



Barriers to open e-learning in public administrations A comparative case study of the European countries Luxembourg, Germany, Montenegro and Ireland



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ARTICLE INFO

Article history:

Received 26 September 2015

Received in revised form 9 June 2016

Accepted 27 June 2016

Available online 16 July 2016

Keywords:

Comparative study

Public administrations

OER

e-Learning

ABSTRACT

This article presents a comparative study of the barriers to open e-learning in public administrations in Luxembourg, Germany, Montenegro and Ireland. It discusses the current state of open e-learning of public administration employees at the local government level and derives the barriers to such learning. This paper's main contribution is its presentation of an empirical set of barriers in the four European countries. The results allow informed assumptions about which barriers will arise in the forthcoming use of open-source e-learning technology, particularly open educational resources as means of learning. Furthermore, this study offers a contextualised barrier framework that allows the systematic capture and comparison of challenges for future studies in the field. Other practical contributions include providing advice about open e-learning programmes, systematising lessons learned and addressing managerial implications.

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1. Introduction

This paper aims to explore barriers to open e-learning in public administrations at the local government level. Lifelong learning is essential to upgrade performance and innovate work processes in various sectors. To increase organisational learning, training programmes in the public sector are also subject to reform. However, e-learning and the use of open educational resources (OERs) are not widely implemented in public administrations. To advance the understanding of this issue, this article explores which barriers prevent public employees' involvement in open e-learning in selected European countries and provides guidance for the implementation. This study advances the current state of practice and research by conducting a cross-national analysis of administrative barriers to open e-learning (cf. Bimrose et al. 2014:60; Chen 2014:464).¹ Compared to e-learning in international

educational settings, the results shed light on a unique yet diversified context. Beyond the studies on e-learning in public health and the military sector (Bonk & Wisner 2000), this study focuses on core administration contexts, which are often severely constrained in terms of time, budget and technical resources.

One notable study on barriers to e-learning of public employees even concludes that the benefits of e-learning might be 'illusory'; flexible learning time, convenience of learning at the workplace and collaborative interactions can hardly be achieved (Eidson 2009: 130 ff.). Chen (2014:460) clarifies that these 'innovative characteristics' of e-learning are important and shape the perceived effectiveness of programs. Is the situation as difficult as studies suggest? So far, most of the research on e-learning in the public sector focuses on single countries (e.g. Langford & Seaborne 2003; Yang & Ruan 2007). Authors therefore doubt the generalisability of the results (Chen 2014:463 ff.; Eidson 2009:154 ff.,157).

This empirical study aims at contributing to close this research gap. The main research question is as follows: *What are the similarities and differences in barriers to open e-learning across public administrations?* This paper presents the results of several focus group sessions and

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¹ Given the initial, extensive literature review, only selected articles that offer comprehensive and balanced insights on the respective points are referenced in this paper.

interviews with public employees that were conducted in public administrations in four European countries. The results extend the contextualised barrier framework [CBF] for open e-learning in public administrations (Stoffregen et al. 2015), which can guide future research in the domain. As the involved public administrations participate in the EU project called EnhAnced Government LEarning² (EAGLE), practical implications of the results are also discussed. Overall, this article thus advances both theoretical and practical considerations about the development and use of open e-learning systems in public administrations.

The article is structured as follows. Section 2 introduces the background of the e-learning domain in the public sector. Outlining the current state of approaches to the phenomenon helps define the particular topics to address. Section 3 discusses the research methodology and design. This section includes the empirical context and selection criteria for the countries in this comparative study. Section 4 presents the results of this qualitative study. Both specific and common barriers across administrations and countries are explained. In Section 5, the findings are discussed in view of their practical and theoretical contributions to the field. The conclusion in Section 6 summarises the most important points.

2. Background of the empirical study: Barriers to open e-learning in public administrations

2.1. Literature review: Current state of e-learning in the public sector

e-Learning in the public sector often refers to blended information and communication technology (ICT)-supported training, meaning that online sessions are combined with traditional face-to-face seminars (cf. Bere et al. 2013:488; Chen 2014:456; Conci & Bramati 2007:82; Hârțescu 2012:497). Open e-learning comprises related activities that include the use of open-source technologies and OERs (cf. Stoffregen et al. 2015). Most courses are launched with the aim of enabling lifelong learning (e.g. Langford & Seaborne 2003:57 ff.), as well as saving costs and increasing competitiveness (Bere et al. 2013:487; Conci & Bramati 2007:82). e-Learning has been available since 2000 (cf. Langford & Seaborne 2003). However, studies on e-learning have not systematised the lessons learned so far, for example, discussing implications of the challenges in interventions or the design of programs. The reports are of short length and focus on selected aspects (e.g. Hârțescu 2012; Yang & Ruan 2007). Some of the challenges and salient topics are presented in this subsection.

