Public

IECEU

Contract no 653371

Start date: 01/05/2015

Duration: 33 months

PROJECT TITLE:

Improving the Effectiveness of Capabilities (IEC) in EU conflict prevention

5.2 Design and Development Processes of the NMLA

Lead beneficiary: Laurea University of Applied Sciences

Delivery date: 05/10/2016

Revision: 2.0

Dissemination Level	
PU: Public	Х
PP: Restricted to other programme participants (including the Commission)	
RE: Restricted to a group specified by the consortium (including the Commission)	





















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ACRONYMS

AKU	Autonomous Knowledge Units
C3MC	Certified EU Civilian Crisis Management Course
CBT	Computer-Based Training
CEP	Center for European Perspective
CEPOL	European Police College
CivCom	Committee for Civilian Aspects of Crisis Management
CMPD	Crisis Management and Planning Directorate
CMPD	Crisis Management and Planning Directorate
CSDP	Common Security and Defence Policy
CSDP	EU's Common Security and Defence Policy
EAPTC	Eastern Association of Peace Operations Training Centres
EDA	European Defence Agency
EEAS	European External Action Service
EGT	The European Group on Training
ENTRi	Europe's New Training Initiative for Civilian Crisis Management
ESDP	European Security and Defece Policy
EU	European Union
EUFOR ALTHEA	European Union Force Althea
EUMM	European Union Monitoring Mission
EUPST	European Union Police Services Training
EUSR	European Union Special Representative
FINCENT	Finnish Defence Forces International Centre
IAPTC	The International Association of Peacekeeping Training Centers
ICO	International Civilian Office
ICR	International Civilian Representative
IDL	Internet-Based Advanced Distance Learning
IECEU	Improving The Effectiveness Of Capabilities In Eu Conflict Prevention
IPA	Instrument for Pre-Accession
MMA	Monitoring, Mentoring and Advising
NATO	North Atlantic Treaty Organization
NMLA	New Media based Learning Application
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OMIK	Organization for Security Cooperation in Europe Mission in Kosovo
OSCE	Organization for Security Cooperation in Europe
POTI	UN Peace Operations Training Institute
SSR	Security Sector Reform
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNMIK	United Nations Administration in Kosovo
UNSC	United Nations Security Council
UNSCR	United Nations Security Council Resolution

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EXECUTIVE SUMMARY

The IECEU project findings are made available a New Media based Learning Application (NMLA) developed as a part of the project. The developed NMLA is an e-learning platform with an object on one hand, to support the project dissemination and on the other hand, to provide a complimentary tool for various EU crisis management training courses and events.

This deliverable will describe the background, structure, learning objectives and the development process of the IECEU learning application. This application is a part of IECEU training toolbox, developed in the course of the project as a part of the IECEU dissemination activities (integration with other relevant trainings has been further elaborated in D8.5). The deliverable briefly describes underlying theories related to online learning. Moreover, it describes the development process and related phases in NMLA development work. The NMLA is based on Opigno/Drupal open source software which provides a clear and light basis for comprehensive content which easy to maintain and update. The platform can be accessed at www.ieceulearning.eu

The developed NMLA can be used free of charge. The user will only have to create his or her own user account. After that, the required link to access the NMLA will be emailed to the user. The target group of the eLearning tool includes staff seconded to the CSDP missions, contracted staff, national staff, researchers, educational institutions, students, civil servants, employees of NGOs. The structure of the NMLA consists of seven chapters. The platform has been developed in a way that after initial introduction to the tool, the platform allows users to navigate freely to focus on their individual needs and interests. First, the platform presents briefly the most relevant EU institutions and planning and implementation activities related to conflict prevention and crisis management. Then, the platform describes and summaries the eight IECEU case studies and the findings of subsequent comparative studies. All the chapters will be followed by a quiz measuring users' learning achievement. Finally, a chapter titled *General competencies in conflict management*, consisting of animations and interactive elements, presents 13 generic topics related to crisis management.

The deliverable sums up the current EU/CSDP training in particular with regard to existing eLearning. The EU has demonstrated increasing interest towards eLearning and that it has invested in developing various eLearning contents to support conflict prevention/crisis management related training (especially under ESDC, ENTRi and EUPST activities). However, it has not been done in a coordinated and well-orchestrated manner in spite of the potentials



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eLearning has as a cost-effective, practical and easily manageable complimentary tool. Moreover, the findings highlight the need for enhanced training among CSDP mission participants. This need creates a strong incentive to develop and utilize e-learning in a more systematic manner. In order to support EU's comprehensive approach, it would be logical and beneficial to try to restructure eLearning activities/platforms in a more holistic manner. The use of various e-learning solutions has increased considerably in EU countries as part of informal and formal education. The younger professionals joining the CSDP missions and operations are more accustomed to use eLearning tools in their learning and thus they can be more respondent to it. Moreover, even though it is often difficult to pin-point causalities in sequence of unfolding events, trade politics, development aid, humanitarian aid, civilian crisis management and military crisis management are all interconnected. Training that provides understanding of this interconnectedness with the various eLearning platforms could serve to enhance the competences and analytical skills of the collaborators in the CSDP missions and operations. Ultimately, this could enhance the effectiveness of the EU efforts in conflict prevention.

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1 INTRODUCTION

The EU aims to prevent conflicts and manage crisis in an increasingly complex environment. Contemporary conflicts impact an increased number of civilians as has been demonstrated by flows of refugees seeking for shelter and protection in EU countries. At the same time, the working conditions in crisis management missions and operations have become riskier for the EU personnel. The EU needs to reflect this changing environment while developing its future training. Moreover, due to economic constrains, tools are needed to conduct training in a more efficient way. One tool for cost-effective and flexible (complimentary) training is eLearning. It can provide one way to cut expenses while at the same time it diminishes risks related to simulation of (security) training. Additionally, it can provide a way for various missions to store and transfer institutional memory. The eLearning is not tied to a specific location, time or residential training requiring allocation of trainers. Moreover, the new media learning based applications (NMLA) can be updated, adapted and disseminated fast and easily. In short, eLearning offers a tool to enhance training while being economically more efficient at the same time.

At later stage of the IECEU - project, a Handbook (D5.3) will be developed and distributed on how to utilize the NMLA in training. Subsequently, training will be arranged for trainers (During task 5.4 a curriculum will be developed for this purpose) to facilitate the use of the IECEU learning platform in future in tertiary education programmes, crisis management training, seminars and workshops.

The eLearning platform will be maintained and up-dated also after the project has been completed to support Universities and other training organisations to develop further their training activities related to conflict prevention and crisis management. The application can be used as a part of blended CSDP pre-deployment training. The learner centred active learning methodology the elearning platform is utilizing is in line with pedagogical theory of constructivism which in short states that individual learning process is based on the use of already existing information, on personnel ideas and experiences.

1.1 IECEU PROJECT

Improving the Effectiveness of Capabilities in EU conflict prevention (IECEU) Project launched in May 2015. The length of the project is 33 months and it has 11 participants from 7 European countries. The main goal of the project is to discover new solutions for responding to eventual



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threats and difficulties. EU Framework Programme for Research and Innovation Horizon 2020 is funding the project. IECEU project aims to gather different organisations to work in co-operation in order to determine the best practices for resolving future threats.

The project analyses and evaluates the missions' and operations' effectiveness in three selected, case study areas, where Common Security and Defence Policy (CSDP) activities are represented: Balkans, Africa, and Middle East/Asia. Such comprehensive analysis of current external actions can provide better answers to creating more effective missions and operations. Through analyses and evaluations the project will identify the best practices and develop new approaches and solutions. In order to achieve the set goals IECEU project aims to strengthen cooperation between different actors in the operational and political context. The project looks to provide recommendations for EU to guarantee the long-term stability. The three main goals of IECEU – project are:

- 1) Analysing and assessing the current situation of on-going and past missions and operations: to identify effectiveness of EU external actions and the impact
- 2) Learning from lessons provided by these missions and operations
- 3) Providing new solutions, approaches and recommendations for EU to guarantee long-term stability

In the field of conflict prevention and crisis management the cooperation among the different actors in the operational and political contexts may require effective solutions in terms of communication and dialogue facilitation. In order to support the implementation of the IECEU results, recommendations and solutions, commitment of key end user groups (especially in political level) is necessary throughout the project implementation. Contributing to solving societal challenges and making sure that results are taken up by key decision-makers to influence policy-making are key objectives for dissemination.

1.2 OBJECT AND PURPOSE

The main goal of the deliverable is to present and discuss the development process and content of the IECEU Learning Application designed to exhibit the eight IECEU case studies and the subsequent findings of the comparative analysis of these case studies. The D5.2 describes the design and development process of the IECEU Learning Application. This process consisted of the



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following four phases: 1) the requirements and specification analysis, 2) to develop and code the actual platform, 3) testing, 4) implementing and piloting the programme.

1.3 STRUCTURE OF THE DELIVERABLE

After the introductory chapter, chapter two will first discuss some underlying theories and pedagogical concepts of the e-learning and gamification. Then, the chapter two provides a description of the background and a short overview of current crisis management training practices including the use of eLearning. The chapter three describes the development process of the eLearning platform. It defines the target group and gives an account of the developed visualisations/animations (the 13 developed animations are listed in the Annex 3). Finally, the conclusion chapter, the chapter four, will summarise the process and discuss selected topics covered by the preceding chapters.

2 NMLA - BACKGROUND

This chapter will first briefly present the reader with selected concepts and theories related to online learning forming the intellectual basis for the developed platform. The chapter provides both factual and pedagogical reasoning on the topic discussing how and why eLearning can contribute to crisis management training. After that, the chapter will describe current crisis management training related to civilian crisis and to military crisis management (the existing training has been described in more detail in D8.5 Integration with other relevant trainings). Finally, the chapter will briefly discuss how the NMLA can contribute to the CSDP training.

2.1 WHY NEW MEDIA BASED LEARNING APPLICATION (NMLA)?

NMLA creates an ideal tool for the aim of providing the catalogue of best practices and findings from the IECEU case studies. What is considered as NMLA? The term new media has been used to differentiate between old media (print press, TV, radio) and the new information technology based media. The IECEU project uses term New Media Based Learning Application (NMLA) as an overarching name for the content available on internet through digital devices including PC, laptop, tablet and mobile phones. The learning content is also supported by the new media such as social media and HTML5. These contents often include interactive elements and possibility to communicate and provide feedback ¹. Examples of new media include websites, games, augmented reality, multimedia and various learning platforms.

ICT tools and resources have significant influence on teaching and learning processes². In European countries especially tablets and smartphones are considered as an important development on the field of education³. In practice, the online learning takes place partially or entirely over the Internet. With its potential for providing flexible access to content anywhere and anytime, it has become popular worldwide. The computers have made the delivery of education possible and the material was able to deliver both print and electronical media.⁴ The *online learning* includes different sets of learning applications, web resources, web-based applications

⁴ Moore, M. G., Background and overview of contemporary American distance education, 1990.



¹ "Tools that people use to share content and to interact, and the process that this interaction creates.", Erkkola, Jussi-Pekka, 2008, *Sosiaalisen median käsitteestä*.

² Sevillano-García, M. L., & Vázquez-Cano,. *The Impact of Digital Mobile Devices in Higher Education*, Educational Technology & Society, 18 (1), E. 2015, 106–118.

³ Eimeren, V., & Frees, Ergebnise der ARD/ZDF Online Studie 2012. *Media Perspektiven, 7*(8), B. 2012, 360-372.

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and new collaboration technologies. Moreover, new type of hybrid approaches regarding online learning activities are increasing.5

Changing landscape of education

Improved access to and ability to use the internet have increased interest towards online environments and online learning. As a result, the educational landscape is shifting. In today's communities social media platforms provides environment for the learning that would have previously taken place in the corridors, classrooms and after-school telephones conversations. The new digital technologies enable the e-learning distribution worldwide⁶. Moreover, the studies mainly show perceived benefits of e-learning in European countries⁷. In the beginning of 21st century, the online learning has been described as complex, diverse, and rapidly evolving field.8 When the classroom based learning is more structured and formal, informal learning is not typically classroom based or structured and the learning is in the hands of the learner9. Learning through applications in more based on the informal learning theories. There is a need for academic practice-based design research when developing learning tools¹⁰. Based on the earlier theories, the learning can happen through own experiences¹¹, through critical reflection¹² and in problem based solving 13. The theory background for online learning environment development has concentrated in behaviorism, cognitive and constructivism learning theories. Furthermore, most of the current online education tools and environments are developed based on these theories. Behaviorism answers for the question "what", cognitive for the question "how" and constructivism for the question "why". 14 The researchers have raised the criticism regarding the theory background in online learning technology. The technology has re-organized the human life,

¹³ Poikela, Esa & Poikela, Sari, *Kriittisyys ja ongelmaperustainen oppiminen*. Teoksessa Järvinen-Taubert, Johanna & Valtonen, Päivi (ed.). Kriittisyyteen kasvu korkeakouluopetuksessa. Tampere: TAJU, 1999. ¹⁴ Ibid.



⁵ Means, et al., Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, 2009. Available at: www.ed.gov/about/offices/list/opepd/ppss/reports.html

Zhang, D., Zhao, J. L., Zhou, L., & Nunamaker, Jr., J. F., Can e-learning replace classroom learning? Communications of the ACM, 45 (5), 2004, 75-79.

Gaebel, M. & al., E-learning in European higher education institutions. Results of a mapping survey conducted in October-December 2013, 2014.

Anderson, T. Elloumi, F., Theory and Practice of Online Learning, 2004.

