TEACHING GENDER IN THE MILITARY

A Handbook

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Leveraging technologies to support teaching gender

Tanja Geiss (NATO School, Oberammergau) and Gigi Roman (NATO School, Oberammergau)[1]

CONTENTS

This chapter outlines how various e-learning tools can be used efficiently in support of teaching gender, especially to the military. It also introduces how content can be developed in a gender-sensitive manner as a principle of online teaching, faculty development and effective use of e-learning tools in curricula.

E-learning tools for instructors and learners show that collaborative learning is possible within an online training and education environment and can help to overcome gender bias. By linking the different efforts, the learner gets the most out of the blended experience and becomes better prepared to meet real-world challenges. E-learning content for pre-learning purposes is a tool used to support residential courses. The method allows instructors to presume certain knowledge on each course topic and address the audience on more detailed issues, by trying to overcome gender stereotypes in teaching.

Today e-learning has evolved from primarily being used as a strict pre-learning tool. Twenty-first-century e-learning tools and techniques provide course designers and instructors with numerous possibilities to support individual training and education, e.g. instructor-led course preparation, e-readings and the building of communities of practice. By leveraging these capabilities effectively, the instructor can focus on the specials needs of his/her audience and tailor not only online courses but especially residential courses to the needs and wishes of the learners.

The power of global collaboration means that in a world of rapidly changing threats and challenges on different levels and featuring different actors, training and teaching independent of time and place are available.

1. Introduction

In recent years the need to teach gender in the military has become more and more of a necessity for NATO and the PfP (Partnership for Peace).[2] One challenge for NATO has been to offer education in a timely manner and ensure that it is made available to the majority of NATO/PfP personnel. To overcome this education gap, e-learning was used to provide a basic course on gender: the course was developed by NATO Allied Command Transformation (ACT) together with NATO School Oberammergau and the PfPC (Partnership for Peace Consortium) Security Sector Reform Working Group and Education Development Working Group, with support of the PfPC Advanced Distributed Learning Working Group. This course is not only a good example of interdisciplinary and interagency collaboration, but also a tangible example of how NATO can deliver education and training on various topics to thousands of potential learners by leveraging technology.

Box 9.1 Screenshot of the PfPC learning management system

This chapter provides an overview of various online delivery methods and tools for teaching gender, and examines how e-learning can be embedded effectively into curricula. It includes practical examples from NATO and PfPC learning management systems (LMSs). We conclude with a summary of best practices in gender-sensitive instructional design to help instructors to guide and support learners using online tools. The chapter focuses on four main objectives: to provide an overview of online learning capabilities in support of teaching; to outline various online teaching methods and tools in support of gender teaching; to highlight instructional design considerations for online delivery; and to show how to apply gender to online instructional design of curricula.

2. Online learning capabilities in support of learning

When thinking about e-learning or online learning, most people envision self-paced online courses which can be joined at any time from anywhere. In some cases they link e-learning with the blended learning approach promoted by NATO School Oberammergau to enhance the quality of residential classes. This blended model of delivery is becoming more and more prevalent with the increased availability of powerful commercial and open-source tools on the market which allow a more customer-tailored approach to online learning. For example, many platforms now support online tutoring which allows learners and instructors to connect both synchronously and asynchronously as an important addition to enhancing teaching and learning. The various LMSs on the market allow tracking the success of learners, and many of them also support file management and online discussions. Portal technologies, on the other hand, are ideal to facilitate communities of practice and help learners and educators to exchange files and share knowledge in special online groups.

Box 9.2 Screenshot of the NATO LMS log-in page

Even social networks can be used for teaching, and some universities are using Facebook groups to stay in contact with their learners during breaks and facilitate online discussion forums.[3] In a military context Facebook might not be the preferable platform, but it shows that there are many online learning opportunities available – they just need to be used the right way and learners need to be aware where they can find the content. A good example is the Facebook group on "Gender in military operations", for "people interested, professionally or personally, in the topic of gender in military operations. The purpose is to share information about ongoing events and topics that are worth discussing in a gender related context."[4] This demonstrates that social networks can be used in various ways to offer professional information beyond the normal channels. NATO School offers its learners the NATO School Members Portal so they can take advantage of collaborative learning prior to,

during and after residential classes. The portal allows instructors and learners to communicate and exchange their knowledge not only during classes but also months after leaving NATO School.

