

eSEC - Competency Based e-portal of Security and Safety Engineering

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ABSTRACT

The main focus of the preparing electronic portal “eSEC - Competency Based e-portal of Security and Safety Engineering” – eSEC-portal, is to establish web system, which would be new tool in process of learning for students and professionals in fields focusing on security studies, safety studies and crisis management. eSEC-portal aims on preparing connections among students, teachers, professionals and experts. This interface will bring qualitative improvement for learning process of students and we suppose more activities from them in professional and scientific work. Students will have possibility to compare actual questions and problems on other institutions, in scientific and professional environment. Teachers will be able to get feedback from professionals, colleagues and students. Through the e-portal will increase the employability of the e-portal users by directly linking competencies required by employers with competencies which are available for students on the e-portal and which are not a part of the educational system.

Keywords

E-portal, Security and Safety Education, Security and Safety Engineering.

INTRODUCTION

In 21st century the traditional way of teaching students just from books and only printed materials is not enough. While in the past the content of printed material was current for several years, nowadays we can count only in months. The expansion of internet and the development of transfer capacities afford new forms of information resources for studies and preparing of students.

In the past the most common resources of information were printed materials. Every year in member states of the EU are printed several dozens of journals, magazines, books of abstracts from conferences and seminars in fields of security and crisis management. The biggest disadvantage in connection with education process is the time difference between two following issues. The better possibility is the interval of three months (scientific and professional journals), but the worse possibility is twenty-four months (several international conferences). Second biggest disadvantage is limited number of possible readers and limited feedback from them, which is very important for self reflex of the author. This weakness we can see in graduation works of bachelor and master students. Very often they prepare very valuable work, which is hidden from wider number of interested individuals in this area and they are maybe interested.

Mentioned disadvantages were partly eliminated by new forms of education, for example in traditional view the e-learning. E-learning nowadays is made of several separated platforms and on many separated educational institutions. After several years of experiences we are able to say, that this system has disadvantages. Main disadvantage is the number of users sharing information. It is limited by the institution, mostly only students of the

Reviewing Statement: This paper represents work in progress, an issue for discussion, a case study, best practice or other matters of interest and has been reviewed for clarity, relevance and significance.

institution, worst students of the particular field or year, or even subject. Usually the system is closed for students and teachers from other institutions or professionals. Other disadvantage of classic form of e-learning is decentralization, duplicity, incompatibility and unavailability. Based on our own practical experiences on our faculty we decided to establish our own e-portal, which would minimize mentioned disadvantages. This new e-portal will be joining all advantages it can and will be based on new platform of web learning system, which is offering many new possibilities.

ELECTRONIC PORTAL

The idea of the e-portal originated from the social requirement to increase the quality of education in the field of security and an empty space in this area. The fault of the current educational systems is common detachment of the taught theory from the real practical requirements. That is the reason why it is necessary to focus more on the way in which the participants of LLP can be prepared for the challenges which emerges from the labour market, which competencies are required and how it would be possible to link the educational systems of various institutions most efficiently. Therefore, the aim of the idea is to develop and increase the competencies of students, pedagogues and research personnel working in the field of security, but even the expert public within the EU.

To achieve the objectives, an e-portal (eSEC-portal) will be developed. This will become a basic tool, which will enable its users efficiently acquire wanted competences. Practical contribution of the eSEC-portal will be creation of an individual study plan supported by the possibility to achieve part of the chosen competences within the exchange programmes of European universities and consequently use the obtained competences in practice. The eSEC-portal will also assess the availability of current grants and studentships consistent with the chosen study plan and all the necessary information will be provided to the user's profile. Unique asset of the eSEC-portal is creation of an electronic glossary of terms, which enables the users to search and add new technical terms interactively.

Users of the eSEC-portal will be mainly students, pedagogues, academics, and people with an interest in the field of security engineering. Thereby, we create a link between the world of students, pedagogues and expert public from practice within the frame of the EU.

The eSEC-portal will consist of ten main parts, modules: (first idea of e-portal structure, see Figure 1.)