⁹ Marsick, V., & Watkins, K., *Informal and Incidental Learning*, New Directions for Adult And Continuing Education, no. 89, Spring 2001, Jossey-Bass, A Publishing Unit of John Wiley & Sons, Inc, 2001.

¹⁰ Leinonen, T., Designing Learning Tools. Methodological Insights, Aalto University, 2010.

¹¹ Kolb, D., Experiential Learning: experience as the source of learning and development, Englewood Cliffs, NJ: Prentice

Mezirow, J., A Critical Theory of Adult Learning and Education. Journal of Adult Education 32 (1), 3-24, 1981.

communication and learning.¹⁵ In 21 century the theoretical insights have raised the collaborative practices in online learning.¹⁶. Furthermore, most of the current online education tools and environments are developed based on these theories. According to constructivism, individuals are active learners who construct their knowledge rather than reproduce set of facts. In 21 century the theoretical insights have raised the collaborative practices in online learning.¹⁷ The researchers have raised the criticism regarding the theory background in online learning technology. The technology has re-organized the human life, communication and learning.¹⁸

Online training environments provide a variety of opportunities: teaching can be organized and the online learning environment can be utilized in many different ways. Online teaching can be divided into guided e-learning, self-study online learning and multiform learning, in which classroom training and e-learning are combined. The new terminology of multiform teaching has begun to use the term "blended learning" E-learning can be implemented as distance learning, where learners and teachers do not see each other, also learners may be geographically distant from one another. Moreover, the e-learning is highly appreciated worldwide because of its cost-effective possibilities. The learners are not required to travel or use other costs to have access to training. When the classroom based learning is more structured and formal, informal learning is not typically classroom based or structured and the learning is in the hands of the learner²⁰. Furthermore, the learning experiences provided by education technology and applied in appropriate way has been show to enable positive learning experiences and improve learning outcomes²¹.

The NMLA is linked with the concept of edutainment which can be defined as a combination of education and entertainment. Edutainment often consist of interactive technologies such as digital simulation games.²² The underlying principal of edutainment is to catch learners' attention and maintain it by engaging emotions and generating feelings of pleasure during the learning process

²¹ Carlson, S., *Using Technology to deliver educational services to children and youth in environments affected by crisis and/or conflict*, Final Report, JBS International, 2013, 30.

²² Santonen & Faber 2015.



¹⁵ Siemens, G. 2004, Connectivism: A learning theory for Digital Age, 2004.

¹⁶ Hakkarainen, K., Palonen, T., Paavola, S. & Lehtinen, E., *Communities of networked expertise: Professional and educational perspectives. Advances in Learning and Instruction Series*, Amsterdam, Elsevier, 2004.

¹⁷ Hakkarainen, K., Palonen, T., Paavola, S. & Lehtinen, E., *Communities of networked expertise: Professional and educational perspectives. Advances in Learning and Instruction Series*. Amsterdam: Elsevier, 2004.

¹⁸ Siemens, G., Connectivism: A learning theory for Digital Age, 2004.

¹⁹ University of Helsinki, Department of Computer Science.

²⁰ Marsick, V., & Watkins, K., *Informal and Incidental Learning. New Directions for Adult And Continuing Education*, no. 89, Jossey-Bass, A Publishing Unit of John Wiley & Sons, Inc., 2001.

with the help of gaming. The platform includes animations and interactive quiz at the end of modules. Initially, the idea was to include gamified elements into the catalogue.

What was the rationale for gamification²³? According to Malone²⁴, games are beneficial for active learning. The games can be engaging if they are genuinely motivating, challenging and offer elements of curiosity, fantasy and control over certain tasks. A gamification can offer also a way to reduce complexity of phenomena and bring it to a comprehensive level (like societal theories are simplifying social construct of reality to bring it to more operational level). Elements of gamification can be integrated into crisis management training diverse organisations are providing prior or during the deployment of the staff. An application with gamification features will provide a complimentary tool to ensure that the trainees have acquired the necessary knowledge in an interactive manner. The individually centred active learning methodology NMLA is utilizing in line with pedagogical theory of constructivism²⁵ which in short states that individual learning is based on the use of already existing information, on personnel ideas and experiences.



Figure 1 The framework of NMLA

²³ There is no commonly agreed definition on term 'gamification'. Scholars point out that gamification simply summarises numerous existing concepts and research on human-computer interaction and game studies including, i.e. serious games and playful design. Gamification stands for use of game design elements in non-game context. Deterding, S., Dixon, D., Khaled, R. and Nacke, L., *From Game Design Elements to Gamefulness: Defining "Gamification*", Seminar paper for MindTrek'11, September 28-30 2011, Tampere, Finland.

²⁴ Malone, Thomas, W., *Toward a theory of intrinsically motivating instruction*. Cognitive science, 5(4), 1981, 333-369. ²⁵ See, e.g., Dewey, John, *Experience & Education*, New York, 1938/1998; Bruner, Jerome, *Acts of Meaning*, Harvard University Press, 1990 and Piaget, Jean, *The Psychology of the Child*, 1972.

NMLA can help motivating learners and as a result facilitate reaching better learning results in the course of various training crisis management training. In terms of theoretical frameworks, the field of edutainment is still new and rather undeveloped. In fact, no solid theories have so far been developed to systematically assess the efficiency of diverse edutainment applications. Therefore, it is vital that the design of the NMLA encompasses all the inputs from the diverse shareholders to ensure the high quality and applicability of the product. The NMLA can also be tailored to reflect the local environment and updated easily to keep it accurate in fast changing field. The game is often cost efficient compared with conventional training which involves a lot of planning, logistics which is expensive in the longer term. Gamification also enables creating high risk scenarios in a safe manner. The scenarios can also be relatively easily updated to reflect the volatile conflict areas. Gamification can also offer a way to preserve some of the institutional memory (e.g. by describing certain complex hot spot where the international staff is working).

The objective for the WP5 states that Learning from the lessons through the developed learning tool: New Media based Learning Application (NMLA), which will provide the best practices and lessons learned fast with open data access for the broad audience, and at the same time testing the New Media technologies and game environments in conflict prevention. It seems that among different international actors of crisis management training there is a common interest to increase use of modern technology for training purposes. The reasons can be related, on one hand, to decreased financial resources and, on the other hand, on belief that new learning methods can provide a complimentary tool for training that enhances current methods. Especially the curricula items not directly related to life saving skills are seen as elements that could be delivered via online learning tools, applications and ELearning.

The IECEU NMLA will offer a complimentary tool to enhance the knowledge of a broad end-user audience on themes related to selected case studies and EU crisis management decision making and planning. This also because in spite of the presented benefits e-learning can provide to various training, "digital tools do not substitute face-to-face methods, but complement them by enabling more constant interaction with users and lowering certain users' participation thresholds."²⁷

²⁷ Friedrich, Pirjo, *Web-based co-design. Social media tools to enhance user-centered design and innovation process*, University of Tampere, 2013.



²⁶ Santonen & Faber 2015.

2.2. REVIEW OF ELEARNING AND ONLINE LEARNING IN CSDP TRAINING

Even though the main effort of CSDP trainings still relies on residential courses, the eLearning part is receiving increased attention. E-learning is independent of time and location and therefore presents a perfect tool to educate and train newly selected staff before their deployment to a mission area. Low running costs compared to residential courses are also in favour of online learning. This chapter will discuss and present how eLearning elements have been currently used in civilian crisis as well as military crisis management training.

The limited information received from the interviewees corroborated the assumption that up until now eLearning and NMLA have been not been broadly and systematically utilized in the predeployment training. The idea as such was welcomed²⁸, but no further information was provided in detail. The questions with regard to current eLearning practices were discussed during co-creation of conceptual framework. However, the researchers who conducted the related research were not able to exhaust their entire questionnaires and they had to make a judgement call prioritizing their focus. The questions related to NMLA have very likely not been considered priorities for the project and therefore were not fully covered. However, the survey corroborated the desk study findings that currently, there is no systematic approach to implement eLearning activities within the missions and operations. The finding was further tested (triangulation) in discussions with selected key functionaries (such as ESDC civil servants and training officers within the ENTRi training organisations).

The main challenges of eLearning include the content of the eLearning modules, the nomination of trainees as well as the co-ordination between Headquarters and Mission responsibilities. As per financial implications of training and time constraints, their role cannot be neglected in the inmission training. Furthermore, the various legal statuses of the deployed personnel (contracted, seconded, locals), the different personal security permissions and the learning content, such as no classified information in eLearning modules and sensitive information accepted, can raise concerns when it comes to eLearning.²⁹

²⁸ For instance, by the case study report on EUPOL Afghanistan.

²⁹ Jochen, Rehrl, and Taitto, Petteri, *Pre-deployment eLearning for CSDP missions/operations*, 2015.

Training can be categorised as basic, advanced or specialisation, pre-deployment or in-mission. While basic trainings provide participants with the basic knowledge and skills required for an international crisis management mission, advanced or specialisation training enables participants in a particular field to understand how to use their expertise in crisis areas. Advanced training therefore complements basic training. Pre-deployment trainings are performed (immediately) prior to deployment to ensure that personnel are equipped with the necessary knowledge and skills and to harmonise the management culture. During this phase many seconded personnel have been tasked to complete online hostile environment training (eHEST).³⁰ Induction training is given in the mission immediately after deployment aiming to further familiarise personnel with the administrative procedures when joining the mission as well as with the security aspects and communication procedures for all mission members.

All mission trainings have numerous challenges to overcome, especially when we consider predeployment trainings. Pre-deployment trainings have the time between the selection of mission staff and their deployment, which is generally very short, therefore the time available for training is very limited.³¹ The rotation phases between the various missions/operations are not synchronised hence the number of people to be trained can vary a lot. Each mission/operation has its own specific training needs and requirements; therefore, each training course must adapt to these specificities. Sometimes the training must even be tailored to personal needs (e.g. Head of Mission, Press and Public Information Officer). Another challenge is also mission staff that can be recruited from all EU member states as well as from non-EU states which have concluded a Framework Participation Agreement with the EU and have been invited to send personnel to a mission/operation (In most cases this partnership is based on the so-called Framework Participation Agreements (FPA).³² The training must therefore be conducted at different times and locations, and ideally in the mission language. With these challenges in mind, eLearning is an ideal

The agreements provide a legal basis to the participations and contributions in/to missions and operations. Currently, the CMPD has signed over dozen of FPAs. Recent examples include Colombia, Bosnia Herzegovina and Australia., http://eeas.europa.eu/csdp/structures-instruments-agencies/cmpd/index_en.htm



³⁰ Previously, the personnel deployed to the CSDP missions had to complete online based hostile environment training (eHEST). Completing the course took some five hours and required well-functioning internet connection. eHEST has been replaced by EEAS developed Basic Awareness in Security (BASE) and Security Awareness in Fragile Environments (SAFE), available at https://webgate.ec.europa.eu/eeas/security-e-learnings/

³¹ For example, the persons interviewed while conducting the case study on Central African Republic stated that a common foundation of pre-deployment training can enhance mission effectiveness and coherence by ensuring that mission personnel has a solid understanding of the operational environment and code of conduct., IECEU D3.3 CAR, chapter 3.4.4.

way to provide pre-deployment training for mission staff. Nevertheless, eLearning in the pre-deployment phase is not a substitute for residential courses, particularly with regard to classified information and team-building. From a legal point of view, and in more general terms, pre-deployment training is part of the employer's *duty of care* towards its employees. Seconding authorities and CSDP missions (for contracted personnel) are therefore responsible for preparing their personnel for difficult working conditions so that they are aware of their rights, duties and responsibilities.³³

Although some EU member states have adopted legal framework regarding rights and obligations of mission personnel related to training, they are using training expertise of other European partners who have specifically developed their training centres (e.g. Finland, Sweden, Austria or Germany, ENTRI, ESDC, etc.), rather than developing an autonomous capacity. To find the right course available within an appropriate timeframe for the mission personnel often presents a challenge. In this sense the eLearning courses and NMLA or similar e-tools play an important role to be made available to EU member states for their own use. However, it would demand an extensive research to assure the overview of existing eLearning platforms in CSDP. The EU training policy in CSDP, existing since 2003, which is being revised for the last couple of years, is implemented by member states' training providers on a national basis or through EU-level training providers and projects. For civilian side, the training for police and military is provided by their national authorities, yet only a handful of countries in EU has an established system of training providers on a national level for civilian personnel, e.g. Finland, Sweden, Germany, Denmark to name a few. It is much more difficult to determine if and how the other member states are training their civilian (apart from police) personnel prior to their deployment. Since the CSDP in general seems to be quite low on the agenda of some of the member states, secondments to the military mission (e.g. Althea) are sometimes actually perceived as a training opportunity and member states do not send their best personnel to serve in missions.34 Critics say that a number of deployed personnel are also not qualified for the work they are sent to do.35 Moreover, the staff officers' short duration of tours, usually six months or even less is a significant challenge in terms of institutional memory, continuity and general effectiveness of the operation. The lack of personnel with required expertise combined with frequent rotations is perceived to be the major challenge

³⁵ Interviews in WP2 (Balkans) no. 24, no. 25, no. 14, no. 15, and no. 21.



³³ Rehrl & Taitto 2015

³⁴ "IECEU Roundtable discussion of experts," May 24, 2016, Jable Castle, Slovenia

reducing the effectiveness of the missions significantly. Out of a six-month rotation in most cases at its best only two months are actually effective if the staff possess the required expertise and skills to do the job. Too often generalists are deployed when specialists were needed, and the predeployment training is perceived by the critics to be insufficient to prepare the individuals for the tasks. This view is striking taking into consideration that the a great share of CSDP missions' work actually involves training as means of conveying 'European best practices' to recipient bodies and authorities as military and police. Security sector reform is namely an important part of the overall reform process in all beneficiary countries with EU engagement through non-executive capacity building and training tasks, aiming to contribute to strengthening of local ownership and capacity.

