BEZPIECZEŃSTWO / SECURITY

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INTEGRATION OF MOOC PRINCIPLES INTO A LANGUAGE COURSE FRAMEWORK FOR NATO DEEP: A CASE STUDY

Introduction

Defence education is a topic of an utmost importance for NATO and partner countries. Historically, there were multiple attempts to create a project a common ground for knowledge-exchange in security-related subjects. The latest and most complete approach to this matter is NATO Defence Education Enhancement Programme (DEEP), that was launched by NATO and the Partnership for Peace Consortium (PfP) in 2007[1].

This demand-driven programme is continuously gathering experts from NATO's 13 partner countries with experts of various fields, appropriately answering their needs and expectations[2]. Since 2007, NATO subject matter experts network provide guidance and training in the fields like, for instance: e-learning, cybersecurity, logistics, and military education[3].

The presented project of a language course framework is compatible with policies and regulations regarding e-learning and language learning in NATO. Also, this course directly corresponds with the plan to build the NATO DEEP Portal that would include an e-learning system.

The author of this article is directly involved with NATO DEEP expert network on e-learning. This paper presents his insight and observations regarding the events attended and overall participation in the programme.

There are three main reasons why this language course framework addresses NATO DEEP specific needs, and is going to add value to the programme:
1. Overcoming the language barrier – the DEEP events frequently need interpreters to communicate in an efficient manner. Overcoming the language barrier would result in a more direct contact with experts, thus giving them an opportunity to answer partner countries' needs more appropriately.

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[1] NATO, *Defence Education Enhancement Programme Handbook* [b.r.m.w], p. 13.
[2] Ibidem, p. 11.
[3] Ibidem, p. 6–7.

2. Popularizing e-learning – participation in the course would result in famil-
   iarization with tools and methods used in e-learning. As the author observed,
   e-learning is still not a very popular mean of training distribution in the
   NATO DEEP partner countries.
3. Promoting open educational resources – the course material is going to be
   built around such free resources of high quality. Lack of funding is a sub-
   stantial barrier in education, therefore sharing knowledge about the free
   resources help to develop partner's own training projects.

Apart from the abovementioned rationale, this language course framework
is an attempt to promote NATO values that can be found in existing Standardi-
zation Agreements (STANAG) and other official documents.

One of NATO's principles regarding training is innovation that is reflected,
among other things, in the use of new technologies and ICT in education[4]. Pub-
lished in 2014, NATO E-learning Concept is a manifestation of this institution's
approach to this matter. There is no doubt that the use of ICT in education has
changed it This document refers to e-learning as to a great mean of providing
training for NATO needs[5]:

> *Using e-Learning ensures NATO and partner staff have access to high-quality
> education and training that can be tailored to individual needs, enabling per-
> sonnel to effectively contribute to the NATO mission.*

The primary points of NATO e-learning initiative are[6]:
– Providing finest e-learning materials,
– Developing standards in distance education,
– Increasing access to learning materials,
– Overcoming challenges linked to e-learning with appropriate strategies.

Language policy in NATO acknowledges that there are two official lan-
guages – English and French, but the language that serves as a primary mean
of communication and instruction is English. A primary document that regulates
language learning in NATO is STANAG 6001 Edition 5, published 11 December
2014. This document constitutes basic information in this area. According to
this document, there are five levels of proficiency regarding language learning[7]:
• Level 0 – no practical proficiency,
• Level 1 – Elementary,
• Level 2 – Fair (Limited working),
• Level 3 – Good (Minimum professional),
• Level 4 – Very good (Full professional),
• Level 5 – Excellent (Native/bilingual).
Also, this document specifies language skills, which are: reading, speaking,
listening and writing[8].

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[4] NATO, *NATO eLearning Concept*, Jan 28, 2014, <https://www.act.nato.int/images/stories/
structure/jft/NATO_e-Learning_Concept_Jan_2014.pdf, p. 3>, access: 08.10.2018.
[5] Ibidem, p. 1.
[6] Ibidem, p. 4.
[7] NATO Standardization Office (NSO), *Language Proficiency Levels Edition A.* May 2016,
<https://www.natobilc.org/files/ATrainP-5%20EDA%20V2%20E.pdf, p. 1>, access: 08.10.2018.
[8] Ibidem, p. 2.