Learning today is no longer a hierarchical process; it is linear and has moved to peer-to-peer learning, or the so-called "flipped classroom".[5] In the case of gender this offers various online teaching possibilities which can be adapted to the needs of the respective audience, ranging from stand-alone courses on an LMS to more interactive communities of practice on a learning portal. In summary, we can see an evolution from instructor-driven learning towards knowledge-driven learning, which will further influence the ways of transmitting content to the learner.[6] Peer-to-peer learning has a special relevance in adult education and vocational training. It is different from collaborative learning, where learners work together in small groups to find a solution to a problem; peer-to-peer learning is where one learner leads another through a problem.[7] When speaking of the changing learning process and the use of different electronic means, there is no clear preferable solution. Both approaches are used, but social networks and different groups have to be seen as collaborative learning.

Box 9.3 Case study – Leveraging technology to support a regional network of gender trainers in Southeast Europe

The Regional Network of Gender Trainers in the Western Balkans was created in 2014 to enable networking, information sharing, knowledge exchange and learning among gender trainers in the region. The network is facilitated by UNDP SEESAC (UN Development Programme South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons) through the Gender Equality in the Military in the Western Balkans project. Exchange of information and knowledge sharing are facilitated by a range of tools, ensuring that best practices are disseminated and cooperation takes place among the beneficiaries. Regional meetings, workshops and study visits are organized, and a knowledge-sharing platform was established on the secure area of SEESAC's website (http://kx.seesac.org) to allow discussion among network members, knowledge exchange and learning. For example, the platform enables the sharing of presentations and relevant documents, and allows members to interact and consult on questions and issues they as trainers might encounter during lectures, workshops and training. The platform also includes all the training material from the capacity development activities in which the gender trainers participate.

In addition to the knowledge-sharing platform, the Gender Equality in the Military project created a Facebook page and a Twitter account (@genderssr), managed by SEESAC, and these are used as knowledge-sharing mechanisms. They feature articles and other resources on current news and discussions related to the recruitment and retention of women in the military worldwide, gender training and other relevant topics of interest to gender trainers.

Members of the Regional Network of Gender Trainers in the Western Balkans also created a closed Facebook group (Genders) that they use to share news on their activities – seminars and briefings on gender equality in the military, photos, articles they have written and other relevant news.

" *As a NATO School course director I am interested in providing access for our learners to the highest quality education and training, tailored to their individual needs. 'ADL 169 Improving Operational Effectiveness by Integrating Gender Perspective' online course is part of the pre-learning package recommended to all NCO Professional Development course participants at NATO School Oberammergau. This self-paced course provides the basic concepts and tools needed by personnel to apply gender perspective in their work at NATO and international environment, with the aim of improving operational effectiveness as they come better prepared and ready for discussions during the resident programme.*

SGM Tibor Bogdan, Course director/instructor, NCO Programmes Department

3. Choosing the right online teaching method for your audience

Selecting the right tool for your online learning might be challenging: it depends on your audience and your course aim. If you want your learners just to get an overview of the topic, you might choose one method; if you plan online discussions and allow learners to ask you questions and give feedback, you may prefer another.

The three options discussed here are the main online learning methods used within NATO/PfP, but in some cases a combination of them is found most effective, depending on the individual instructor and the needs of learners.

3.1 Stand-alone

Stand-alone e-learning modules are very often used to reach as many learners as possible. The advantage of this form of asynchronous e-learning[8] is that learners can truly be reached at any time, whenever the learner feels the need to access the content and has time for learning.[9]

When addressing the need for education and training associated with important topics such as gender, stand-alone e-learning is often the most expedient and cost-effective option to reach learners quickly when they are geographically and temporally separated. Our experience has taught us that changing the curriculum is not often as easy as it should be, and in many cases a stand-alone online course is the best way to ensure learners get the information they need in a timely manner. The option of stand-alone training becomes even more attractive when a course is mandatory. The LMS allows tracking learner success, and most of these systems are supported by various options for online assessment.

Box 9.4 Screenshot of gender perspective online course hosted on NATO e-learning LMS

However, there are some aspects of stand-alone courses which should be taken into consideration, especially when addressing topics such as gender. A stand-alone course normally does not foresee any feedback to the learner from an instructor: the learner usually only communicates with the LMS and the course content. It also requires certain self-discipline from the learner to finish the course, as no one is actively checking on learner progress and course completion. To avoid drop-outs, the content needs to be well designed and should answer as many questions as possible on the topic. It should be informative but also comprehensive, to ensure the learner is not getting lost or being overwhelmed by the amount of information.

