### **BUCHAREST UNIVERSITY OF ECONOMIC STUDIES**



Doctoral School of Economic Informatics

## **DOCTORAL THESIS**

Presented and publicly supported by the author:

LUPESCU M. MARIAN-ERNUŢ

Title of doctoral thesis:

SOCIAL MEDIA IN LIFELONG LEARNING

Scientific supervisor: Prof. dr. MARIAN STOICA

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# Council for Doctoral Studies Doctoral School of Economic Informatics

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Lupescu Marian-Ernuț

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**Bucharest**, 2024

### **CONTENTS**

1.	Introduction	.4
2.	Using Social Media in Adult Training	9
2.1.	Education and learning in the online context1	0
2.2.	Generation Z or about the young people we educate1	9
2.3.	Pedagogical principles for successful teaching and learning2	23
2.4.	Didactic model for online learning – adaptation and explanation2	25
2.5.	The concept of social media in the literature4	16
2.6.	Applications used in social media5	;2
2.7.	Social media and new forms of adult training5	5
2.8.	Institutional dimension6	57
3.	Examples of quality assurance frameworks for online education	0
4.	Social media platform models for education9	)4
4.1.	Analysis of a social media platform for adult education9	)4
4.2.	Advantages of using a CMS to develop and implement a social media platform $10$	)5
4.3.	Disadvantages of using a CMS to develop and implement a social media platform $\dots 10$	)7
5.	SEMANTIC Web	6
5.1.	Ontologies	9
5.2.	Resource Description Framework (RDF)	23
5.3.	Theoretical LoD structure for a qualifications platform	1
5.4.	Properties by class	5
5.5. networks	Comparative analysis of basic functionalities offered by social media platforms or social 144	al
5.	Research methodology	16
6.	Social media platform model for education	;3
7.	Conclusions	6
8.	Bibliography	<sup>7</sup> 1
9.	List of abbreviations	32
10.	List of tables	;4
11	List of figures	25

Considering the importance of education in a person's life path and how technology is increasingly part of society's daily life, this doctoral thesis aims to investigate the possibility of integrating these two elements. Integrating technology and education in a manner that allows better and direct interaction between participants in the educational process. The level of use of technology in education has increased as society has become accustomed to the concept of information society, but this level has not reached a point where the potential that combining technology and education at a fundamental level can be achieved.

The main objective of this thesis is to provide a viable model to implement a social media platform in the field of education so that people interested in lifelong training have an efficient way to be integrated into the lifelong training system. This theoretical model will provide the possibility of retaining data to be used for continuing studies according to the learning outcomes they have accumulated, by creating ontologies and interconnectivity elements at central level, so that people interested in continuing their studies can complete their knowledge base to obtain new qualifications. The last aspect of the model is the possibility of placing people on the labor market in accordance with the learning outcomes they have on the platform.

The motivation for the elaboration of this paper lies in the way technology has advanced in the last decade, and in how new generations and society itself have reached a high level of dependence on the use of technology. Thus, I considered it necessary to develop an efficient manner of using this technology in a field with a strong economic and social impact, measurable impact on medium and long term, namely in the field of education.

In this thesis there have been listed different methods of implementing technology in the field of education, with established examples and with elements from recent research to understand the concepts and elements that have been debated since the emergence of the phenomena discussed until now. Also, elements related to social media and social media platforms are presented, for a better understanding of their impact on society, the degree of use and the cases in which they have been used in education. Finally, elements will be presented regarding similar platforms or incipient variants underlying the model presented in the paper. The last aspect presented in the thesis is that of the platform model with the necessary elements for it to work and to be implemented.

The paper presents a structure of seven chapters in which are listed elements such as the motivation for choosing the theme, basic concepts about the elements discussed in this paper,

research designation, elements related to the advantages and disadvantages of online teaching platforms and other such information. The rationale, objectives and introductory aspects are presented in the introductory chapter 'Introduction'.

In the chapter "Using social media in adult training" elements underlying the concept of social media and its use in the educational field have been presented. The information is structured so that the current state of knowledge is present in each aspect debated, to be clear, the theoretical framework in which the present thesis is developed. In this chapter I have presented the concept of social media and how it is perceived in specialized literature, where the basics were mentioned, a concept debated since its appearance. Also, clarifications were made on what education is in an online context, how this activity takes place, what was the basis of the online teaching process and what are the novelty elements.