2.2.1 CIVILIAN CRISIS MANAGEMENT

The existing platforms such as the European Security and Defence College (ESDC), Europe's New Training Initiative for Civilian Crisis Management (ENTRi), European Police College (CEPOL) and EU Police Services Training (EUPST) are all relevant. The EU should also draw on existing platforms already providing pre-deployment training. IECEU training toolbox will mostly benefit the training providers offering pre-deployment, CSDP orientation trainings or core courses as well as specialisation trainings, which include subject on CSDP. Also the missions will be able to utilise the toolbox in their induction trainings and all will benefit from the training evaluation set. Shared management of training increases pro-active planning and coordination of activities, so as to be more effective in meeting identified training needs.

The European Security and Defence College (ESDC) has been established in 2005 and is organised as a network of the institutes, colleges, academies, universities and institutions within the EU dealing with security and defence policy. Its objective is to further enhance the European security culture, promote better understanding of the CSDP by organizing and conducting training activities in the field of CSDP at the strategic level.³⁷

³⁶ "IECEU Roundtable discussion of experts," May 24, 2016, Jable Castle, Slovenia.

³⁷ Joint Action 2008/550/CFSP of 23 June 2008 establishing a European Security and Defence College (ESDC), Official Journal of the European Union, L176, 20-21.

European Security and Defence College (ESDC) is actively engaged in eLearning as a part of mission trainings. Council Joint Action 2005/575/CFSP of July 2005 stated that the ESDC should "install and run an Internet-Based Advanced Distance Learning (IDL) System to support the ESDC training activities." This reference was repeated in Council Joint Action 2008/550/CFSP' in June 2008. With the arrival of ESDC Training Manager Mr Dan Trifanescu a conceptual framework and the first eLearning units were developed,³⁸ As a result of Committee for Civilian Aspects of Crisis Management (CivCom) deliberations and due to the conclusions of the Lessons Learned report, the ESDC was asked to provide an eLearning course for contract and seconded staff for CSDP missions.

Again since 2013, the ESDC has provided "stand-alone" eLearning courses for the incoming EU Presidencies at the request of the relevant EU member state. The courses have included general autonomous knowledge units (AKUs) on gender, intercultural competences, history, strategies, institutions, procedures and the Treaty of Lisbon. In the same year, the ESDC started to support military exercises (MILEX) 12 and 13 with tailor-made eTraining at the request of CMPD/EUMS.³⁹ The ESDC currently has 27 AKUs, consisting of learning units and a confirmation test that are running on the eLearning Management System "ILIAS". The content of courses by subject matter expert is provided cost-free. ⁴⁰ Since 2013, the ESDC has been involved in providing predeployment and in-mission training.

In 2001 the European Commission launched a pilot project on training for Civilian Aspects of Crisis Management to provide training at the operational level which later became the European Group on Training (EGT). This project took the shape of an informal network composed of governmental and non-governmental training bodies involved in training civilian personnel for crisis management activities. When entering in its last phase in 2010, it has been renamed Europe's New Training Initiative for Civilian Crisis Management (ENTRi). It focused essentially on specialised courses and pre-deployment training as well as on harmonisation and standardisation of course curricula.⁴¹ ENTRi III will in the last phase, until 2019, develop training packages in several fields, to be used

⁴¹ ENTRi, available at: http://www.entriforccm.eu/about/about.html



³⁸ The eLearning Management System of the European Security and Defence College, ESDC, 2014.

Autonomous Knowledge Units (AKUs) of the ESDC, state of affairs – January 2016, ESDC/2016/009, 26 January, 2016.; ESDC.

⁴⁰ ESDC, Autonomous knowledge units.

by national and international training providers after the completion of the project. Some of them, for example Training of Trainers, will also contain eLearning but the topic areas have not been confirmed by the consortium yet.⁴²

Since 2007, the European Commission has been funding The European Police Force Training -EUPFT. This project provides training at the operational level for police experts in international policing missions. After the success of EUPFT between 2008 and 2010, it was renamed to European Union Police Services Training - EUPST I (2011-2014), the European Commission has additionally made funds available for EUPST II 2015-2018. The programme comprises large-scale live exercises, modular training courses as well as academic conferences and workshops. 43 The European Police College (CEPOL) is designed to train the senior police officers of the member states and provides training at the strategic level, such as strategic planning of EU police missions for senior police personnel. CEPOL's online learning platform is open to all EU law enforcement officers and is free to use.44 For the police capacities, training is in majority cases offered in house by the national Police or the Police Academy, this field is much more complicated for the strictly civilian personnel, who either receive training by their national training institutions, Ministries of Foreign Affairs or by some of the existing EU providers (ESDC, ENTRi, other different projects). It is difficult to elaborate how much eLearning is being used by national authorities, but there are some, which are not shared by the Member States, though there are some practices, when certain Member States due to the limited number of personnel, send their representatives to a training in another country.

EU has in general put quite significant stress in developing more eLearning tools in the field of crisis management training in the future and is financing them through different projects. ⁴⁵ One of the very well-known eLearning tools was the e-HEST online course designed by EEAS for Council staff to be deployed or posted in risk-associated or hostile environments outside the EU. It was

⁴⁵ ENTRi consortium meeting, 26-28 July 2016, Berlin.



⁴² Decision adopted at ENTRi consortium meeting, 26-28 July 2016, Berlin.

⁴³ EUPST, available at: http://www.eupst.eu/about-us/

⁴⁴ Council Decision 2005/681/JHA of 20 September 2005 establishing the European Police College (CEPOL), Official Journal of the European Union, L 256, 63-70.

revised in 2015 and new eLearning tool was developed, namely BASE (Basic Awareness in Security) and SAFE (Security Awareness in Fragile Environments).⁴⁶

The International Association of Peacekeeping Training Centres (IAPTC) is an open and voluntary association of centres, institutions, and programmes dealing with peace operations research, education, and training. Its objective is to promote better understanding of peacekeeping, as well as methods used in training for peace operations of all types.⁴⁷ The European Association for Peace Operations Training Centres (EAPTC) is one of the branches of IAPTC. It was established in 2013 to encourage networking and partnerships with other similar networks, to strengthen coordination and cooperation, to continue high-quality training and share good practices related to the design and provision of training within the sphere of peace operations.⁴⁸ EAPTC developed free of charge eLearning platform for the Neighbourhood which offers short courses on EU policies, European Neighbourhood Policy, EU-ENP relations, and related best practices, as part of an EU-funded project implemented by the Natolin Campus of the College of Europe.⁴⁹

In the last years we could witness mushrooming of organisations, offering different types of trainings in the field of peacekeeping and conflict prevention. Researching all this organisations, types of trainings and possible eLearning tools they offer is far beyond the purpose of the IECEU project and research since the main training providers in Europe are not aware of those eLearning tools and do not offer them to its public. The above part is therefore focusing on the established and known eLearning tools by organisations, joined in different official networks, which have at least partial links to the EU. Since civilian missions consist not only from seconded personnel but also locals and contracted staff, any useful eLearning tool would contribute to the easier excess in receiving any kind of training support before embarking on a mission.⁵⁰ The recent EU's focus in ensuring some relevant eLearning tools in this field is not surprising; this is why the ENTRi III phase will have a working group on eLearning, providing overview of the existing tools, producing four new standalone eLearning sessions, which will contribute to better qualified personnel, serving in missions.

⁵⁰ ENTRi consortium meeting, 26-28 July 2016, Berlin.



⁴⁶ EEAS, Security e-learnings, https://webgate.ec.europa.eu/eeas/security-e-learnings/

The International Association of Peacekeeping Training Centers (IAPTC), http://www.iaptc.org/

⁴⁸ Folke Bernadotte Academy, Education and Training Networks, https://fba.se/en/how-we-work/courses/education-and-training-networks/

⁴⁹ EAPTC http://eaptc.eu/en/news/view-news-e-learning-platform-on-enp-available-online-0526.html

The Training Impact Evaluation, performed on Eulex personnel in 2012 as part of ENTRi II project proved that training in general shortened the orientation period, assisted in understanding their work context and helped them to prepare for their deployment. With the existing lack and insufficient training for civilians in crisis management, the NMLA is partially filling that gap. There is also an application on CSDP learning as part of ENTRi available on the ENTRi site ⁵¹, whereas the civilian missions are not using any eLearnign tools are aware of, though there seems to be a clear need to implement a proper needs assessment in the field of eLearning in CSDP.

2.2.2 MILITARY CRISIS MANAGEMENT

The EU training policy in CSDP is implemented by member states' training providers on a national basis or through EU-level training providers and projects. Ensuring that personnel have received adequate training, makes less complicated for CSDP military operations than for civilian missions. The part reason for this is as the personnel deployed to operations are usually professionals from national defence forces. To enhance the interoperability of the troops and individuals serving in the crisis management and peacekeeping operations the officers participate in international exercises and trainings that present a part of an officer's normal career. Furthermore, the military culture in terms of protocol, procedures and terminology across the member states is more or less the same.⁵²

In the military domain, eLearning is combined with face-to-face education (blended/hybrid learning). The first eLearning course in the military sphere was developed for Operation ATALANTA (EUNAVFOR SOMALIA) to facilitate the six-monthly rotation phases. All non-confidential briefings were included in an ePackage which the designated new staff were to study in advance of the deployment to OHQ NORTHWOOD. A similar course was developed by the EU Military Staff. Both eLearning courses included a specific AKU and some other AKUs from the ESDC eLearning Management System. In addition, in the spirit of comprehensive approach, the ESDC courses are also made available for the military. ESDC's Internet-based Distance Learning

Jochen, Rehrl and Taitto, Petteri, *Pre-deployment eLearning for CSDP missions/operations*, 2015, http://proceedings.elseconference.eu/index.php?r=site/index&year=2015&index=papers&vol=19#



⁵¹ <u>http://in-control.entriforccm.eu/</u>.

⁵² Panel of Experts (Ministry of Foreign Affairs, EEAS Official and a former OPCEN Official) 27 August 2015.

(IDL) is also widely used within the military training. Several courses that focus merely on the knowledge development are at least partially realized through IDL.

The increasing eLearning opportunities are utilized nationally within the Military training as well as by the major international organisations. Digital games seek to raise awareness and find complimentary and new ways to teach issues related to conflicts and peace operations.⁵⁴

The North Atlantic Treaty Organisation (NATO)

The relevance of the NATO in terms of military eLearning training is based on the fact that out of 28 EU member states 22 belong as well to NATO. The North Atlantic Treaty Organisation started to develop its own eLearning concept in 2003. The outcome of the process is an online eLearning platform called Advanced Distributed Learning (ADL).⁵⁵ The platform contains a vast catalogue of different eLearning courses dealing with various topics related to military and security. According to the ADL site, it is currently the most commonly used eLearning tool in NATO which by the year 2015 was accessed by 85 000 users around the world. Studies are available online up to PhD level. NATO is planning to increase the use of eLearning further. In particular, it focuses on blended learning "which prepares student for residential courses and provides in many cases the only opportunity for a training course prior to deployment".⁵⁶ NATO is working towards creating a common education and training area. Thus, use of NMLA can be seen as a natural part of this evolution as well.⁵⁷ This area will be in line with standards of higher education standards.

The United Nations

The UN Peace Operations Training Institute (POTI) provides an e-learning platform that the members can access freely. The platform contains various self-paced eLearning courses dealing

⁵⁷ North Atlantic Treaty Organisation, *Education and Training Programme Management – Direction and Guidance No* 1, March 2012.



⁵⁴ Brynen, Rex, *Teaching about Peace Operations*, International Peacekeeping Vol. 21, Iss. 4, 2014.; "Through serious games, participants can gain a better sense of the dynamic relationships at work in complex environments, explore good fits and practical solutions, and understand how mistakes occur", PAXsims blog, accessible at: https://paxsims.wordpress.com/2014/08/13/teaching-about-peace-operations/

https://paxsims.wordpress.com/2014/08/13/teaching-about-peace-operations/

55 Advanced Distributed Learning (ADL): NATO e-Learning, Education & Training "Anytime, Anywhere" follows a set of standards and specifications known as the Sharable Content Object Reference Model (SCORM). The site is accessible at https://jadl.act.nato.int/

⁵⁶ Ibid.

with peace keeping and related topics.⁵⁸ The content of the courses is written by experienced experts. After successfully completing a course, students are awarded with a Certificate of Completion. As regards security eLearning, the UN has developed Basic Security in the Field⁵⁹ and Advanced Security in the Field 60 training courses. These courses are provided by the United Nations Department of Safety and Security (UNDSS)⁶¹. Completing the courses is a prerequisite for many deployed personnel, including UN military observers.⁶²

National defence forces

Also other eLearning tools are used extensively in implementation of the military exercises. Such as Computer-Based Training (CBT), immersive training, mobile learning (m-Learning) and transmedia learning. Especially within peacekeeping training the development of simulators and scenario-based trainings and exercises are underway.