Another aspect of online teaching is the possibility of allowing learners who feel less comfortable in a residential class to learn at their own pace and within their comfort zone. Stand-alone courses offer a great opportunity for those who do not have time to attend residential courses, or who prefer to learn at their own pace. They are also a great option to allow learners to attend courses beyond the curriculum, and offer additional learning resources for those who want to study more.

The online learning courses developed by ACT, NATO School Oberammergau and the PfPC working groups can be seen as a good example of how a topic such as gender can be taught in a stand-alone online course without losing its relevance. The short course allows learner engagement and provides relevant information on policies and doctrines to build up a foundational knowledge on this topic.

3.2 Instructor/tutor in the loop

> *There will always be a role for the teacher, professor or subject matter expert to teach and entertain us in a classroom.*[10]
>
> John Bersin

Box 9.5 Screenshot of the online classroom set-up on an LMS

An instructor or tutor in the loop allows learners not only to interact with the content but also to address questions to the instructor/tutor. One common strategy is for instructors to schedule online sessions to allow learners to address questions directly to them, and/or for them to participate in online discussions. Another common strategy is that the instructor encourages or requires learners to post questions in online forums which will be answered regularly by the instructor.

This online teaching method allows learners to get more involved with the content and encourages them to reflect on the topic being studied. The instructor can facilitate online discussions and answer open questions. It also allows learners and instructors to engage in depth with the content and facilitates learning on a more intense level: the learning moves from receiving information to engaging and interacting with the topic. This teaching method is also used to encourage participation in communities of practice and peer-to-peer learning. Stand-alone online courses of course do not forbid collaboration and further discussions on a certain topic, but these might or might not appear. The tutor-in-the-loop approach helps to facilitate learning communities and offer learners online spaces where they can exchange. The communities can be moderated by the facilitator, but the idea of collaborative learning is the driving agent: the facilitator is in an observing position and helps in spurring new ideas, rather than actively contributing to the online discussions. In some cases the facilitator just monitors the community and will not be actively involved in the discussions at all.

Different from stand-alone online learning, this method requires assigning a subject-matter expert (SME) who is also willing to moderate and drive the discussions. As a result, the course can be more interactive and the learning outcome might be more intense as the learner gets a deeper knowledge of the topics. However, if the instructor/tutor plans to schedule online sessions, s/he must be mindful that it will limit the freedom of the learner since it requires being online at a certain time. It also might limit the number of people who will be reached.

Choosing this method allows guiding the learner and encourages "out of the box" thinking, but it also requires an SME who is available and able to interact with the learners online. If this method is addressed properly it allows learners to broader their knowledge and moves the online experience from a simple knowledge-receiving method to an interactive learning experience.

3.3 Blended learning[11]

> Blended Learning is the combination of different training 'media' (technologies, activities, and types of events) to create an optimum training program for a specific audience. The term 'blended' means that traditional instructor-led training is being supplemented with other electronic formats.[12]
>
> John Bersin

Within NATO and the PfP blended learning has proven its success. A combination of online courses (mostly stand-alone) and classroom instruction is widely used by various training and education facilities. The "blending" of these two methods allows learners to prepare more thoroughly prior to attending a residential class, and the instructor can have some degree of confidence that learners come equipped to address a topic on a more detailed level.

The Non-Commissioned Officer Programmes Department of NATO School Oberammergau has had success in teaching gender to the military using the blended learning model. Its leadership courses contain a list of mandatory stand-alone online modules, including the gender course hosted on the joint advanced distributed learning (JADL) LMS[13] followed by an active learning session where learners are encouraged to discuss gender-related case studies. The online course is used as basic background, while the classroom instruction allows the instructor and learners to focus on specific issues of the topic.

Choosing the proper strategy to support your instructional goals depends on various factors. The audience you plan to reach will influence the decision, as well as the time available for training and the availability of an instructor/tutor and/or an SME. Box 9.7 gives an overview of the different teaching methods discussed in this chapter.