The chapter 'Examples of quality assurance frameworks for online education' presents ways of assessing or designing online teaching systems in terms of their structure. Considering that the formal education system is regulated in accordance with certain national and international standards to allow the recognition of accumulated knowledge, at national and international level, in the same manner it is necessary to implement them in the online environment. These aspects are necessary to enable quality assurance regarding the online educational process, to recognize the knowledge, skills and aptitudes developed online. Several quality assurance frameworks are presented that are considered in the literature that are effective and recognized.

"Social media platform models for education" presents the elements previously developed for the design of the social media platform model for education. These elements presented in previous models were analyzed following qualitative research to identify data that needs to be collected from other platforms to be used in a social media platform for education. Two theoretical models were developed for this aspect, but later they were modified and adapted into the model of social platform for education. This chapter also discusses the advantages of using certain technologies to develop an educational social media platform. Being an interactive system, it was considered the possibility of using a Content Management System platform for its development, but after analyzing the advantages and disadvantages of such a system, for the model of social platform for education, the manner of designing a new platform, built around the data collection model, was chosen.

The chapter "Semantic Web" lists the elements of what constitutes an ontology and vocabulary of terms from a theoretical and practical point of view. The definition and establishment of a vocabulary of terms is necessary for the possibility of structuring information to implement the model proposed by this thesis. It is therefore necessary to understand the technologies currently available and how they could be implemented in view of the possible practical implementation of the model. The chapter lists different ways of structuring information to choose an optimal variant and defines some elements to serve as a starting point if these technologies are chosen for the future implementation of the proposed model.

"Research Methodology" presents the manner of research for the present thesis. The information gathered through qualitative research carried out within technological and educational research projects in which I took part during the development of this paper is presented. This information was used to create a necessary basis for the development of the model. At the same time, participation in these projects has created the possibility of modeling the preceding data structures so that the presented model can be implemented in the future.

The chapter "Social media platform model for education" presents the theoretical model of a social platform for education, platform that combines all the elements researched and the elements that have been published so far as support for this thesis. For the development of this model were used aspects that were investigated separately in the research projects in which it was participated during the elaboration period of this thesis. Thus, the elements researched regarding the functionalities of a CMS platform were used to build a platform for socialization in the field of adult education and, based on the positive and negative aspects observed in the analysis of that platform, the elements that were considered as positive were chosen. Also, in terms of data structuring, following the analyses carried out within the research project for the development of ESCO and EUROPASS, the necessary data structures at European level and the type of data needed were chosen.

The last chapter "Conclusions" presents the conclusions that have been developed during the research and development of the presented platform model, with the elements that impact the model, the aspects related to the possible difficulties that may be encountered during the implementation of the model and elements related to the limitations of this paper and the model with the definition of a future research direction.

#### **Research limits – future research directions**

The present research was conducted based on the concept of online education with the technologies available now, also considering the possibility of involving other technologies in the future. The socio-political provision for implementing the systems necessary to enable the implementation of this model is not considered. This mention is necessary because the technological and administrative process underlying the design of this model was a long one, which presented the need to involve in research projects for the development at system level of certain preliminary elements to be possible for future implementation.

Also, for the present research, the educational directions of European policies were considered, being affected by the changes at national or international level of these policies and the eventual modification of the approach to the information necessary for the recognition of studies.

As future research directions, which could be approached in a post-doctoral thesis, it would be worth mentioning the development of an integrated system of data entry and categorization in the formal educational field, to eliminate the need for physical degrees and allow the issuance of digital graduation certificates. And another aspect that would be necessary is represented by the system of digital credentials, both personal and institutional, to allow the allocation and collection of data in an efficient and secure manner. This system of credentials must be designed considering general European elements but also elements of national educational autonomy, so designing such a model or system in the future could help implement the model in this paper.

Keywords: Social media; E-learning; Learning model; Educational model; Computer aided teaching; continuing vocational training; lifelong education; educational platform.