Moreover, armed forces in various member states are developing digital learning tools for their individual needs in terms of combat training. For instance, the Finnish defence forces have decided to develop and invest in a battle simulator which will be introduced in 2017 to a number of military units to be actively used as a part of the training of the military personnel.⁶³

⁶³ Helsingin Sanomat, *Puolustusvoimat ostaa uuden taistelu-simulaattorin varusmiehille – hinta liki 10 miljoonaa*, 31 January, 2016, article is accessible at http://www.hs.fi/kotimaa/a1454127115262



⁵⁸ The common core course topics include: Humanitarian Concepts and Human Rights, Mission Components, Operations and Procedures, Gender Awareness, Logistics and History of Peacekeeping Operations., Information on POTI is available at http://www.peaceopstraining.org/peacekeeper-training/

⁵⁹ The Basic Security In the Field e-learning course contains security information for personnel, family members and others covered by the UN Security Management System (UNSMS). The e-learning course is mandatory for all individuals covered by the UN Security Management System, regardless of their function. The course consist of seven self-paced and animated modules. More information is available at: https://agora.unicef.org/course/info.php?id=589

⁶⁰ The advanced course is mandatory for local and international UN staff. The course is mandatory for obtaining security clearance when travelling to (or within) a country where a security phase is in effect. More information available at: https://agora.unicef.org/course/info.php?id=1831

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More information available at: http://www.un.org/undss/?q=home

⁶² Moreover, for instance the CMC Finland, organization responsible for training of Finnish seconded personnel, is currently using these e-learning tools to replace the online based Hostile Environment training (eHEST) which used to be mandatory to all personnel prior to their deployment.

3 DESCRIPTION OF THE NMLA DEVELOPMENT WORK

The object of the planned tool was primary to exhibit the selected eight IECEU case studies and disseminate the findings of the comparative analysis. Secondary, the development aimed at creating an interactive training tool which could be used in various crisis management training or as a basis to introduce the new CSDP staff to the roots and dynamics of different conflicts either in their future deployment areas or in general. The tool can also be used among the larger audience of stakeholders (civil servants, trainers, students etc.) The development period of the application also needed to reflect the scope and follow the timeframe of the project. In the beginning, various structures for the application were identified and discussed.

Compilation of various platform possibilities

The application will be starting point for 'open source' crisis management site which serves as a hub for various crisis management related elearning and online learning tools. The IECEU remains as the core with its structure, but other applications can included to it – either applications with a similar structures or other different type of applications (can include gamification, eLearning, conventional web sites). However, the moment the field of new media based applications is so fragmented that information is hard to find and it is not being to used its fullest (e.g. various UN solutions, ENTRI, Sphere, ISSAT, UN peace University just to mention few⁶⁴). A more focused and concentrated approach would create synergies and improve efficiency. At the same time, the new technology is changing with speed and creating a rigid structures will also not be pragmatic and serve the purpose. The return for the investment could be moderate as the technology is advancing with speed allowing the use of other type of technologies in foreseeable future. This can create possibility for developing more advanced serious games to serve various crisis management related courses. There is a possibility to organize the technology supported learning and training in decentralized or centralized way. From IECEU point of view, they key aspect among this variety of different online learning opportunities is to use the common and relevant key words.

⁶⁴ Examples of studied eLearning platforms related to comprehensive security - other than the ones offered by ESDC or ENTRi - included: Building a better response, available at http://www.buildingabetterresponse.org/; The International Security Sector Advisory Team, available at: http://issat.dcaf.ch/; Fair Share LMS, available at https://issat.dcaf.ch/; Fair Share LMS, available at <

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Modular approach

The user can select a specific topic such as training, pooling and sharing of military and civilian assets, engaging with local population or specific region and the system will generate information/exercise on that. Ideas for further development of the NMLA were identified. A thematically well-structured easily adjustable gamification could provide a mean to utilize it during any given CSDP permission or induction training. The NMLA can be amended by the mission to describe and inform the new staff on the specific mission environment. The need of an application which could be adjusted on field office/hub level was raised. The NMLA which can also be downloaded to laptop, tablet or mobile phone could be utilized as a part of the training conducted in mission areas. The possibility to adjust the NMLA to reflect the existing environment, themes, threats, risks, and reporting procedures could create a very tangible tool to enhance the capabilities and security of the mission members.

Design had to strike a balance between complexity of the researched realities and need to reduce goals to concrete action steps. However, like in the case of theory in human or social sciences, the point in developing models and applications is not to describe the reality in detail. The explanatory power is often achieved by the simplifying the surveyed phenomena when the causalities become more visible. In a same way, gamification seeks not to illustrate the detailed survey results, but seeks to highlight the most important findings and patterns/causalities found during the comparative study on the cases. The acquisition of the knowledge is then provided through gamification. The gamification application can be used in training on different levels. Additionally, the application is created in a way that it allows amendments in the text content. The platform can moreover be used a basis in creating other learning environment reflecting future training needs or projects.

Since IECEU –project made the decision to study different case studies and finalise the comparative analysis, NMLA creation was naturally supported with the understanding of providing the IECEU knowledge and findings as a form of case studies. Earlier research shows that case-based learning combined with problem solving enhances the professional skills development. ⁶⁵ 66

⁶⁵ Nkhoma, M., Lam, T., Richardson, J., Kam, K., & Lau, K. H.,. Developing case-based learning activities based on the revised Bloom's Taxonomy. *Proceedings of Informing Science & IT Education Conference (InSITE)* 2016, 85-93.

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3.1 TARGET GROUPS

IECEU Learning Application is seeking to reach a broad audience, which creates both added value and challenges to the structure to the platform. The different needs and interests of the target group have been taken into account in the design. The modular structure allows users to choose the units they visit based on individual interests and needs. This provides an incentive for a larger audience to use the tool. The anticipated target groups include:

International organisations (IOs)

Staff working in various international organisations in the field of crisis management and conflict prevention is potential end-users of the knowledge generated by the IECEU – project. Relevant international organisations include: **The European Union (EU)**, United Nations (especially DPKO and UNDP), and Organization for Security and Co-operation in Europe (OSCE), International Organization for Migration (IOM) and the North Atlantic Treaty Organization (NATO).

Researchers and think-tanks

Researchers are also important stakeholders of IECEU. The research community, particularly universities, will be strategically targeted in dissemination activities to further intensify collaboration with the consortium and provide either enquiries on the progress or relevant suggestions regarding the project implementation or applicative research. Part of the research community (e.g. security/defence studies, EU studies, studies of international organisations & international relations, global governance, etc.) are also experts who will provide information relevant for the project research. There are other on-going EU - research projects which are overlapping or dealing with similar topics with the IECEU. Ideally, this can be used to cross-check and deepen further the understanding of the EU conflict prevention and crisis management.

Training communities

Training organisations are preparing personnel for their work in the missions and operations. Integration of the IECEU platform or some parts of it into related training curricula will directly contribute to the training. The training integration represents long term impact of IECEU project

⁶⁶ Harman, T., Bertrand, B., Greer, A., Pettus, A., Jennings, J., Wall-Bassett, E., & Babatunde, O. T., *Case-based learning facilitates critical thinking in undergraduate nutrition education: Students describe the Big Picture.* Journal of the Academy of Nutrition and Dietetics, *115*(3), 2015, 378–388, available at: http://doi.org/10.1016/j.jand.2014.09.003

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findings. Moreover, the NMLA can be up-dated, transformed or some of its elements can be used

in future project and applications designed to meet the future needs of conflict prevention and crisis

management.

EU projects

During the drafting phase of the IECEU platform, a new Horizon 2020 project Gaming for Peace

(GAP) was launched in September with an aim of creating serious game application to serve

various conflict prevention and crisis management training. Experiences from the development

phases, structure and the user experiences of the platform can be used in designing and

conducting future project dealing with eLearning/gamification of related topics.

The ESDC that is an associated partner of the project is a network of 70 organisations and ENTRi

of 12 partners, all regularly conducting trainings for the CSDP and other missions' personnel. A

separate internal deliverable (D8.5) of the IECEU project is prepared on the integration with

relevant trainings to ensure the continuation of dissemination even after the project.

Non-governmental organisations

There are numerous non-governmental organisations (NGOs) operating in the field of crisis

management. The number is even larger when approaching the question from the perspective of

comprehensive security. When observed through these lenses, also humanitarian organisations

are working towards the same goals. Increasing understanding of EU conflict prevention and crisis

management objectives and activities among the personnel of the NGO community can improve

the cooperation and contribute to the process.

3.2 LEARNING OBJECTIVES

The aim of the IECEU NMLA is to introduce users with the IECEU project cases and comparative

analysis based on the conducted research. After going through the all the modules, the user will

have an understanding of EU's conflict prevention and crisis management activities and on the

underlying concept of comprehensive security. The user will know the most relevant EU institutions

related to planning and implementing CSDP missions and operations.

The IECEU eLearning platform introduces the user with eight selected case studies related to

European Union's (EU) crisis management covered by the IECEU project. After completing this

application, the user has obtained a basic understanding of the EU processes and institutions

This project has received funding from the EU Framework Programme for Research and Innovation HORIZON 2020 under grant agreement no 653371. The content of this document reflects the authors' view and the European Commission is not responsible for any use that may be made of the information it contains,

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which are involved in planning and implementing EU's Common Security and Defence Policy (CSDP) missions and operations. The user is introduced to the common challenges related to coherent actions at strategic and operational level. Additionally, the user will gain understanding of essential concepts and topics related to crisis prevention and crisis management including: comprehensive security, security sector reform (SSR), mentoring, monitoring and advising, local ownership.

An overview to the IECEU project (Improving the efficiency of EU crisis management capabilities) methods which have been used to carry out eight case studies on selected EU CSDP missions and operations, namely: Kosovo, Bosnia and Herzegovina, Palestine Territory, Afghanistan, Libya, Congo, Central African Republic and South Sudan. After completing these modules, you will have obtained basic understanding of the dynamics of these conflicts and subsequent deployment and activities of the CSDP missions and operations based on the findings of the IECEU project. A text describing the learning objectives are presented in the beginning of each module to set the learning targets which the user should have met after completing the module. The rational/learning objectives of the animations included in the learning platform are listed in the Annex 3.

3.3 TECHNICAL SPECIFICATIONS

Prior to the development phase, a desk-top study was carried out to identify the existing options for developing IECEU NMLA. Developing technology supported learning tools is a resource heavy undertaking. The process requires diverse expertise, including ICT experts (computer programming, Server maintenance) graphic design, copywriter, content expert etc. A game expert commented during his presentation that the timeline for planning including game-elements should be defined to be twice the time assessed for the actual design due to unforeseen obstacles. The timeline as well as the resources available for the platform created certain limitations for the platform. For example, it was not realistic to consider creating a 3D game or an application based on augmented reality.

Choosing a free and open source tool to create a gamified e-learning platform

When choosing the best gamified, open source Learning Management System (LMS) for a specific goal, the selection is always based on the needs of the user. There are over 600 different free & paid LMS solutions. The criteria for the selection was that the platform needed to based on open



source code⁶⁷ featuring desired functions: options for gamified learning, mobile friendly⁶⁸, multi-browser compatible⁶⁹ etc. Against these criteria, we selected three of the most used online platforms which have the ability to turn also into powerful e-learning solutions to be examined more closely. The other freely available tools based on open source code are either incomplete, or they require heavy adjustments in the server and/or in the administrative side, or they simply do not possess the qualities the project set forth to achieve.

The pros and cons of the most relevant technical solutions were compared according to well-known Human-Computer Interaction (HCI) practices ⁷⁰ ((a) functional completeness and (d) compelling user experience). Moreover, the IECEU Quality Assurance Plan has been taken into account in the selection process. The arguments in favor and against the most likely options are listed in the following tables:

Wordpress	
Pros	Cons
Easy to use.	Needs third party plugins and themes to make it an e-learning platform.
Strong support community.	Needs to be heavily customized in order to achieve the desired user interface.
Free and open source code.	Not as secure compared to Drupal.
User friendly – adapt also for beginners.	Not primarily intended for LMS, hence adjustments need to be made.

⁷⁰ Jounghyun, G. K., 2015.



⁶⁷ More information at: https://opensource.org/osd

A website or web application that displays correctly in mobile devices, http://www.seascapewebdesign.com/blog/what-mobile-friendly-website

⁶⁹ More information at: https://www.joedolson.com/2008/03/what-is-cross-browser-compatibility/

Heavy customizations can be done with little PHP ⁷¹ and/or Javascript HTML programming language knowledge, CSS3 ⁷² is a must.	User statistics achievable via third party plugins.
Wide array of plugins and themes.	Gamification features need to be installed and coded to our needs.
Gamification plugins available.	

Table 1 Wordpress: assessment.

Moodle	
Pros	Cons
It is free for users.	The setup is often criticized for being complex and far from user-friendly.
It is open source, so it is always improving.	It takes a dedicated team of IT professionals to maintain it.
Support is available 24/7	The user interface is rather old fashioned.
The tools encourage active, rather than passive, learning.	Moodle does not address exactly to our user interface requirements right out of the box hence, heavy customizations need to be involved.

The Hypertext Preprocessor (PHP) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. More information available at http://php.net/manual/en/intro-whatis.php
To Cascading Style Sheets (CSS) is a style sheet language commonly used to define the visual style of web sites and

[&]quot;Cascading Style Sheets (CSS) is a style sheet language commonly used to define the visual style of web sites and user interfaces written in HTML. More information available at https://developer.mozilla.org/en-US/docs/Web/CSS/CSS3



It is secure.	Moodle provides some general level statistics.
Can be used with any device	

Table 2 Moodle: assessment.