Box 9.6 Teaching methods

Method	Mode of teaching	Learners' role	Instructor/SME role	Time
Stand-alone online teaching	Asynchronous (hybrid courses might exist)	Self-paced learning	Instructor-independent course Only during the development phase and for course review and update	Accessible any time, fully controlled by the learner
Instructor/tutor in the loop	Possibility of both asynchronous and synchronous	Self-paced and instructor guided	Instructor/tutor has to answer learners' questions, and might schedule online seminars	Depending on the set-up, online seminars might be scheduled Timing can be controlled by the instructor
Blended learning	Both asynchronous and synchronous	Depending on the course set-up, most of the online part is self-paced with classroom instruction	Learners meet instructor/tutor/ lecturer during residential phase, and in some cases also online	Residential phase follows a predetermined schedule; online component can be accessed any time

Besides the discussed e-learning services for the learner,[14] collaborative technologies allow easy exchange between experts, giving tutors and instructors a flexible way to prepare their courses weeks in advance, inviting their speakers and support staff to join an expert or facilitator community online. Course preparation is now no longer dependent on one's ability to access e-mail, as portal technologies can be accessed easily through tablets and smartphones, and experts anywhere and anytime can update and amend their briefings and course materials. Collaboration has moved to a new level, which is a good slogan for our online courses: "training and education anytime and anywhere" can now be transformed into "your office anytime and anywhere". This helps instructors to stay in contact with their speakers and support staff even when they are away from the desk on other missions. What was seen as innovative ten years ago is now referred to as traditional training. Currently NATO is looking towards 2020, and how we will address training and education five years hence. Of course the focus of the content will change, but we have to anticipate that the mode of transmitting information could be modified at any time. Tablets and smartphones are no longer status symbols, but tools which help the learner to navigate through the offered curricula. Learners of the twenty-first century no longer limit themselves to libraries and books; e-readers, e-magazines and e-journals are becoming an essential part of research, training and education.

4. Instructional design for online delivery – The challenge of communicating with the content

When deciding to develop an online course you should be aware of certain instructional design principles, even if you are only planning to be the SME for the course. In many cases the instructional design is the only way to influence how your learners will interact with and experience the content. To avoid e-learning drop-out[15] your course should be well designed and avoid inconveniencing the learner, for example through delays when loading the course or multimedia elements that do not work properly.[16]

Based on your goals and objectives, you will have to define the e-learning content which will be used in your online course. Of course it is always possible to load a good briefing on an LMS or a portal, but these may not fulfil the needs of the learners. It is important to identify the key content required during the analysis phase, and structure the content so that it is presented in an easy and informative way. The overall aim of the course design should be to ensure that learners increase their knowledge or develop attitudes that allow them to transfer this information to the work environment, and to provide an authentic context which allows the learners to perform the job.[17]

The instructional design of an online course is also influenced by instructional methods. A stand-alone course requires more detailed instructions and explanations than a course which has an instructor/tutor in the loop who can offer help if a learner gets lost. With a blended learning approach it is important that the online content is harmonized with the residential programme. Both courses need to be designed in concert with each other to ensure the online content is the basis for the classroom instruction.

Additionally, the selection of multimedia elements is an important part of your course design. In many cases less can be more! Ensuring a balance between text, narrative and graphics in multimedia design and adhering to the design principles outlined by Moreno and Mayer[18] apply equally to teaching gender-related content as they do to any e-learning offering. Given the proliferation of mobile devices of all shapes, sizes and configurations, it is a challenge to design and test course offerings which cover all options currently available on the market. The more multimedia you include and the more interactivity you embed, the more your course depends on a fast and stable internet connection and good resolution at the learner's end.[19] Avoiding multimedia elements is not the answer;[20] it requires a balance between words and graphics[21] to illustrate your content and help the learner to visualize. Well-selected multimedia elements can support your content and strengthen your teaching points.

The gender ADL (advanced distributed learning) courses[22] are a good example to show how multimedia elements support the content and help the learner to visualize. The combination of narration, written text and pictures helps the learner to engage with the content. Interactive elements such as text boxes and comprehension questions not only allow the learner to expand the learning experience but also support the learner during studies and allow self-checks to see if the presented content was understood or must be reviewed.

Since these ADL courses were intended mainly as stand-alone online offerings, the design of the content aimed to be very self-explanatory. Focusing on the audiences of the courses (NATO and partners), the designers aimed to prepare the content in a very comprehensive manner which is easy to understand.

5. Applying gender in online instructional design for the curriculum

The instructional design is the critical part of the development of an online course. It sets the tone of the course and outlines how the learner will interact with the content. It also allows integrating certain aspects of teaching.