From the range of goals for introducing e-learning, it appears that the state and *meaning of e-learning* have 'interpretative flexibility'.³ Similar to the private sector, both democratic (access to learning) and economic rationales (cost savings and performance) are promoted (cf. Remtulla 2007:10). A challenge is that managers do not seem to assess the implications of these goals. As a result, the required investments for introducing e-learning programs are uncoordinated and their implementation lags behind if expectations are not met (Langford & Seaborne 2003:66). Phang et al. (2008) highlight the relevance of this challenge for employees. If they have optimistic expectations about reforms, they may take a positive role in the implementation (Phang et al. 2008:111). Phang et al. (2008) focus not only on organisational learning in e-government projects but also on perceived e-learning effectiveness, where expectations play a salient role (Chen 2014). Consequently, the stakeholder expectations and the meaning and state of e-learning should be assessed for the design of a holistic program.

Following Langford and Seaborne's (2003:65) study, another challenge is the lack of *knowledge and skills* needed to engage in e-

learning. Familiarity with online practices is more generally a crucial factor for successful adoption (Yang & Maxwell 2011:173). e-Learning programs may aim at increasing digital competencies (Bere et al. 2013:490), but learning contents should address training needs in the form of dedicated *curricula* (Sannia et al. 2009:50). Programs should concentrate on professional advancement instead of "[...] *make[ing] up for knowledge opportunities missed at the time of compulsory school education*" (Sannia et al. 2009:50). To advance and compare lessons learned across projects, it is important to obtain information about the employees' familiarity with systems (Yang & Maxwell 2011), their professional competencies and e-learning *curricula* (Sannia et al. 2009).

Further challenges relate to introducing digital platforms, which requires institutional changes and resources. One related aspect involves the *process of coordinating* training offers. Both systematised training and coordination of knowledge-sharing processes in the public sector are typically inadequate (Hazlett et al. 2008:62; Yang & Ruan 2007:575 ff.). Often, there is neither a dedicated process nor established routines for transferring knowledge (Butler et al. 2008:264). Since e-learning is conducted at the workplace, employees have difficulties in balancing work processes and spending time for learning or knowledge sharing due to their workloads (Bere et al. 2013:486; Hazlett et al. 2008:63; Langford & Seaborne 2003:65 ff.). As a result, how to integrate e-learning into work processes needs further elaboration in different contexts.

Another related challenge is the *lack of facilitators and managerial support*. Both can have negative influences on the realisation of e-learning and knowledge sharing (Hazlett et al. 2008:63; Langford & Seaborne 2003:68 ff.; Sannia et al. 2009:51). Particularly in self-regulated learning environments, employees need to be trained to become tutors (Hârțescu (2012:497,499). Responsibilities and the roles in collaboration should be designated anew (Bimrose et al. 2014:57,59). Group members need to know the goals and topics of discussions, and they require the means for collaborative activities. Such boundaries offer a space to develop norms on how to share ideas and knowledge.

Why would information be shared? Stefanick and LeSage (2005:245 ff.) indicate that a dominant value in the public sector may be discretion; "[...] *one of a municipal official's most unforgivable sins is to 'mis-speak' in public*" (244). Bureaucracy and hierarchical structures may override the interest to share information and work in teams (Hazlett et al. 2008:61). Moreover, public sector values have recently changed and may emphasise the competition for resources among employees (Amayah 2013:455). Though contrasting with traditional public sector values, competition can impede sharing behaviour as well. Consequently, how and which kinds of *collaboration and cultural norms* shape the introduction of e-learning today are salient questions to be answered and compared across public sectors.

The last selected aspect is the role of *policies*. The Organisation for Economic Co-operation and Development's (OECD 2003:3 ff.,15 ff.) report on knowledge sharing supports the importance of regulations for enabling or constraining practices. Legislative mechanisms should be in place to facilitate exchange of ideas in collaborative projects (e.g. Gil-Garcia et al. 2007). Nonetheless, which kinds of policies would constrain (or facilitate) the use of open e-learning platforms remain unclear. Clarity is also needed regarding the role and nature of *technologies*. Most studies report that e-learning offers are built on open-source products (Bere et al. 2014; Conci & Bramati 2007:83 ff.; see also Gallego et al. 2008 concerning the diffusion of open-source software), yet it is unclear whether OERs (cf. Pirkkalainen & Pawlowski 2010) are used. In the cases in Italy, learning objects may be shared and re-used (cf. Bere et al. 2014:466; Conci & Bramati 2007:83 ff.), but more research is required to find out the technical facilities and (open) principles on which open e-learning is built.

Overall, this brief review of existing studies highlights potential challenges and topics to evaluate when introducing open e-learning.

² www.eagle-learning.eu.

³ 'Interpretative flexibility' stems from the social shaping of the technology school of thought and means that multiple perspectives shape the path of evolving (technical) artefacts (Williams & Edge 1996:869).

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