Opigno (Drupal)	
Pros	Cons
Easy to install.	Heavy customizations are not easy to be achieved by an unexperienced programmer.
Not many customizations are needed, can be used right out of the box. Some of the pre-installed features are: Forum discussions, user messaging, live video conference capability, gamification elements and so on.	Theme is not recommended to be changed with regards to its core functionalities.
Good user interface.	
Easy to navigate.	
Active online support.	
Free & open source.	
More secure compared to Wordpress.	
Faster page loads than Wordpress.	

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Personal-user as well as general level statistics.	
Ability to upload quizzes via Excel sheets.	
Integrated ability to issue certificates upon course completion.	
Contains a free application store for extensions.	
Integrated gamification features such as mozilla badges, live guide (walkthrough), h5p integration.	
Mobile compatible including video, sound and other playback content all done in HTML5 ⁷³ .	

Table 3 Opigno: assessment.

After assessing the technical requirements of the NMLA and comparing identified options the decision was taken to create a Drupal/Opigno based open source eLearning platform. There was multiple reason to select this technology. First, the IECEU platform is designed to broad focus group to be used autonomously. Hence, there was no need to opt for a maintenance heavy platform, such as Moodle, containing several tools to be used for student – teacher communications.

The comparison was carried out to choose a platform that is free of charge, based on open source code and that could be deployed as soon as possible with minimal adjustments. This provided the developers with more time to work with the content itself. Taking into account the time and resource constraints that were set by the GA, Opigno seemed to be a versatile package which met our needs. It is integrated with gamification and e-learning functionalities and it provides a good user interface, learnability and ease of creating the desired content. In short, Opigno provided a

⁷³ HTML 5 is a revision of the Hypertext Markup Language (HTML) which is the standard programming language for describing the contents and appearance of Web pages. More information available at: http://searchsoa.techtarget.com/definition/HTML5



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understanding in desired topics.

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tool which could be made operational with small adjustments (such as removing unneeded features and changing visual styles I.e. colors, certificate layouts and so on) to meet the objectives set for the IECEU e-earning tool. Opigno is an Open Source e-learning platform based on Drupal content management system. This system makes it possible to manage online training courses and other various environments that can be used to enhance users' skills, knowledge or

Description of Opigno Management System

IECEU eLearning platform is based on Opigno Learning Management System (LMS). Opigno LMS is designed to be flexible and scalable to meet different needs related to content management. Opigno user interface is clear which makes its easily accessible and it can be made operational with rather small adjustments to the webserver. The clarity helps the user to focus on learning preventing the risk that the user would lose his/her interest due to cumbersome and illogical navigating.

The platform is mobile friendly, which is considered very important as today, more and more users are browsing sites with their portable devices. Moreover, the system does not use Flash multimedia software platform (which additionally has become a less used technology) based content and does not require the use of other special software in order to run. Only a web-browser is needed to run Opigno. Opigno contains tools that allows it to be developed as a collaborative platform. As mentioned earlier, these features are not included in the developed learning environment. However, if the future the IECEU NMLA – or some modules of it - must be up-dated or transformed to serve other purposes, the functions are available and can be included. Opigno has its own application store which hosts extensions for the tool. The available applications are free of charge and open source. These tools can be utilized in the future to develop the

The platform can be easily gamified with Mozilla badges, user scoring, certification awards and H5P module integration, all of which are pre-installed in the package or obtainable via the free Opigno app store. H5P is an extension developed for WordPress, Moodle and Drupal from a separate organization that is used to gamify e- learning with ease, all done in HTML5, including

video quizzes. The H5P extension includes a wide array of gamification and new media tools on its own.⁷⁴ The following lists options and functions that are possible with Opigno:

- The tool also has PDF displaying capabilities via HTML5, making it useful for mobile devices.
- 2. Issue certificates upon completion of courses, modules etc.
- 3. Live results and data statistics including charts and other human readable data.
- 4. Import or export guizzes from and to excel.
- 5. User accounts, user management (security levels etc.)
- 6. Quizzes (true/false questions, multiple choice questions, matching questions, long text question, grouping question, fill-in blanks question) with centralised questions database, video gallery, user forum, surveys, statistics, Automatic PDF certificate generation to a user who has successfully completed all the modules, flexible access control, based on roles which include as a default: student, teacher, class' coach, and administrator (at this state developed platform will only have administrator and student/user functions), unlimited number of users.

IECEU platform does not use all the listed functions. The reasons for this are twofold. Firstly, the design of user interface is based on clarity and therefore the options for different functions were kept limited. Secondly, due to architecture of the application, many course-type functions available as a default in the Opigno were not needed for the IECEU platform. The IECEU design was deliberately kept light to make use of the NMLA easy. The focus group of the application is large. The interest of the user can be very to a large extent. As a result, the structure of the module was designed in a way that allows access only to one of the modules or to several ones. The user is not systematically guided through several modules and therefore, the structure and how to navigate in the platform needs to be clear and self-guiding.

⁷⁴ For more information, see: https://h5p.org/



Integration

Technical qualities were:

- 1) Apache Solr integration (Solr is a standalone enterprise search server with a REST⁷⁵-like API.⁷⁶ You put documents in it (called "indexing") via JSON⁷⁷, XML⁷⁸, CSV⁷⁹ or binary over HTTP⁸⁰. You guery it via HTTP GET⁸¹ and receive⁸² JSON, XML, CSV or binary results.)
- 2) Lightweight Directory Access Protocol (LDAP)⁸³, is an Internet protocol that email and other programs use to look up information from a server.
- 3) (Active Directory) ⁸⁴ and CAS integration. The Central Authentication Service (CAS)⁸⁵ is a single sign-on protocol for the web. Its purpose is to permit a user to access multiple applications while providing their credentials (such as user identification and password) only once.
- 4) Easily scalable due to its internal Apps Management System
- 5) SCORM 2004 compliant Sharable Content Object Reference Model (SCORM)⁸⁶ is a collection of standards and specifications for web-based electronic educational technology (also called e-learning)
- 6) Tin Can (xAPI)⁸⁷ compliant
- 7) Certified LRS: Learning Locker, Watershed
- 8) HTML5 Package (H5P) compliant which allows creation, use and recycling of various interactive H5P elements.

Using the NMLA tool is easy. It is required to log into the system by providing your name and your email address. No additional information is needed. The Opigno platform is based on open source

⁸⁷ Experience API, more information at: https://tincanapi.com/overview/



⁷⁵ REST stands for Representational State Transfer, more information at: http://rest.elkstein.org/

⁷⁶ Representational State Transfer, more information available at: http://www.restapitutorial.com/

⁷⁷ JavaScript Object Notation, more information at: http://www.json.org/

⁷⁸ Extensible Markup Language, more information at: http://www.xml.com/pub/a/98/10/guide0.html?page=2#AEN58

⁷⁹ Comma-separated Values, more information at: http://edoceo.com/utilitas/csv-file-format

⁸⁰ Hypertext Transfer Protocol, more information at: http://www.tutorialspoint.com/http/

⁸¹ Requests data from a specific resource, more information at: http://www.w3schools.com/tagis/ref htt

⁸² Data that can be received using a receive adapter, more information at: https://msdn.microsoft.com/en-us/library/ee267547%28v=bts.10%29.aspx

⁸³ More information at: http://www.gracion.com/server/whatldap.html

More information at: https://u-tools.com/help/whatisad.asp

⁸⁵ More information at: https://en.wikipedia.org/wiki/Central Authentication Service

More information at: https://en.wikipedia.org/wiki/Sharable_Content_Object_Reference_Model

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software and it can be used free of charge. The user only needs to have a functioning online

connection and a device (PC, laptop, tablet or a mobile phone) to access the platform.

Audio

The voiceover of the application is created by professional speaker to ensure comprehensiveness

and quality of the user experience (the voiceover texts are provided also in subheadings of the

animations). The voice-overs are embedded in and synchronized with the animations.

Navigation

The design has aimed at providing a comprehensive overview of the platform content. The various

topics NMLA is dealing with are listed in the main menu visible on the left hand side. In a same

way, the topics/subheadings included in different modules are listed in the start page of the

respective page to ensure clear overview.

The application is self-paced; it allows the user to freely decide how to navigate in the site. The

content of the application has been arranged in chapters based on the themes and

missions/operations which have been reviewed as a part of the IECEU project. As the application

is aimed at a broad audience, the various elements can however been accessed individually. It is

not mandatory to browse the application in a predetermined order, but the user can select and

immediately access topics of his/her interest.

Quiz

All the modules include guiz. In order to answer to the multiple choice questions, the user needs to

go through the entire module in guestion. After completing the guiz, the system will show the user

score and show the correct answer with short explanations. In order to receive a printable

certificate, the user has to take all the quizzes in the end of the modules and score at least 80%

correctly.

Domain Optimisation

Number of business enterprises spend considerable time in optimizing their domain address (the

url-address of an internet site/game/application) to ensure that the major search engines (Google)

will find and rank high their applications based on the search words which are most commonly

used by the users. This has assessed to have a considerable impact on marketing of services or

products. For instance, Google changes its algorithms on regular bases to prevent

This project has received funding from the EU Framework Programme for Research and Innovation HORIZON 2020 under grant agreement no 653371. The content of this document reflects the authors' view and the European Commission is not responsible for any use that may be made of the information it contains,

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companies/other actors from figuring out how the search engines define their rankings. The search engines instead consider education related sites (no-profit orientated) more trustworthy and place them higher in the displayed links. Therefore, it was assessed that making an extensive effort in analysing the most commonly used search words was futile (this was further vindicated by screening the domain names of other good quality eLearning applications – such as Building a better response on the field of humanitarian aid and In Control created as a practical guide for civilian experts working in the CSDP missions. Their domain names do not suggest that domain optimisation would have taken place.

The selection of the name of the domain was based on peer review which revealed various factors which were necessary to consider when choosing the name: was the focus on presenting the project results or on creating an application that will be maintained and potentially developed further in the course of coming years (an example of peer review comments: "the best name depends on what other contents there will be under the same domain: if there will be also other material about conflict management, then..."). The task leader proposed three pre-selected options as the domain name for the consortium. The selected domain name is ieceuLearning.eu.

The application was chosen to be designed in consultation with external ICT experts to ensure the functional and visual quality of the final product.

3.4 DEVELOPMENT PHASES

The drafting started with the needs assessment and defining the elements and findings of the project which were necessary to be published in the platform. Like stated in the beginning, the NMLA has two main targets: Firstly, it provides a new complimentary tool to be used in conflict prevention and crisis management training. Secondly, it offers an effective tool to disseminate the project findings and collects the good practices from the case studies.

The development of the NMLA was designed to be based on co-planning and integration of endusers into the progress. The broad focus group was work is a process that required regular feedback from the partners. It was also clear that any possible delays in the case studies would be reflected in the NMLA. The systematic development progress was scrutinised to quality considerations. There are numerous documents dealing with the issue. For this work, the mostly used reference points are The Quality Assessment for Elearning: a Benchmarking Approach

produced by the European Association of Distance Teaching Universities⁸⁸ as well as "Verkko-oppimateriaalin Laatukriteerit" produced by experts appointed by the Finnish National Board of Education. ⁸⁹ The following selected points formed basis, a checklist for the IECEU platform development. The primary object of any given platform is to create learning results. One indicator for the good content are good learning results. However, in practice, it is difficult to demonstrate the validity of one single element as a part of a complex and individual learning process. ⁹⁰ The checklist for the on-line content includes:

Pedagogical quality

Case –based Material supports teaching and learning accurately and offers pedagogical value. Learning skills, activation of the learner, challenging exercises, validity and meaningfulness of the presented points. The criteria will ensure that the platform provides value for both teachers and students.

Instructions for the users must be easily accessible and comprehensive. How the content can be used for leaning and what is its length.

Definition of the target/user group. What kind of skills/knowledge are needed to use the platform?

Material must be flexible and it can be used for different type of learning/teaching. Possibility to use the material on individual pace.

Information whom to contact in case of technical problems or other inquiries

Material stimulates learning process of different type of users and offers a possibility for self-assessment and/or keeping a learning portfolio

Supports learning of complex topics

Information provided is well-grounded and up-to-date

Structure helps to connect earlier knowledge to new topics

Structure helps to assess learning process

Practicality

Platform works in most common devices

Information relevant to the user can be found easily

⁹⁰ Ibid



⁸⁸ Quality Assessment for E-learning: *A Benchmarking Approach*, EADTU, Third Edition, 2016.

⁸⁹ Verkko-oppimateriaalin laatukriteerit, Työryhmän raportti 2005, Opetushallitus, Edita, Helsinki, 2006, 12.

Navigation on the site is smooth

When applicable, the content is printable (certificate)

Content is divided into manageable parts

The most important features of the platform are self-explanatory

System provides feedback supporting the learning process if (correct or incorrect answers or course of action)

Visualisations, including voice-overs (to make it possible to study content in mute setting), are of high quality and they run smoothly

Text flows and there are no grammatical mistakes which would make understanding of the text difficult

Quality of the development progress

Content is developed in a pre-planned and documented manner (timelines, responsibilities, allocation of resources)

Learning objectives are clearly set and reflected in the process

End-user needs are taken into account and reflected in the content

Content design is carried out by experts on the subject matter

Platform will be double-checked carefully before the launch

Technical maintenance is agreed and confirmed prior to the launch

User feedback is collected and analysed regularly

Received improvement suggestions are, when applicable, executed

The development work of the NMLA consists of five different development phases integrating the feedback from the consortium members and end-users.

- 1. Analysis of required specifications,
- 2. Developing and coding the platform,
- 3. Initial testing of the product (including feedback collection and subsequent improvement,
- 4. Piloting of the revised platform; additional phase to complete the development cycle
- 5. Revising the final structure and learning objectives based on the experience obtained during the development phases and on the collected feedback). Key points: user-center approach, consultations with the end-users (EEAS, various training institutions etc.), online based survey and/or direct consultations with stakeholders.