Considering how gender can be taught to the military, it is obvious that creating a gender-sensitive environment is important. Within classroom instruction there are different modes (discussed in Chapter 5 in this handbook). For online instruction there are some possibilities to develop gender-sensitive content, and other effective and simple ways to help visualization and promote a different way of addressing the topic.

NINE

Simple methods such as using gender-inclusive language and choosing your multimedia material carefully by respecting both women and men are easy first steps in promoting gender awareness in your online courses. However, this is not nearly enough: the aim of any form of teaching should be a knowledge transfer, and in the case of teaching gender it should ideally also be a transformation of the mindset. Box 9.7 gives an overview of how instructional design helps to apply gender to the online curriculum.

Box 9.7 Instructional design for gender in the curriculum

Design mode	How to apply gender	Example
Language/narration	Use gender-inclusive language.	Avoid generic male pronouns ("he"), but keep the content language inclusive to address any learner.
Pictures	Select pictures which reflect men and women.	Choose pictures with women in leadership positions. Vary your picture selection: focus once on men and the next time on women.
Other multimedia elements	Select/produce videos that incorporate a gender perspective.	Use, if possible, not only male experts. Find female experts on the topic and use them as testimonials.
Case studies	Keep a good balance in your case studies.	When selecting case studies ensure you are showing the respective case from both sides, from a female and a male perspective.
Questions	When posting questions and giving feedback try to use gender-inclusive language.	Avoid generic male pronouns ("he"), but keep the content language inclusive to address any learner.

Without addressing the topic directly, gender can be applied to learning content in fairly simple ways. Teaching gender online is more than just developing another online course on this topic; it means reviewing the online curricula and ensuring that newly developed online material applies a gender perspective. Teaching gender to the military means changing the mindsets of both learners and instructors.

6. Gender and online teaching – Opportunities, challenges and limits

Online teaching demands a great deal of innovative thinking and creativity from creators/designers, instructors/tutors and SMEs. As shown in this chapter, the online environment provides more opportunities than limitations. Course material designed with a gender-aware mindset sensitizes learners to a balanced approach to presenting the topic, and the gender aspect can be indirectly implemented in the course.

As discussed in Section 3.1, one aspect of online teaching of gender is the possibility of allowing those learners who feel less comfortable in a residential class to learn at their own pace and in their comfort zone. In addition, online classes can overcome the gender bias when learners remain anonymous.[23] This allows the instructor to focus purely on the comments and provided feedback in the online class free of gender bias. Anonymity can also give learners the confidence to post comments (adhering to the course etiquette) on subjects in the knowledge that the comments will be rated on their own merit. This concept can be extended into the instructional environment, whereby the learners may not be aware of the gender of the instructor teaching

the course. This approach may help to overcome prejudices when teaching sensitive topics such as gender. It might sound radical, and of course it should not be the case that both learners and instructors need to remain anonymous, but it helps, especially when it comes to the evaluation. An anonymous group will be rated purely on academic performance and not on personal reasons. The same applies to the instructor: the "typical male" or "typical female" prejudice will not apply in this case. However, it is interesting to mention that a study from the University of Alabama showed no significant difference between the genders using a communication module. This would mean that within an online environment there is no clear, predictable gender difference.[24] Nevertheless, anonymity in online courses makes it possible to allow learners to interact with content with which they may not be comfortable. It may be inappropriate to confront learners with this kind of content in the classroom setting.

Of course, challenges remain in the design of assessment criteria and the question of how far one should go in order to integrate a gender perspective and guarantee a gender-inclusive learning environment. It remains the decision of each creator/designer, instructor/tutor and SME as to how far they want to push the online course. As with many other aspects of course design, here "overdoing" can be worse than simply "not doing". Mainstreaming your online curricula and trying to apply gender must make sense and support the content, otherwise the course will lose its aim and become redundant. Just editing the language to be gender-inclusive is a step in the right direction, but it is by far not enough; however, creating artificial case studies to meet the target to gender mainstream your course will for sure make it lose its relevance. It might be better to offer your learners an online course on gender as complementary reading to introduce them to the topic.

