be used afterwards. This marks the beginning of the application phase. The participants return

to their workplaces and must apply their newly acquired or deepened knowledge and skills in their daily work. At some point, almost everyone encounters the problem of not being able to solve a task or problem all by himself and with the means available on site. In this context, the network established with the teletutor and the other participants—the experts from different fields—during the distance training measure can be helpful. Thus, distance training does not only imply the end of the idea of ever completing a specific course of learning, but also marks the beginning of facilitated knowledge management. We call it “facilitated” because the teletutor helps enable the continued functioning of the network, providing access to relevant information and making connections to experts who may help to solve a given problem.

Thus, in distance training, technological networks, network-based tools for cooperation and communication, learning programs, and databanks can only be a means to an end. Training relies and will always rely on human beings as actors, which concerns the instructor as well as the participants. Therefore, human beings with all their needs and capabilities—not the latest computer interface or software package—take center stage in training.

### **Perspectives on the Further Development of Training in the Bundeswehr**

The innovative didactic concept in the field of distance training has made clear the degree to which modern education work in the armed forces can contribute to increased mission orientation. In this context, the Bundeswehr will pursue consistent further developments in order to accompany and actively shape the upcoming reorientation of the German armed forces. In order to do so, it is imperative to consider current developments such as the focus on competence orientation, which is already being discussed quite intensively in the field of science and vocational training, for educational work in the Bundeswehr.

By making offers for advanced training and continued education that may be continued by occupational training in the civilian sector, and that offer better opportunities for advancement, education has the potential to considerably contribute to the Bundeswehr’s attractiveness as an employer. The basis for such a permeability of education between the Bundeswehr and other fields of occupational training and continuing education is a common understanding of concepts. This is the only way to consistently represent and evaluate comparable performances at the individual level (i.e., the soldiers) as well as at the organizational level of personnel development. Not least, this is the prerequisite for improving the attractiveness of military service and, consequently, for creating an increasingly flexible personnel management system, as is being requested by the Structural Commission of the Bundeswehr. One example for the current discussion is the debate about the terms *Meister* and *Bachelor*, which is closely related to the “Bachelor Professional.” The core question is whether

a *Meister* degree acquired in the German system of vocational training is equivalent to a bachelor degree from a university, and consequently whether it can be accepted as a prerequisite for follow-on studies to obtain an academic master's degree<sup>3</sup>.

Related to this is the requirement to survey the training opportunities in the German armed forces to determine whether they offer certifiable content within the framework of the ECTS (European Transfer Credit System), which could result in the recognition of credit points. By doing so, soldiers and civilian employees could pave the way during overall course of education and training for subsequent or simultaneous follow-on training at a university. Particularly in view of the demographic developments in German society, which is seeing its population get older, this could be another important contribution to the attractiveness of the Bundeswehr as an employer.

If we expand on this idea, an extension of this point system to a level below university education (e.g., vocational training or master craftsman training) should be developed. This would clearly increase the permeability of the educational system as a whole. In cooperation with the respective authorities in the fields of science, economy, and politics, the Bundeswehr, too, could participate in the development of sustainable and innovative concepts in education.

Particularly in the emerging "battle for the talents of tomorrow," the phase of occupational orientation and transition management gains central importance. In this context, the Bundeswehr has great potential to present itself as an attractive employer to the specialists of tomorrow.

The value of qualified labor will increase in the years to come. Therefore, the cost of longer phases of absence from the workplace for individuals to participate in intensive attendance courses will increase. This implies advantages for education scenarios that flexibly and (partially) virtually reduce phases of absence of personnel while not affecting the success of the educational enterprise. In this context, the Bundeswehr's concept of distance training is absolutely up to date, as it offers adequate solution strategies and manifold potential for the further development of training, advanced training, and continued education.

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<sup>3</sup> cf. W. Müller, „Vier Thesen für Durchlässigkeit der Bildungssysteme und Anrechnung von Kompetenzen," in *Durchlässigkeit gestalten! Wege zwischen beruflicher und hochschulischer Bildung*, eds. R. Buhr, W. Freitag, E. A. Hartmann, C. Loroff, K.-H. Minks, K. Mucke, & I. Stamm-Riemer (Münster: Waxmann Verlag GmbH, 2008), p. 57.

## **Experts with Diverse Skills and Backgrounds: The Bundeswehr Distance Training Convention**

Only jointly it is possible to meet the challenges of the future. Exchange and cooperation with others must play a central role in distance training. This applies also to the further development of our concept and to exchanges with other experts in the field of technology-based education. The Centre for Technology-based Training and Education (CTTE) has been working to develop expertise in distance training since its founding in 2002. Today a central scientific institute of the Helmut-Schmidt-University/University of the Bundeswehr in Hamburg, the CTTE was begun as a project group for distance training on the initiative of the Bundeswehr Armed Forces Office and with the approval of the competent branch of the Ministry of Defense. Within the tripartite distance training working group—the Modern Training Technologies Section of the Bundeswehr Armed Forces Office; the training branch of the Ministry of Defense (Armed Forces Staff Branch I 5); and the Centre for Technology-based Training and Education—the CTTE acts as the scientific “think tank” for developing new concepts in distance training. It cooperates with numerous scientific institutions, such as the *Bundesinstitut für Berufsbildung* (Federal Institute for Vocational Education and Training) and with the *Deutsche Gesellschaft für Evaluation* (German Evaluation Society).

In pursuit of its goals of developing future best practices in distance training, the Centre for Technology-based Training and Education (CTTE) has been holding an annual Bundeswehr Distance Training Convention at the Helmut-Schmidt-University / University of the Bundeswehr since 2004. The Distance Training Convention brings together theory and practice with a scientific conference program, an integrated trade fair, and a variety of special panels. This year, the Ninth Bundeswehr Distance Training Convention will take place from 4 – 6 September 2012.