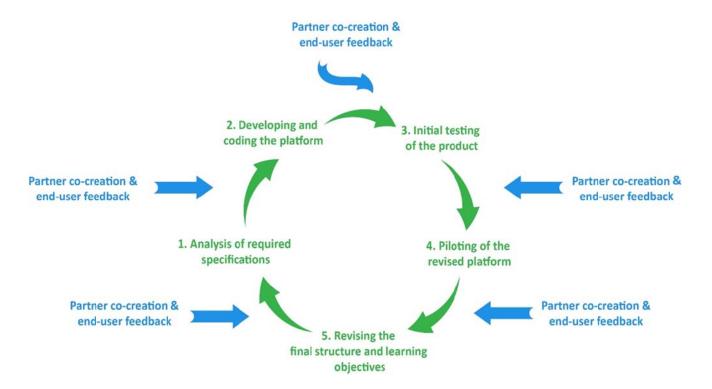


Figure 2 NMLA development process.

The development process circle describes the continuing development of the platform related to the future needs either based on up-dating the content/structure or changing training needs. Moreover, the process is characterised with feedback and inputs form the end-users and various stakeholders.

1. Analysis of required specifications

The project required a light platform where to embed the content providing selected information on each of the case studies and subsequent analysis. Moreover, the content was designed to include visual elements/animations using gamified features to create more engaging and motivating user/learning experience. Moreover, a desk study was conducted to draw from existing good quality e-learning environments. The content of the NMLA devolved in the course of the drafting process. Initially, the structure was seen to reflect the content and elements of the IECEU project. This practical approach has been maintained in the structure that consist of introduction, description of EU crisis management followed by the eight case study descriptions and finally by the analytical chapter which summaries and presents the most important project findings. A desk

study was conducted to identity applications available for eLearning platform creation. The most relevant options are listed and compared in the section technical specifications.

2. Developing and coding platform

The content and structure of the NMLA in the Opigno platform was drafted in dialogue with consortium partners who also in a broad sense present the end-users of the platform. Moreover, selected subject experts were consulted during the process. The development process was further discussed with the WP5 partners in regular conference calls. The structure and visualisation were developed in a dialogue with graphic designer and ICT expert. A detailed script was drafted to provide detailed guidance for animation development including voice-overs.

3. Initial testing

The initial testing of the product was carried out in the course of the development process. A selected group of in-house experts were consulted to comment on the tentative draft. The inputs were collected and reflected in the subsequent development phases. Initial testing was moreover integrated into earlier developing and coding phase.

4. Piloting

Piloting was organised in Laurea University of applied science. Some 20 participants were invited to participate in the testing phase. The test group consisted of both men and women of different age. Only few participants had detailed knowledge of the EU conflict prevention and crisis management activities. The majority presented experienced academic researchers from different

disciplines. Some of test persons were ICT experts and/or held expertise in eLearning/gamification (the questionnaire used in the piloting phase is included as Annex 2). The test group was divided into two parts. The first group received instructions from the test organisers on the platform. The main goal with this group was to collect information on the platform content. The second test group was not provided prior information on how to use the platform.



Figure 3 IECEU NMLA Pilot event

As a result, the second group mainly produced feedback on clarity of navigation in the platform. The collected information was then assessed and fed into development process.⁹¹

5. Revision of the final version

The final stage of the development is carried out in the course of the remaining months to ensure that all project findings will be integrated into the eLearning platform.

Moreover, the process was transferred to the timeline of the NMLA development in the beginning.

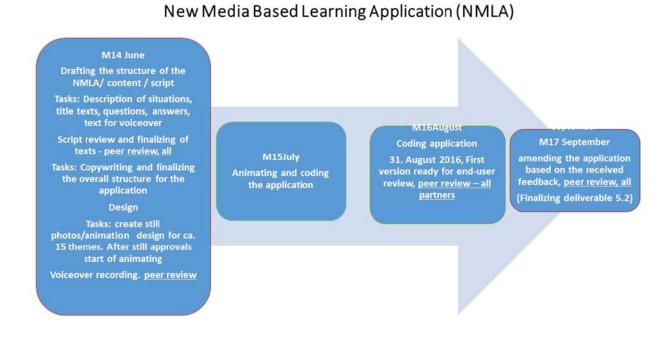


Figure 4 The timeline of the NMLA development

The current structure of the NMLA includes seven modules/chapters. The modules will introduce summaries of the eight case studies covered by the IECEU. The summaries include overview of the root causes of the respective conflict, description of the EU mission/operation, conflict parties and many cases overall findings an assessment of the situation. As the information available on

⁹¹ The test group provided inputs on overall layout of the site, comments on the used visual elements, colors and content of randomly selected animation. The testing phase and related findings will be elaborated in more detail the IECEU D5.5 Evaluation Report.

the platform can be only very limited, the users are provided with a link that would allow them to consult the entire case study stored at the IECEU web site. The three main elements of the IECEU eLearning platform are;

- 1. The eight (8) case studies
- 2. Comparative findings
- 3. General Competences in Conflict Prevention and Crisis Management

The main elements of NMLA include different new media functionalities, such as animations.

3.5 ANIMATIONS, VISUAL IMAGES (HTML5) AND VOICE-OVER

In the beginning, the new media supported possibilities were analysed in the IECEU NMLA development process. In total, in the course of the process, 13 animation themes (ANNEX 3) were developed. The visualisations were developed in a cooperation with ICT expert and graphic designer during M15-M18. The project timeline and available resources set certain frames for the work. Creation of more sophisticated serious-game-like elements would have required different setting. It was decided to use cartoon like visualisations from one hand to keep the developing and programming time manageable and on the other hand rather flexible to accommodate any possible changes. Although the serious topic of crisis management is linked to human suffering, the visualisations were preferred to keep light. The possibility of using authentic pictures and videos was also discussed. The developers concluded that using photographs is challenging for several reasons. The pictures should not show any operational activities. The persons in the pictures would ideally not be recognisable. The real pictures would also connect content to specific themes to certain cases and possibly set prior expectations. Finally, the animation visualisations can be recycled in the platform providing long-term building blocks for the platform. Created animations were according to the IECEU case-based findings (WP2-WP4):

- PR and setting expectations
- 2. Pooling and sharing
- 3. Fragmented approach
- 4. Mission mandate
- 5. Handover



- 6. Coordination and exchange of information
- 7. Monitoring patrol
- 8. Security sector reform and functioning defence
- 9. Gender
- 10. EU's political framework for crisis approach
- 11. Monitoring mentoring and advising
- 12. National staff
- 13. Deployment of mission/operation

To balance the content, the animations were created to reflect also some of the concrete topics and challenges the EU staff confronts during the CSDP missions and operations. The modular structure allows the user, if she/he wishes to do so, to concentrate on specific modules. This is in line with the idea that IECEU NMLA provides a complimentary training/learning tool. In a same way, the animations can be studied individually. For this reason, the animations have a short generic beginning. They can be used in the context of diverse presentations (the curriculum will further elaborated in D5.4 Training for the Trainers curricula).

The development of the animations was a process. Initially, the idea was to identify good practices and other type of clear and comprehensive narratives from the individual case studies that would visualise the IECEU themes. In the course of the process, this proved out to be difficult. There are several reasons for this. Firstly, the themes (capabilities) of the IECEU conceptual framework were not easily translated into visualisations. The timeframe and resources allocated to the visualisations established certain limits what was feasible and what not. Finally, perhaps most importantly, conflict prevention and crisis management topics are often sensitive. Presenting criticism - even when it can be substantiated - in a form of short animations which cannot describe the complex contexts in a balanced way can be seen offensive and create unwished frictions. This came out in a peer review during the initial animation development phase. Therefore, it was decided to create generic animations which bear a relevance to the most of the cases. The themes for the animations were selected and developed both based on the findings from the case studies (co-creation) and on various themes which have been identified important by the end-users and persons who have worked in the CSDP missions/operations. Topics provide pragmatic examples the personnel can face in various missions and operations. The short animations (roughly 30 seconds long) are followed by quiz. Pedagogically the contain elements of case based and problem based learning approach which is line with learning constructivist ideas.

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Opigno allows use of various HTP5 elements. In practice, this means that animations and videos containing interactive elements can be embedded into the platform. Only some of the available

functions have been utilized in the developed platform. However, with limited ICT expertise

allocation these functionalities can be activated later on when needed. The choice not to

programme the animations to have HTP5 features also keeps the quiz which follow the animations

easier manageable. Now, as the quiz are created using Opigno tools, the text content can be

easily revised and changed with a little familiarisation by a person with administrator rights. In case

the interactive elements would have been integrated into animations, any changes would require

ICT expertise and more resources.

3.6 NMLA EVALUATION

Evaluation of the IECEU NMLA can be seen as an integral part of the quality control and a way to

continuously up-date and improve the content and functionality of the eLearning platform.

Moreover, the evaluation of the development process can provide helpful lessons to support future

undertakings in this field. For the purpose of this deliverable, an overview of the evaluation will be

provided in the following. The evaluation will be elaborated further as a part of the task/deliverable

5.5 of the IECEU project.

Background

NMLA will be evaluated under the following approach to assess and guarantee quality of the

learning tool, sustainable use of resources and impact on the users. Evaluation report will be

prepared by M30 and encompass the overall findings from the comprehensive eLearning

evaluation. The main purpose of the NMLA evaluation is:

To improve its content after the testing period;

• To gather lessons learned for future activities within the project;

• To provide a basis for accountability, including the provision of information to the donor, the

public, and interested third parties.

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Methodology

Mission (IEM).

Since it is a long path from the establishment of the NMLA to the possible actual implementation of the acquired skills by the eLearning tool in the mission, effective evaluation needs to be multifaceted in order to identify which aspects of NMLA need adjustments. Hence, it is useful to carry out several types of evaluation, which involve a different subject matter or aims at a different "level of evaluation." Four such levels of evaluation can be distinguished (Kirkpatrick 1979): Reaction, learning, behaviour, and results. In order to guarantee a systematic and comprehensive assessment of the NMLA and its impact, IECEU partners (mostly CEP) will conduct different types of evaluation that correspond to the four levels: NMLA evaluation by the producers, NMLA evaluations by the users, In- and Out-Tests for the users and possibly a NMLA Impact Evaluation

Categories and Types of NMLA Evaluation

Since it is a long path from the establishment of the NMLA to the possible actual implementation of the acquired skills by the eLearning tool in the mission, effective evaluation needs to be multifaceted in order to identify which aspects of NMLA need adjustments. Hence, it is useful to carry out several types of evaluation, which involve a different subject matter or aims at a different "level of evaluation." Four such levels of evaluation can be distinguished. In order to guarantee a systematic and comprehensive assessment of the NMLA and its impact, IECEU partners (mostly CEP) will conduct different types of evaluation that correspond to the four levels: NMLA evaluation by the producers, NMLA evaluations by the users, In- and Out-Tests for the users and possibly a NMLA Impact Evaluation Mission (IEM).

⁹² Kirkpatrick, D. L., *Techniques for evaluating training programs* in Ely, D. P. & Plomp T. (Eds.), Classic Writings on Instructional Technology, Vol. 1, Englewood: Libraries Unlimited, 1979, 231-241.

Evaluation Type	Description	Level of Evaluation	Purpose
NMLA Evaluation	 Evaluation reports by the producer, partner organisation and a piloting group (piloting and some agreed group of users): Focus lies on how users perceived the eLearning tool Peer review by consortium members Task leader report Feedback by the users at the end of the eLearning tool 	Reaction	 "General estimate of the NMLA's success based upon the views of the users." Addresses users' experience. Reflects users' opinions ("customer satisfaction"). Measure of feelings, not of actual learning.
In- and Out-Test	■ Group of users have to participate in two tests, one before and one after taking part in the NMLA. The focus of the test is not on the individual performance of the respective user, but rather to check on the learning success.	Learning	 Identification of principles, facts, and techniques that were understood and absorbed by the participants (cognitive skills, knowledge).
6-Month- Post Questionna ire	■ The questionnaire will (in case it will be possible to gather a group of personnel taking part in NMLA as part of the pre-deployment training before deployment to the	Behaviour	 Estimation of NMLA-related transfer of learning/knowledge into behaviour. Feedback to those involved in (re-) designing NMLA content to meet future needs.



	mission or a group of personnel not receiving any training but only NMLA before deployment) serve to assess to what degree users are able to apply the knowledge and skills acquired in the NMLA for their work in the mission. Especially, the ability to integrate quickly into the mission environment, the ability to become agents of change within their organisation, and the ability to contribute to the implementation of the respective mission mandate.		
Impact Evaluation Mission (IEM)	 Through qualitative interviews, IEM analyse the impact NMLA had on: Capacity building, i.e. knowledge, skills, attitude, networks; The use of capacity by the individual in a mission; The impact of the individual using capacity built by NMLA on his/her performance and in fulfilling the mission mandate. 	Results	■ Estimation of impact of NMLA-related behavioural change on organization (very difficult to be implemented due to various reasons but most importantly because of to the lack of baseline data (two groups shuuld be compared in the mission environment, one not taking part in the NMLA and the other taking part in it; personnel supervisors should assess both groups related to their performance in the mission. Such evaluation would go beyond the aim of this project).