When discussing teaching gender online one has to be aware that there are limits within online teaching. The blended learning approach tries to overcome these issues, by offering both an asynchronous teaching environment online and a synchronous teaching environment during classroom instruction.[25] The question of how much an online course on gender will impact the learner is debatable; however, it should be noted that the classroom environment has it limits. The model of transactional distance first introduced by Dr Michael Grahame Moore,[26] who sees distance education as a pedagogical concept and not as a simple geographic separation of learners and instructors, explains that distance between instructor and learner can also exist in a classroom.[27]

Box 9.8 Leveraging advances in technology to provide new training opportunities

New training opportunities include simulation-based training, which has always involved challenges with regard to user interfaces, collaboration, networking, standardization and interoperability. These problems have often been more advanced than those faced in the business IT and C4I (command, control, communications, computers and intelligence) communities. Recent advances in fields like computer gaming and business IT have shown that new technologies can become the basis for simulation systems. Over the last two years consumer IT applications have emerged that may have useful application in distributed simulation. Social networks, wikis, blogs, webpage tagging, photo and video sharing, and tools for personal 3D game development have all attracted significant attention in the academic environment by bringing distributed processing technologies to the mass consumer. Web 2.0 tools answer important problems around distributed, interoperable, interactive, user-centred experiences. Just as computer games brought powerful commercial technologies to military training, Web 2.0 applications have a similar potential which is not yet generally recognized. It is up to the instructors and users how useful application of these technologies can be within the interactive simulation community.[28]

Finally it should be recognized that the challenges within online teaching could change into possibilities, and the limits are only in our ideas.

Box 9.9 offers a list of online courses, websites and social media groups on gender. The authors do not claim that this is a complete list, but it covers the online resources mainly used within NATO and PfP training and education facilities.

Box 9.9 Online resources on gender

Delivery mode	Name	URL	Registration	Open access
Online course	ADL 168: Role of gender advisers and gender field advisers in operations	https://jadl.act.nato.int/	Registration needed	Unlimited access to the course (once registered to the LMS)
Online course	ADL 169: Improving operational effectiveness by integrating gender perspective	https://jadl.act.nato.int/	Registration needed	Unlimited access to the course (once registered to the LMS)
Online course	ADL 171: Gender focal point	https://jadl.act.nato.int/	Registration needed	Unlimited access to the course (once registered to the LMS)
Online course	ADL 135 Gender perspective	https://jadl.act.nato.int/	Registration needed	Unlimited access to the course (once registered to the LMS)
Online courses	UN peacekeeping training resource	www.peaceopstraining.org/	No registration needed for the free online courses	Some courses require a tuition fee
Community of interest	Facebook groups such as Gender in Military Operations	https://www.facebook.com/groups/115311195225650/	Registration with Facebook needed	Subscription to group needed
Community of interest	Facebook pages such as SEESAC	https://www.facebook.com/SEESAC/	Open	Open
Community of interest	Twitter account @genderssr	https://twitter.com/genderssr	Open	Open
Community of interest	LinkedIn groups	https://www.linkedin.com/	Registration with LinkedIn needed	Subscription to groups needed

7. Annotated bibliography

7.1 Books

Bersin, Josh, *The Blended Learning Book: Best Practices, Proven Methodologies, and Lessons Learned* (San Francisco, CA: Pfeiffer, 2004).

The Blended Learning Book is a user manual for implementing blended learning. It offers a guide to combining the latest technologies with traditional training models to create high-impact programmes that drive superior business results (not just reduced costs). Filled with real-world examples and case studies from organizations such as Accenture, BI, Cisco, FedEx, Kinko's, Grant-Thornton, IBM, Novell, the US Navy, Verizon and more, e-learning veteran Josh Bersin zeroes in on what works – in all shapes and sizes of training departments from a variety of industries.

Colvin Clark, Ruth and Richard E. Mayer, *E-Learning and the Science of Instruction. Proven Guidelines for Consumers and Designers of Multimedia Learning* (San Francisco, CA: Pfeiffer, 2003).
The authors offer useful information and guidelines for selecting, designing and developing asynchronous and synchronous e-learning courses that build knowledge and skills for workers learning in corporate, government and academic settings.

Sauter, Annette M., Werner Sauter and Harald Bender, *Blended Learning* (Unterschleissheim/Munich: Luchterhand, 2004).
The book mainly addresses instructional designers and project managers, as well as tutors and trainers, to offer a set of best practices on how e-learning can be effectively embedded in an institution and enhance the learning experience of the learners.