- Competency based creation of the curriculum: In this module, a user chooses required competences which he / she wishes to acquire for his / her future professional work in the field of security. The module will help him / her to create a study plan, which will include various study programmes, seminars and events at European universities. This module will also provide information about available scholarship programmes or grants useful for realisation of the created study plan. It will also propose which materials available on the portal are useful to obtain required knowledge.
- Study Programmes: Space designed to publish study programmes focused on the problem of security engineering.
- Security Journal: Space designed to publish articles, studies, presentations and posters.
- Student's Projects: Space designed to publish final students' works, which will have gained a prominent position in students competitions focused on research and development activities.
- Glossary of Terms: Elaboration of electronic dictionary of terms, which enables an interactive search of scientific terms, related to the problems of security.
- Newsletter: Space designed to advertise the memos about the next events and news.
- Blogs: Reserved space where any user can share own opinions, experiences and knowledge with the other users.
- Resources: Module will be focused on innovative methods in education supporting creativity and active approach of users to education and trainings in the field of security engineering. It will enable the use of audiovisual presentations from the lectures, excursions, practical workshops or measurements and other sources.
- Labor Market: The module provides job offers in the field of security engineering within Europe along with the possibility to publish professional CVs of the job applicants in the field of security engineering.

- Mobilities: Information about scholarship possibilities of the universities in the European network.

eSEC-portal will offer its users a possibility to create an study plan, overview of courses, seminars with the focus on the required competences within European educational institutions. Furthermore, it will provide information about possible scholarships, which will support the mobility not only of students but also of pedagogical personnel, experts, and people interested in this field. Mobility within the scope of practice will support the module of job offers and internships in the field of security.

For educational institutions is not possible to react on fast development and to altered requirements and competencies of school graduates, teachers and professionals. Therefore, it is necessary to link the practice with these institutions most efficiently. Accordingly, the eSEC-portal ensures a fast reaction to altered competences requested by practice. eSEC-portal will support the transparency and modernization of education process through the access to all published information on created e-portal.

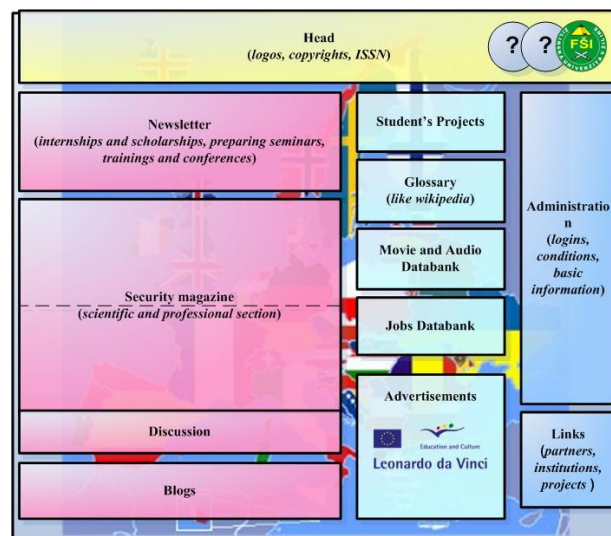


Figure 1. First idea of E-portal Structure

Development of the eSEC-portal will intensify the amount of cooperation among the educational institutions in the EU and not only by practical exchange of students, pedagogues or academic personnel within the motilities, but also by day by day exchange of current sources on the e-portal, or discussions about important questions in the field of security.

The e-portal will use the latest expertise for creation and organization of contents in the field of ICT. Users will be able to use their time flexibility and depth of education process, which this type of study offers. Study materials used on the e-portal will be produced and organized in accordance with the best practices within the ICT.

eSEC-portal will be based on the possibility to create an intelligent study plan, which will be created by an application for each user after evaluation of his/her profile and required competences. eSEC-portal will support the connection among the worlds of students, educators and professionals within the European higher education institutions.