It is important to note that the different levels of evaluation according to Kirckpatrick cannot be achieved within the IECEU context! Whereas the first and second level can and will be covered in a comprehensive and thorough way, the following levels should rather be seen as possible at a later stage, once the training organisations and missions started using the NMLA and a sufficient number of users could be detected prior to their deployment and then tracked into the mission and questioned about potential benefits of NMLA related to their assignment in the mission (in cooperation with ESDC such a IEM could actually be organised or if the missions advised their members to use it as part of the induction training).⁹³

Additionally to the above mentioned evaluation of the usability of the tool, the evaluation report will also gather information about the number of logins to the learning environment and how many participants have actually completed it. The eLearning tool will also provide results of the quiz (number of wrong and right answers they scored) and at the end of the NMLA, some space will be made available for users to leave a qualitative feedback about the NMLA and possible suggestions for the improvement of the content. Ideally, an evaluation mission would be launched to assess a group of representatives deploying to a mission, who completed the learning environment and check after 6 months in what way the eLearning has helped them at their work. Since NMLA is not intended for one type of the audience only, it might be difficult for the task leader to track all those various audiences using the tool. Therefore a testing group of personnel will be assured, the NMLA will be evaluated by checking the learning progress of individual participants in anonymous in- and out-tests. A group of students will namely be asked to complete an IN test prior to taking part in the NMLA and an OUT test after the completing of the NMLA. Tests will be anonymous but each student will receive a number, which he would put at the beginning of the test, which allows the organisers to assess any improvement in the knowledge related to CSDP missions.

IECEU Quality Assurance Plan (D9.4) lists several **technology quality indicators** related to functionality, reliability, usability, efficiency, maintainability and portability for a proper technology related evaluation of the tool. This part of the evaluation will be assured in a comprehensive report by the implementing/producing organization (Laurea) as well as in a peer review by the partnering

⁹³ It is difficult to assess at this stage to which level the training organisations and missions will include the NMLA as part of the training.



organization (CEP). This parts of report will also describe the process of the planning, preparation, financial contribution and possible constraints at producing the NMLA.

Limitations of the described evaluation cycle

It is important to stress again that the different levels of evaluation according to Kirckpatrick as described above most probably cannot be fully achieved within the IECEU and NMLA context! Whereas the first and second level are covered (in- & out-tests, NMLA evaluation reports), the coverage of the following levels are test fields, since individual level and organisational level changes are often harder to measure than reaction and learning directly after completing the NMLA. A shortcoming of many eLearning evaluations is also the absence of baseline data. Baseline recording of qualification, occupation and experience are critical but since the NMLA is not indented for professional audience only but wider audiences, the impact of it and any resulting changes in the working environment will be limited to the two groups mentioned above, mission personnel who will take part in NMLA as part of the pre-deployment training and university students. Users may have also acquired the necessary knowledge, skills, and attitudes, but this does not guarantee that they will implement in their working environment, the evaluation report will address this issue as well, since that does not necessarily mean there is a shortcoming in the NMLA itself.

3.7 RELEVANCE TO CURRENT CSDP TRAINING

The relevance and entry points of IECEU NMLA will be discussed further in other WP5 deliverables, namely in 5.3 NMLA Handbook and 5.4 Training for the trainers curricula. Due to retiming of the WP5.1 (Comparative review of the analysed case studies) and delay with WP 3.1 (DR Congo) due to partner change not all the materials needed for refining the content were received by the end of the WP5.2. However, this was foreseen and the object of the 5.2 was to create the structure for the platform within the allocated timeframe. The content of the platform can be up-dated and revised until the very end of the project. One of the underlying reasons for utilizing Drupal/Opigno based open source code platform was that it allows the instance with administrator-rights to easily perform changes in the NMLA content. The animations, instead, are elements that are more difficult to be revised and changed due to the fact that work on them is resource heavy: it requires diverse expertise in form of programming, graphic design, copy writing and voice-overs.



Nevertheless, with new resources, the platform can always be amended by introducing new animations.

According to the ENTRi⁹⁴ course concept for pre-deployment training, "the training curriculum is based on the assumption that trainees have received a generic core course beforehand and seeks to contribute to the creation of a common identity and purpose for the mission specific country and specific civilian crisis management mission among the future mission personnel. Since the training should encourage a high degree of group work, discussions and role plays, the participation of experts with heterogeneous backgrounds is highly beneficial in order that trainees gain objective knowledge about the situation in the mission specific country as well as the mandate and strategic objectives of the mission itself despite the fact that they will be engaged in different working areas.95" It logically follows that also the various eLearning training course and applications should be assessed, structured and made available in a comprehensive catalogue. There are two reasons for that which instantly support this. Firstly, designing and implementing learning environments based on new media technology is expensive and time consuming task. Making the eLearning environments available in a coordinated manner would create synergies for training, prevent unplanned duplication. When made, at least partially accessible for larger audience, it could improve the general understandings of the objectives of the EU crisis prevention and management. (the lack of easily accessible knowledge can hamper missions work on operational level. One former CSDP mission member stated that in spite of the EU brokered peace accords and several year-long field office presence many members of the local population did not seem to know what the EU was or what they were doing in the region.)

Various documents (ENTRi ibid, interviews) high light the need for standard pre-mission training to ensure that all the staff are on the same page in the beginning of their deployment. Improved and coordinated sharing of existing eLearning tools can contribute to these efforts. Additionally, the EU

⁹⁵ ENTRi, Europe's New Training Initiative for Civilian Crisis Management Course Concept for the pre-deployment course, Slovenia 2012, 4, available at: http://www.entriforccm.eu/certification/developed courses/assets/pdf/Pre-Depoyment Course Concept.pdf



⁹⁴ Europe's New Training Initiative for Civilian Crisis Management (ENTRi) is a unique capacity-building programme that was initiated in early 2011. ENTRI provides civilian experts with the basic knowledge and soft skills required for deployment in an international crisis management mission, irrespective of the specific functions they fulfil in the field. At the end of the training, participants will have acquired knowledge about specific conflicts and their parties, as well as about the political background and the role of the mission. They will be familiar with the challenges of mission work and life and security issues. The courses will also raise awareness for inter-cultural issues, gender affairs, and personal conduct.

D5.2 Design and Development process of the NMLA

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emphasizes the concept of comprehensive security. The comprehensive security consists of various aspects: trade politics, foreign policy, election observation, crisis prevention, crisis management...) Using existing and developing new versatile eLearning instruments covering these topics can enhance mission members understanding of the subject (for instance, the UN has comprehensive eLearning tools on security in field. The Harvard University offers eLearning tool on humanitarian aid). NMLA can provide a comprehensive tool to create more holistic approach to crisis prevention and crisis managing through offering an easy tool to put on a different hat, to approach the crisis from a different angle. One way to observe development leading to crisis is to see them as an interconnected chain of events which also reflects the idea of comprehensive security. If EU (and entire international community) fails to prevent escalation in a fragile state through policy means (trade politics, sanctions, embargo, diplomatic negotiations), then it in many scenarios need to resort to humanitarian aid (coordinated by ECHO. Further worsening situation would require support in a form of civilian crisis management (MMA, SSR). The final stage would then require military crisis management efforts. These four simplified phases are considered to have clear financial implications: the related costs will increase considerably every time

Points for future development

EU/international community will have to resort to next phase.

As a part of the expert consultation, it was mentioned that the user replies could be collected to assess the knowledge of the users (the most common mistakes) on conflict prevention and management to improve the learning environment as well as to address the identified themes more effectively in the future. This 'big data' could then provide a way to develop and refine crisis training further to more achieve better learning results.

Trainer – trainees interaction. As stated, the main object of improved eLearning and use of NMLAs is not to replace conventional training. Blended training possibly consisting feedback and interaction with a trainer coud deepen the understanding of the platform users of the content. It would also provide a fast way to collect feedback to improve the content or functionalities of the platform further: instant hot-wash-up with a trainer/mentor to deepen users' understanding as well as to identify possible knowledge gaps to be covered better in various training activities.

4 CONCLUSIONS

The developed IECEU Learning Tool serves three purposes. First, it provides a powerful and versatile tool for gathering and disseminating the project findings. Secondly, it provides complimentary training and learning tool for a broad group of end-users either as an alone standing platform or as a part of larger crisis. Finally, the created open platform based structure offers basis for many other types of training content. More gamified elements can be included as Opigno contains functionalities (H5P) that allows creation of animations and other interactive elements.

The chapter three shed light on the development process of the platform. The described development phases are not rigid and new information and improvement in the visualisations can be carried out also later on. Furthermore, the fact that D5.1 comparative analysis and the case study on DR Congo D3.1 were delayed extended the time frame for completing the learning platform. Composing good quality content for the platform proved out to be challenging due to different requirements needed in an online text. Most of the users are not willing to read long texts from the computer screen and yet the text should provide a balanced view of the cases. Related to this, drafting good set of questions is also challenging. The questions should measure the points that the case studies seek to convey. At the same time, the length of the text does not allow much elaborated questions. On the other side, the questions should also not be too simplistic. The challenge still needs to be included.

In a same way, drafting animations which would add value to the platform within the frames create by the existing skills, resources and timeframe was challenging. Initially, the animations were planned to reflect the findings from the case studies turned out to be difficult. No feasible animation themes were identified in all of the case studies. Moreover, co-planning with the project partners – who are also experts on the subject matters and potential end-users – revealed that several themes were considered sensitive, regardless if they were based on the case study findings. It was concluded that, for instance, some of the related gender aspects are complex and creating potentially a critical short animation of 30 seconds of them would not do justice for the case. As a result, it was decided to create generic animations. This was further supported by the fact that number of identified issues – such as difficulties created by the short rotation times of the seconded staff to missions and operations – were valid for most of the cases. As discussed in the chapter two, the training potential new information technology is offering today is not being fully utilized.



D5.2 Design and Development process of the NMLA

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NMLA can provide a highly beneficial tool to be used in the future training courses and exercises for the experts participating in the CSDP missions and operations. NMLA can be utilized in blended/hybrid training where e-learning is combined with hands on training with trainers. This can lead to more effective training outcomes. Ideally, the platform will also be used by the large public in the EU countries and by the members of local communities in crisis and conflict areas to increase transparency and understanding on EU's crisis management activities and objectives.

Even though it is often difficult to pin-point causalities in sequence of unfolding events, trade politics, development aid, humanitarian aid, civilian crisis management and military crisis management are interconnected. Training that provides understanding of this merging the various online learning tools that could from its part serve to enhance the competences and analytical skills of the collaborators of the CSDP missions and operations. Ultimately, this could help to enhance effectiveness of the EU efforts in conflict prevention.

BIBLIOGRAPHY

Anderson, T. Elloumi, F., Theory and Practice of Online Learning, 2004.

Brynen, Rex, Teaching about Peace Operations, International Peacekeeping Vol. 21, Iss. 4, 2014.

Carlson, S., Using Technology to deliver educational services to children and youth in environments affected by crisis and/or conflict, Final Report, JBS International, 2013.

Cascading Style Sheets (CSS), available at: https://developer.mozilla.org/en-US/docs/Web/CSS/CSS3

Council Decision 2005/681/JHA of 20 September 2005 establishing the European Police College (CEPOL), Official Journal of the European Union, L 256.

Deterding, S., Dixon, D., Khaled, R. and Nacke, L., From Game Design Elements to Gamefulness: Defining "Gamification", Seminar paper for MindTrek'11, September 28-30 2011, Tampere, Finland.

EAPTC, News e-learning platform on ENP available online, 2016, Accessible via http://eaptc.eu/en/news/view-news-e-learning-platform-on-enp-available-online-0526.html

EEAS, Security e-learnings, available at: https://webgate.ec.europa.eu/eeas/security-e-learnings/

Eimeren, V., & Frees, Ergebnise der ARD/ZDF Online Studie 2012, Media Perspektiven, 7(8), 2012.

ENTRi About, available at: http://www.entriforccm.eu/about/about.html

ENTRi, Europe's New Training Initiative for Civilian Crisis Management Course Concept for the pre-deployment course, Slovenia 2012, 4, available at: http://www.entriforccm.eu/certification/developedcourses/assets/pdf/PreDepoyment Course Concept.pdf

Erkkola Jussi-Pekka, 2008, Sosiaalisen median käsitteestä, Taideteollisen korkeakoulun lopputyö, available at: http://users.jyu.fi/~juerkkol/sosmed_kasite_erkkola.pdf

ESDC, Autonomous knowledge units, available at: http://www.emilyo.eu/sites/default/files/2016%2001%2026%20Autonomous%20Knowledge%20Units_1.pdf

ESDC, The eLearning Management System of the European Security and Defence College, 2014.

EUPST About, available at: http://www.eupst.eu/about-us/



Folke Bernadotte Academy, Education and Training Networks, available at: https://fba.se/en/how-we-work/courses/education-and-training-networks/

Friedrich, Pirjo, Web-based co-design. Social media tools to enhance user-centered design and innovation process, University of Tampere, 2013, available at: http://lib.tkk.fi/Diss/2013/isbn9789513880040/isbn9789513880040.pdf

Gaebel, M. & al., E-learning in European higher education institutions. Results of a mapping survey conducted in October-December 2013, 2014, available at: www.eua.be/libraries/publication/e-learning_survey

Hakkarainen, K., Palonen, T., Paavola, S. & Lehtinen, E., Communities of networked expertise: Professional and educational perspectives. Advances in Learning and Instruction Series, Amsterdam, Elsevier, 2004.