7.2 Periodicals

Hrastinski, Stefan, "Asynchronous and synchronous e-learning", *Educause Quarterly,* No. 4 (2008).
Today's workforce is expected to be highly educated and to improve skills continually and acquire new ones by engaging in lifelong learning. E-learning, here defined as learning and teaching online through network technologies, is arguably one of the most powerful responses to the growing need for education. Some researchers have expressed concern about the learning outcomes for e-learners, but a review of 355 comparative studies reveals no significant difference in learning outcomes, commonly measured as grades or exams.

7.3 Online publications

Educause Learning Initiative, "7 things you should know about... Flipped classrooms", February 2012, https://net.educause.edu/ir/library/pdf/eli7081.pdf.
The flipped classroom is a pedagogical model in which the typical lecture and homework elements of a course are reversed. The notion of a flipped classroom draws on such concepts as active learning, learner engagement, hybrid course design and course podcasting. The value of a flipped class is in the repurposing of class time into a workshop where learners can enquire about lecture content, test their skills in applying knowledge and interact with one another in hands-on activities. Although implementing a flipped classroom places different demands on faculty and forces learners to adjust their expectations, the model has the potential to bring about a distinctive shift in priorities – from merely covering material to working towards mastery of it.

Lucas, Susan, "Relationship of gender to faculty use of online educational tools", Educause Library Items, 1 January 2003, https://net.educause.edu/ir/library/pdf/EDU03159.pdf.
Research shows that men and women use the web differently. This difference may dictate what online tools faculty make available to enhance learning. This paper presents the results of a research study that questions whether this gendered use extends to higher education faculty and discusses possible implications.

Sams, Aaron, Jon Bergmann, Kristin Daniels, Brian Bennett, Helaine W. Marshall and Kari M. Arfstrom, "What is flipped learning?", Flipped Learning Network, 2014, http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/46/FLIP_handout_FNL_Web.pdf.
While often defined simplistically as "schoolwork at home and homework at school", "flipped learning" is an approach that allows instructors to implement a methodology, or various methodologies, in their classrooms.

7.4 Online resources

NATO eLearning (Joint Advanced Distributed Learning – Learning Management System), https://jadl. act.nato.int/.

NATO's joint advanced distributed learning (JADL) platform has a wide variety of free courses, but users must have a NATO military, government or NATO official e-mail address in order to register. Some courses are restricted and require administrative approval to join, but all the gender-related courses (of which there are several) can be joined directly by anyone with a JADL account.

PfP Consortium e-learning, https://pfpcadl.act.nato.int/.

The PfPC JADL platform has a wide variety of free courses available to partners. All online courses are free to join.

"ADL 10 years", *NATO School Today,* **www.slideshare.net/gigiroman/nato-school-magazine-adl-10-years-special.**

NATO School Today is the authorized but unofficial publication produced by the NATO School Public Affairs Office. It contains a compilation of articles, reports and general information related to NATO School. The opinions expressed in this publication are those of the authors and do not necessarily represent the official policy of NATO.

"JADLeT – Building communities of practice through collaborative learning at NATO School", *Journal of Advanced Distributed Learning Technology,* **http://jadlet.com/index.php/jadlet/article/view/5/10.**

This article documents the initiatives taken by NATO School's ADL team to promote the idea of collaborative learning within their institution. It also illustrates how e-learning tools can enhance existing curricula in educational institutions. It argues that e-learning is critical to NATO's activities given its specific need to respond to rapidly changing threats and challenges that can occur unexpectedly across a wide geographical area.

E-learning on gender and security – Inventory of existing resources, www.gssrtraining.ch/images/ stories/PDF/AResources/Mapping-gender-e-learning.pdf.

This inventory compiles e-learning courses on gender and security identified by desk research and expert consultations. Its purpose is to map existing resources and serve as an annotated bibliography. The inventory focuses on self-directed courses and does not list individual courses that are offered for a limited amount of time. It seeks to identify courses that are available on a continuous basis, giving course name, authors, access requirements, duration, topics covered and target audiences.

Flipped Learning Network – A professional learning community for educators using flipped learning, http://flippedclassroom.org/.

This free professional learning community is for sharing best practices. The not-for-profit Flipped Learning Network is a source of information for emerging and established educators at all grade levels and in all subjects who are employing the flip in a single lesson, an individual class, an entire department or the whole school.

Notes

1. The authors would like to thank Aram Hong, Greta Keremidchieva and Rémi Tremblay for providing written comments on this chapter.