On the ground of required competence, which a user wishes to achieve, he/she will reach the materials on the eSEC-portal by an innovative approach that will improve the quality and increase the mobility and practical internships of people involved in the programs of the lifelong education on the eSEC-portal. Added value of the eSEC-portal as a web application will be based on the possibility to crate an intelligent study plan, which will be created by an application for each user after evaluation of his/her profile and required competencies.

CONCLUSION

The own contribution of proposed e-portal consists in progress of information knowledge in field of security engineering and in creation of new resources of information for students, teachers and professionals. Practical

aspect of this e-portal will be in centralization of resources on one place, where it will be possible to have professional discussion, evaluate published articles, promote seminars, conferences, competitions, insert own blogs, publish student works and step by step make new information sources. Users will be able to search actual information about scholarships, internships and possible work places in fields of security and crisis management. Separate contribution of the e-portal will be professional specialized glossary in security, safety and crisis management, with interactive search and it will be based on wiki-tool with possibilities of adding new terms and discussing them.

The eSEC-portal will provide the link between practice, expert community and educational institutions not only within a particular region but it will also link individual countries within the EU. Accordingly, the eSEC-portal will become a centralized source of information in the field of security and will ensure a fast reaction to change of competencies of practical work not only for our graduates. Development of the eSEC-portal will contribute to increase participation on lifelong education of people of all age categories by allowing access to information to all registered users regardless the age or social-economical background in accordance with the rules for web application creation with the support of people with specific needs.

Multilateral project eSEC - Competency Based e-portal of Security and Safety Engineering is submitted within the framework of the programme of Erasmus (Modernisation of Higher Education) and focuses on supranational cooperation among educational institutions and expert practise in the field of security in the EU. The objective of this project and e-portal is development and enhancement of the competencies of our students, pedagogues, researchers, expert public and other participants working in the field of security in the EU. The support of target groups at obtaining their competencies will be achieved directly by providing them with educational sources as well as indirectly by providing information about where and how these competencies can be acquired further. We believe that the eSEC-portal will become established and well known internet portal in security and safety education.

ACKNOWLEDGMENTS

This paper is part of project Competency Based e-portal of Security and Safety Engineering – eSEC – number: 502092-LLP-1-2009-1-SK-ERASMUS-EMHE, funded by the European Commission with support from the Education, Audiovisual and Culture Executive Agency (EACEA) and reflects only the views of the authors.

REFERENCES

1. Antusak, E. - Kopecky, Z., 2005, *Krizový management – mezinárodní aspekty / Crisis Management – International Aspects*, Oeconomica, Praha, ISBN 80-245-0952-0.
2. Holla, K., 2007, Dealing with key terms in risk analysis and phenomenon of uncertainty in this process, In: *Communications : Scientific Letters of the University of Žilina*. Vol. 9, No. 4, pp. 59-61, ISSN 1335-4205.
3. Lovecek, T. – Ristvej, J., 2008, Legal Aspects of Information Systems Security in the Slovak Republic and the European Union,, In: *conference Internet a bezpečnost organizací, Univerzita Tomáše Bati ve Zlíně*, 2008, ISBN 80-7318-393-5.
4. Simak, L. and Ristvej, J., 2009, "The Present Status of Creating the Security System of the Slovak Republic after Entering the European Union", *Journal of Homeland Security and Emergency Management*: Vol. 6, Iss. 1, Article 20, DOI: 10.2202/1547-7355.1443, Available at: <http://www.bepress.com/jhsem/vol6/iss1/20> , ISSN: 1547-7355.
5. Spircova, I. – Sulgan, M., 2004, *Nové informačné technológie / New infotechnologies*, In: *conference "Globalizácia a jej sociálno- ekonomické dôsledky '04"*, EDIS - vydavateľstvo ZU Žilina, 2004, ISBN-80-8070-311-6.
6. Velas, A., 2009, *Poistovníctvo pre bezpečnostných manažerov / Insurance for security managers*, Žilina: EDIS - vydavateľstvo ZU Žilina, 2009. ISBN 978-80-554-0149-2.