Harman, T., Bertrand, B., Greer, A., Pettus, A., Jennings, J., Wall-Bassett, E., & Babatunde, O. T., Case-based learning facilitates critical thinking in undergraduate nutrition education: Students describe the Big Picture. Journal of the Academy of Nutrition and Dietetics, 115(3), 2015, 378–388, available at: http://doi.org/10.1016/j.jand.2014.09.003

Helsingin Sanomat, Puolustusvoimat ostaa uuden taistelu-simulaattorin varusmiehille – hinta liki 10 miljoonaa, 31 January, 2016, article is accessible at http://www.hs.fi/kotimaa/a1454127115262

Hypertext Preprocessor (PHP), available at: http://php.net/manual/en/intro-whatis.php

IAPTC, available at: http://www.iaptc.org/

Jochen, Rehrl and Taitto, Petteri, Pre-deployment eLearning for CSDP missions/operations, 2015, http://proceedings.elseconference.eu/index.php?r=site/index&year=2015&index=papers&vol=19#

Joint Action 2008/550/CFSP of 23 June 2008 establishing a European Security and Defence College (ESDC), Official Journal of the European Union, L176.

Kirkpatrick, D. L., Techniques for evaluating training programs in Ely, D. P. & Plomp T. (Eds.), Classic Writings on Instructional Technology, Vol. 1, Englewood: Libraries Unlimited, 1979.

Kolb, D., Experiential Learning: experience as the source of learning and development, Englewood Cliffs, NJ: Prentice Hall, 1984.

Leinonen, T., Designing Learning Tools. Methodological Insights, Aalto University, 2010.



Malone, T. W., Toward a theory of intrinsically motivating instruction. Cognitive science, 5(4), 1981.

Marsick, V., & Watkins, K., Informal and Incidental Learning, New Directions for Adult And Continuing Education, no. 89, Spring 2001, Jossey-Bass, A Publishing Unit of John Wiley & Sons, Inc, 2001.

Means, et al., Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, 2009, available at: www.ed.gov/about/offices/list/opepd/ppss/reports.html

Mezirow, J., A Critical Theory of Adult Learning and Education. Journal of Adult Education 32 (1), 3-24, 1981.

Moore, M. G., Background and overview of contemporary American distance education, 1990.

NATO e-Learning, Education & Training "Anytime, Anywhere" The site is accessible at https://jadl.act.nato.int/

Nkhoma, M., Lam, T., Richardson, J., Kam, K., & Lau, K. H., Developing case-based learning activities based on the revised Bloom's Taxonomy. Proceedings of Informing Science & IT Education Conference (InSITE) 2016.

North Atlantic Treaty Organisation, Education and Training Programme Management – Direction and Guidance No 1, March 2012.

Panel of Experts (Ministry of Foreign Affairs, EEAS Official and a former OPCEN Official) 27th August 2015.

Poikela, Esa & Poikela, Sari, Kriittisyys ja ongelmaperustainen oppiminen. Teoksessa Järvinen-Taubert, Johanna & Valtonen, Päivi (ed.). Kriittisyyteen kasvu korkeakouluopetuksessa. Tampere: TAJU, 1999.

Quality Assessment for E-learning: A Benchmarking Approach, EADTU, Third Edition, 2016, available at http://e-xcellencelabel.eadtu.eu/images/documents/Excellence manual full.pdf

Rehrl, Jochen and Petteri Taitto, Pre-deployment eLearning for CSDP missions/operations, 2015, Accessible via: http://proceedings.elseconference.eu/index.php?r=site/index&year=2015&index=papers&vol=19#

Rehrl, Jochen, and Galia Glume, "Cooperation and Coordination." In Handbook on CSDP Missions and Operations, edited by Jochen Rehrl and Galia Glume, 2015.

Sevillano-García, M. L., & Vázquez-Cano, The Impact of Digital Mobile Devices in Higher Education, Educational Technology & Society, 18 (1), E. 2015.

Siemens, G., Connectivism: A learning theory for Digital Age, 2004, available at: http://devrijeruimte.org/content/artikelen/Connectivism.pdf

Teaching about Peace Operations, Rex Brynen, International Peacekeeping Vol. 21, Iss. 4, 2014

Zhang, D., Zhao, J. L., Zhou, L., & Nunamaker, Jr., J. F., Can e-learning replace classroom learning? Communications of the ACM, 45 (5), 2004.

ANNEXES

ANNEX 1 QUESTIONNAIRE FOR THE CASE STUDY RESEARCHERS

E-learning tools/NMLA questionnaire

As a part of the IECEU-project we seeks to review the current practices with regard to use of eLearning/new media based learning applications (NMLA) in EU CSDP mission training. We appreciate if you could contribute to our work by completing the following questionnaire (it will take ca. 15 minutes). Thank you for your considerations.

Questions	Sub-questions				
1. Has the mission/operation	If yes,				
induction training utilized eLearning	a) What kind of applications? b) When and where they have				
tools/New Media based Learning	been used?				
Applications ⁹⁶ (NMLA)?	c) By whom they were used (training conducted by national				
	authorities, training provided by the mission, other type of				
- Potential counterparts to pose the	training)?				
questions: HQ or field office training	d) Are the applications accessible to the public?				
focal points, field office staff,	d) Which kind of technical specifications the learning tools/				
operation officers)	eLearning environments are using?				
- Examples of eLearning applications	f) Have any type of impact assessment carried out on				
which have been used in the	effectiveness of the training utilizing educative learning tools?				
missions: eHEST, landmine	g) What type of assessment?				
awareness training, online training on	h) What type of benefits were gained by using the application?				
ethics	i) What kind of challenges (technical or other) were faced while				
	using the online educative tools / eLearning environments				
2. If eLearning tools/NMLA have NOT	a) Yes, please describe what kind of application could be				

⁹⁶ New media technology is any type of application meant to transfer information via digital techniques, computerized systems or data networks.



been utilized during the pre-	helpful.				
deployment training, do you think that	b) No, please give reasons.				
it would be helpful to utilize them?	c) No opinion				
3. Has in-mission training utilized	a) What kind of applications?				
eLearning tools/NMLA?	b) When and where they have been used?				
	c) Are the applications accessible to the public?				
	d) Which kind of technical specifications the learning tools/				
	eLearning environments are using?				
	e) Have any type of impact assessment carried out on				
	effectiveness of the training?				
	f) What sort of assessment?				
	h) What type of benefits were gained by using the application?				
	i) What kind of challenges (technical or other) were faced while				
	using the training application?				
4. If no eLearning tools/NMLA have	a) Yes, please describe what kind of application could be				
been utilized in-mission training, do	helpful.				
you think that it would be helpful to	b) No, any reasons given?				
utilize them?	c) No opinion				

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ANNEX 2: QUESTIONNAIRE FOR PILOTING

IECEU Learning Application Testing: Questionnaire				
Please fill in the questionnaire in requested order. The data will be gathe	red in order	to further		
improve the IECEU Learning App. The data can be used also for other related research purposes.				
Background information Your answers				
Gender Male Female				
Age?				
Are you familiar with EU Common Security and Defense Policy? YES	NO			
Are you with EU conflict prevention and civilian crisis management?	YES	NO		
SECTION 1				

(1= Poor, 2= Satisfactory, 3=Good, 4=Very good)
How would you rate your first impression of the IECEU Learning App?
How would you rate the visual layout?
How would you rate the navigation (side bar, scrolling)?
How would you rate your user experience?
Other Comments
SECTION 2
(1= Poor, 2= Satisfactory, 3=Good, 4=Very good)
Which case did you complete?
Did you find the introduction beneficial? YES NO



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Why?								
Were the learning	ng objectives defined cle	ear?	YES	NO				
Which were the	three most useful eleme	ents and wh	y?					
General comme	ents and feedback							
SECTION 3								
	13 animations/interative Conflict prevention?	e elements	did you	complete	under	section	7.	General
What worked?								
What did not wo	ork and how to improve	it?						
THANK YOU FO	OR YOUR COMMENTS	3!						

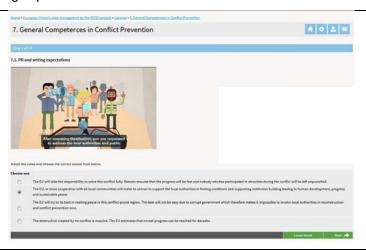
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ANNEX 3: ANIMATION THEMES IN NMLA

Animation theme 1. PR and setting expectations

Learning target: Presenting realistic but yet optimistic expectations for the mission objectives conveys the message the best without creating wrong expectations.



Animation theme 2. Pooling and sharing

Learning target: The user will understand the content of pooling and sharing (P&S) Importance of P&S has been highlighted in the course of the IECEU. The user while be emphasized with a fact that concrete way to cut expenses while at the same time improving competences and subsequently results of the mission. The user is sensitized to consider concrete ways to enhance skills and competences of the mission staff by pooling and utilizing the large expert potentials within the mission/operations staff.



Animation theme 3. Fragmented approach

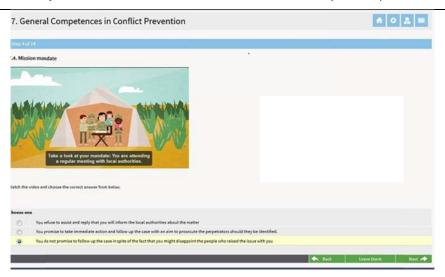
Learning target: The user is sensitized to the complexity of mission environment and to the outcome of uncoordinated relief and crisis management efforts.





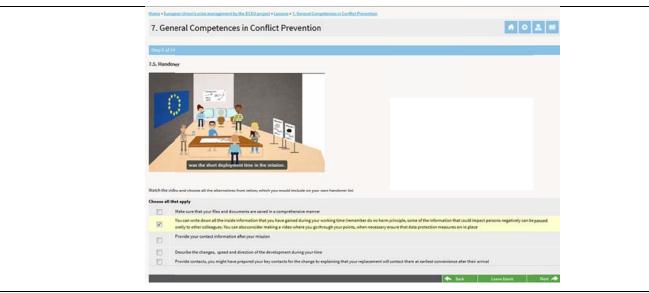
Animation theme 4. Mission mandate

Learning target: The user understands that the activities of a CSDP mission are connected to its mandate. The CSDP missions usually have non-executive mandates which rarely allow proactive action.



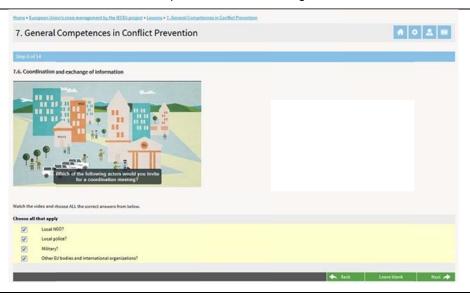
Animation theme 5. Handover

Learning target: The user understands the lack of institutional memory and how to counter it with HOTO. The problems of lacking institutional memory have been identified as a challenge in many CSDP missions. Considerable changes in HR, selection processes of the member states are, however, needed to fully address this issue. Nevertheless, robust HOTO procedures can diminish these challenges both on strategic and operational level.



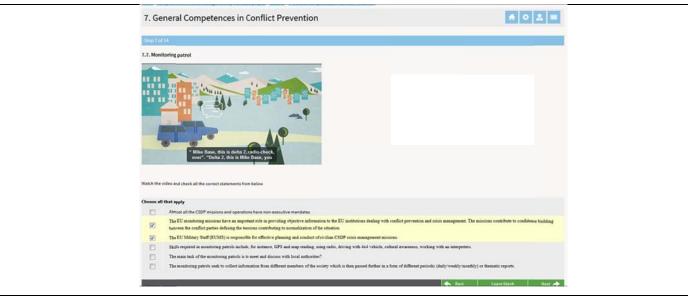
Animation theme 6. Coordination and exchange of information

Learning target: The user is sensitized to the importance of functioning communication in mission implementation.



Animation theme 7. Monitoring patrol

Learning target: The user is introduced to a standard day within CSDP monitoring mission. The IECEU project does not cover a CSDP monitoring mission. However, an unarmed non-executive civilian crisis mission is a part of CSDP activities.



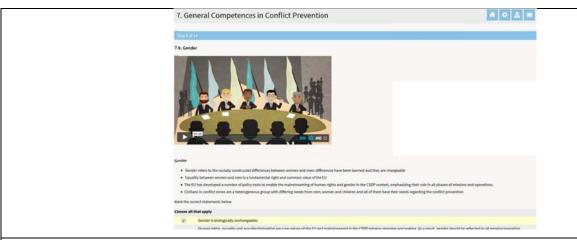
Animation theme 8. Security sector reform and functioning defence

Learning target: The user is sensitized to the importance of safe and secure environment as a condition for peaceful sustainable post-conflict development.



Animation theme 9. Gender

Learning target: The user understands the reasons and importance of including gender into missions' planning and implementation phase.



Animation theme 10. EU's political framework for crisis approach

Learning target: The user obtains overall understanding of the elements related to EU's instruments to prevent or resolve conflicts in a framework of comprehensive approach.



Animation theme 11. Monitoring mentoring and advising

Learning target: The user is introduced to the concept of MMA and to the challenges and criticism EU's activities have faced in some case.





Animation theme 12. National staff

Learning target: The user is sensitized to a range of themes related to working with national staff. The user will understand that the staff can contribute to the work of mission in many ways. Well-functioning working relations between international and national staff call for mutual respect and require investment in cooperation and in transparent dialogue. The role of national staff can be seen to go beyond the mission tasks in the form on competency building and fostering local ownership.



Animation theme 13. Deployment of mission/operation

Learning target: The user will obtain an overall understanding of processes related to deployment of CSDP missions and operations. The user will be introduced to the planning and implementation phases of crisis management missions and operations. After the unit, the user is able to define the measures which are taken prior and in the course of the crisis management activities.