2. Since 2012 ACT together with NATO School Oberammergau and the PfP Consortium, mainly the Security Sector Reform Working Group and Advanced Distributed Learning Working Group, have been developing a series of online courses on gender.

3. The Facebook group "Gender in military operations" is a good example of bringing together experts and interested persons, https://www.facebook.com/groups/115311195225650/. The LinkedIn group "Gender in operations" is another example of using social networks to reach as many people as possible, https://www.linkedin.com/groups/Gender-in-Operations-4065311.

4. Charlotte Isaksson, post on 8 July at 19:41, https://www.facebook.com/groups/115311195225650/?notif_t=group_r2j_approved.

5. Flipped Learning Network, "Definition of flipped learning", 12 March 2014, www.flippedlearning.org/definition.

6. Annette M. Sauter, Werner Sauter and Harald Bender, *Blended Learning* (Munich: Luchterhand, 2004), p. 67.

7. Itworx Education, "Collaborative learning versus peer-to-peer learning", 27 November 2014, www.itworx.education/collaborative-learning-vs-peer-to-peer-learning/.

8. Stefan Hrastinski, "Asynchronous and synchronous e-learning", *Educause Quarterly*, Vol. 31, No. 4 (2008), pp. 51–55.

9. Josh Bersin, *The Blended Learning Book: Best Practices, Proven Methodologies, and Lessons Learned* (San Francisco, CA: Pfeiffer, 2004), p. 3.

10. Ibid, p. 2.

11. In this chapter "blended learning" means a combination of online teaching and classroom instruction.

12. Bersin, note 9 above, p. XV.

13. See https://jadl.act.nato.int/.

14. There are a variety of different e-learning services for learners available. Here we mainly focus on the services designed for NATO and the PfP: currently the ACT LMS powered by ILIAS and the PfP Members Portal (similar to the NATO School Members Portal).

15. "Students drop out of online classes at rates 15 percent to 20 percent higher than traditional ones, according to earlier research cited in the study." Marc Parry, "Preventing online dropouts: Does anything work?", 22 September 2010, http://chronicle.com/blogs/wiredcampus/preventing-online-dropouts-does-anything-work/27108.

16. For further information on avoiding drop-outs see John Laskaris, "Avoiding drop outs in your e-learning courses", Talent blog, 17 July 2015, www.talentlms.com/blog/avoiding-drop-outs/.

17. Ruth Colvin Clark and Richard E. Mayer, *E-Learning and the Science of Instruction. Proven Guidelines for Consumers and Designers of Multimedia Learning* (San Francisco, CA: Pfeiffer, 2003), p. 14ff.

18. Roxano Moreno and Richard E. Mayer, "Cognitive principles of multimedia learning: The role of modality and contiguity", *Journal of Educational Psychology,* Vol. 91, No. 2. (1999), pp. 358–368.

19. Ibid., p. 29ff.

20. For further information see Tanya Elia, "Universal instructional design principles for mobile learning", *International Review of Research in Open and Distance Learning,* Vol. 12, No. 2, (2011), www.irrodl.org/index.php/irrodl/article/view/965/1792.

21. Colvin Clark and Mayer, note 17 above, p. 54ff.

22. Hosted on https://jadl.act.nato.int/.

23. This refers mainly to the instructor/tutor-in-the-loop online teaching method.

24. Susan Lucas, "Relationship of gender to faculty use of online educational tools", Educause Library Items, 1 January 2003, https://net.educause.edu/ir/library/pdf/EDU03159.pdf.

25. It has to be mentioned that these are ideal types: in reality there is very often an overlap of both synchronous and asynchronous teaching methods.

26. Professor emeritus of education at Pennsylvania State University, and known for his major contributions to the field of distance education. In 1972 he published his first statement of theory, while his transactional distance theory was first formulated in 1997.

27. Based on Moore's theory it can be simplified that the less dialogue between learner and instructor and the more structure, or the less capacity for individualization, the more transactional distance will be generated. Of course, the self-directed study of a textbook will generate more transactional distance than personal tutorials; but by selecting the appropriate communication media this distance can be influenced. See CI 484 Learning Technologies, "Transactional distance theory: Synopsis of Moore's theory of transactional distance", 22 August 2011, https://ci484-learning-technologies.wikispaces.com/Transactional+Distance+Theory.

28. Roger Smith, "Web 2.0 and warfighter training", 18 December 2014, http://docslide.us/business/web20-and-warfighter-training.html.