The framework – MOOC principles integration

Online learning market is growing continuously, as stated by recent reports, cited by Bezehovski and Poorani[9]. Along with increasing value, innovative applications of online learning are being developed. Among the most discussed topics of recent trends are Massive Online Open Courses, which are described by Fischer (et al.) as: *number one of all e-learning trends*[10].

There are many definitions of Massive Online Open Courses (MOOC). For the purpose of this paper, the author has chosen the following explanation provided by Joint Research Centre of the European Commission[11]:

> *[…] online courses designed for a large number of participants that can be accessed by anyone anywhere, as long as they have an internet connection. They are open to everyone without entry qualifications and offer a complete course experience online for free. They are led by subject matter experts from higher education or industry and hosted by learning management systems or dedicated MOOC platforms.*

A recent study carried out by Drake, O'Hara and Seeman have described the five principles of MOOCs that decide about their unique format[12]. They are the reasons why the author of this framework tries to integrate such principles into a language course. The table below depicts those MOOC principles and shows how to integrate them within this course framework.

Table 1. MOCC principles

MOOC principle	Description	Integration
1	2	3
Scalable	The course can possibly have a huge number of participants, thus there's a need to automatize certain tasks.	Using technology to take care of a portion of student's activities, f.ex. tests and quizzes should be graded by the system.
Meaningful	Assuring that the learner is focused on what's the most important during the lesson. Making sure that all the content is carefully thought out.	Giving appropriate examples. Concentrating on the content that is factual and meaningful.

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[9] Bezehovski, Zlatko. Subitcha Poorani. *The Evolution of E-Learning and New Trends*. Information and Knowledge Management. Vol.6, No.3, 2016. p. 52.

[10] Fischer, Helge. Linda Heise. Matthias Heinz. Kathrin Moebius, and Thomas Koehler. *E-learning trends and hypes in academic teaching. Methodology and findings of a trend study*. International Conference e-Learning 2014. p. 64, <https://files.eric.ed.gov/fulltext/ED557279.pdf>, access: 08.10.2018.

[11] Witthaus, Gabi (et al.). *Validation of Non-formal MOOC-based Learning. An Analysis of Assesment and Recognition Practices in Europe*. JRC Science for Policy Report, 2016. p. 10, <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC96968/lfna27660enn.pdf>, access: 08.10.2018.

[12] Drake, J. R., O'Hara, M., Seeman, E. *Five principles for MOOC design: With a case study*. Journal of Information Technology Education: Innovations in Practice, 2015, p. 125−143, <http://www.jite.org/documents/Vol14/JITEv14IIPp125-143Drake0888.pdf>, access 08.10.2018.

cont. table 2

1	2	3
Engaging	There are two types of engagement: Cognitive – that focuses on course content. Social – that focuses on interaction between course participants.	Instantaneous feedback from tasks. Discussions and interaction between course participants. Contact with the tutor.
Measurable	Statistical analysis is an important point in the course life-cycle. Learning Management Systems provide tools to measure participant's time spent during certain activities and cofmpletion statuses.	Enabling SCORM options, like sequencing and evaluating the statistics.
Accessible	Enhancing accessibility provides a learning space for every participant that would like to take part in the course. Also, it makes it possible to gather people that are on different levels of proficiency.	Broadening course participant's options to adjust course content. More proficient students could adjust the content to their needs/level, which would constitute a challenge for them.

Source: Drake, J. R., O'Hara, M., Seeman, E. *Five principles for MOOC design: With a case study.* Journal of Information Technology Education: Innovations in Practice, 2015, p. 131–133, <http://www.jite.org/documents/Vol14/JITEv14IIPp125-143Drake0888.pdf>, access: 08.10.2018.

The framework – NATO DEEP Online English Course

Related to the main aim of this paper, the NATO DEEP Online English course is now presented. The very first aspect of this course is the shape of a project team. The author of this framework has selected three essential roles to be filled by specialists:

1. Project manager – project and team coordination – setting goals and making sure all the deadlines are met.
2. E-learning Specialist – course development, LMS implementation and graphical design.
3. English tutor – responsible for lesson plans, material quality assurance and direct contact with course participants.

All the above roles are crucial and have a vital role in this course development throughout its whole life-cycle.

Materials that can be used in the course should follow certain guidelines. As this course is intended gather students from a wide range of countries and cultures, choosing appropriate materials is crucial to this course success.

First of all, the content should be customizable on various levels. Given that the course participants could be on different levels of language proficiency, it is advisable to use content that is easily customizable. For example, an advanced student would watch a video without any prompts, like subtitles or voiceover; however, a student that struggles to understand the passage of the video, could use those prompts in order to fully participate in the lesson.

Secondly, all the materials should be checked for any copyright issues. As a rule, English tutor should look for materials that are released under the license of Creative Commons 0 (CC0), Public Domain or any materials that allow educational use. There are three reasons for that:
• Resources used in the course can be used later (after the course) for self-studying.
• Promotion of open education resources.
• Promotion of copyright recognition.

Thirdly, the quality of the content should be of high quality – in terms of both production and merits.

The author of this framework suggests the following sources for materials:
• TED (www.ted.com, access: 07.09.2018) – a non-profit organization that creates conferences (TED Talks) on various topics. Their materials are always of high quality in terms of production and merits. Also: TEDx, TED-Ed.
• BBC Radio 4 – a radio station that provides high-quality content across a wide range of topics (www.bbc.co.uk/radio4, access: 07.09.2018).
• British Council Learn English (learnenglish.britishcouncil.org/en, access 07.09.2018) – a platform dedicated to language learning, offers materials that cater to the needs of an online learner.

LMS ILIAS is an open-source learning management system (LMS) that is often used by military institutions as a go-to e-learning platform. Among institutions that use this software, the author is aware of the following installations within the military: NATO ACT, NATO School Oberammergau, The War Studies University (Poland), and Carol I National Defence University (Romania).

There are numerous LMS ILIAS features that are possible to take advantage of while creating course content. The said features are devised into several categories:
1. Organizational:
    • Folder – used to group selected content in one place.
    • Session – used to group content in a selected timeframe.
    • Group – used to group users and present them content.
2. Communication:
    • Forum – used for asynchronous communication between users, and users with the teacher.
3. Content:
    • File – used to store files of various types (ex. pdf, doc). Those can be presentations, articles, guidelines etc.
    • Weblink – used to store a link to a webpage.
    • Wiki – used to create a learning place like Wikipedia – with a search tool and ability to create thematic pages.
    • Learning Module (SCORM) – used to create learning modules in a built-in SCORM editor, or import a module created in an authoring tool.
    • Glossary – used to store a list of terms with their explanation.

- Bibliography – used to store a list of sources, for example to broaden the lesson.
- MediaCast – used to store videos.
4. Assessment:
   - Exercise – an activity that requires users to perform a desired action – for example, sending a file with an essay.
   - Test – a set of various, thematic questions that check users' knowledge or skills.
5. Feedback and evaluation:
   - Poll – a short and simple way to get to know users' opinion on a selected topic.
   - Survey – used to gather information from our users, but in a more complex way that a poll.

All the mentioned features can be adopted to produce contents of the lesson. Since it is crucial to benefit from it, both E-learning Specialist and English Tutor should work on the lesson design.

The course is divided into lessons that are a unit of time and subject. Each lesson should have main subject and a timeframe. Lessons are divided into panels: basic and advanced. Basic panel feature as the basis of the lesson – it's a formal requirement to complete each task in this panel. Advanced panel is not mandatory to complete. If a course participant wants to have more practice or is not satisfied with the basic lesson's difficulty level.

Instructional design model used in this course framework is called ADDIE, that stands for its five phases: Analysis, Design, Development, Implementation and Evaluation. One of the popular definitions of this model was developed by Shelton and Saltsman in 2006[13]:

> *The ADDIE model of instructional design is a generic instructional model that provides an organized process for developing instructional materials. This systemic model is a five-step cyclical process that can be used for both traditional and online instruction.*

Analysis – which is described as a phase of gathering information about the target group and outcomes of the course[14]. Upon registration to the course, each future participant fills a form that is meant to the project team design the materials. The form should include questions about future participants' interests, hobbies, previous experience in English learning, declared English level of proficiency, and their motivation to attend this course. On the basis of that form, the project team creates a model (or a "persona") of a course participant. It constitutes a starting point – basing on that all the decisions will be made. Also, during this stage a timeline for the course development is being set.

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[13] Shelton, K., & Saltsman, G. (2006). *Using the ADDIE model for teaching online.* International Journal of Information and Communication Technology Education (IJICTE), 2(3), p. 14–26.
[14] Lawrence Cheung. *Using the ADDIE Model of Instructional Design to Teach Chest Radiograph Interpretation.* Journal of Biomedical Education, vol. 2016, 2016. p. https://doi.org/10.1155/2016/9502572. 2, p. 2.

Design – which is described as a phase of course devoted to general planning of the instruction process[15]. During this phase, the project team starts to produce lesson scenarios, select media, and set learning objectives.

Development – which is focused around content creation.[16] The development phase is devoted to start working on the course assets, which includes LMS-implementation, graphical design, SCORM settings. The course assets need to be properly tested by dedicated testers or members of the project team.

Implementation – which is described as start of the instruction delivery process[17]. The project team makes sure that everything's in place for the course start. Students are now registering to the course.

Evaluation – which is described as the final part of the cycle, aiming attention at the feedback given by the course participants[18]. Each participant fills a survey after the course completion. Depending on the design decisions made in previous phases, there might be a quick survey after each lesson. All the stats should be analyzed and taken into consideration for the future editions of the course.

After the full cycle is completed, the ADDIE model is reoccurring, meaning that the last phase of the model: Evaluation is a start of another cycle, as claimed by Drljača et al[19].

Conclusions and recommendations

The presented framework is fluid in terms of design; it can be applied to both: suit needs of a different target group and subject. However, this paper focuses solely on language learning and should be applied to provide training only in this dimension.

The e-learning platform used in this project is LMS ILIAS; however, it would be possible to apply another system of this class (learning management system). Nonetheless, it is advisable to use LMS ILIAS, as it suits this project's needs and is compliant with the NATO DEEP Portal project.

Ideally, the people involved in this project should know the specifics of working with military personnel of various countries. Additionally, all the role-holders are required to have experience with e-learning project design based on the ADDIE model of instructional design.

The author recommends launching the project with a pilot phase first, so the initial assumptions would be properly revised.

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[15] Ibidem, p. 3.
[16] Ibidem, p. 3.
[17] Ibidem, p. 4.
[18] Ibidem, p. 4.
[19] D. Drljača, B. Latinović, Stanković, D. Cvetković. *ADDIE Model for Development of E-Courses*. Sinteza 2017 – International Scientific Conference on Information Technology and Data Related Research, Belgrade, Singidunum University, Serbia, 2017, pp. 242–247, <http://portal.sinteza. singidunum.ac.rs/Media/files/2017/242-247.pdf>, access: 08.10.2018.

INTEGRATION OF MOOC PRINCIPLES INTO
A LANGUAGE COURSE FRAMEWORK FOR NATO DEEP: A CASE STUDY

SUMMARY

NATO Defence Education Enhancement Programme (DEEP) was established in 2007 and is aimed at military and academic personnel of various expertise fields from 13 countries. The paper presents a language course framework, designed specifically to enhance language competences of the personnel involved in this programme. The framework includes: initial assumptions and challenges, course life-cycle and development phases, lesson scheme, course material requirements, and tools recommendation. The author's design decisions are properly contextualized, references to the latest theoretical and empirical research are given. Main principles of Massive Open Online Courses (MOOC) and their integration within the course framework are discussed in detail. Moreover, the presented framework of a language course is compliant with NATO's standardization policies (STANAG) regarding both language learning and e-learning.

KEY WORDS: Language learning, E-learning, NATO DEEP, MOOC, course framework.