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## Educators' open educational collaboration online: The dilemma of emotional ownership

Henri Pirkkalainen <sup>a, \*</sup>, Jan M. Pawlowski <sup>b</sup>, Dimitra Pappa <sup>c</sup><sup>a</sup> Tampere University of Technology, PO Box 541, 33101 Tampere, Finland<sup>b</sup> Ruhr West University of Applied Sciences, 45407 Mülheim, Germany<sup>c</sup> The National Center for Scientific Research (NCSR), Patriarchou Gregoriou Str. Aghia Paraskevi, 15310, Greece

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### ABSTRACT

The open education movement has witnessed ups and downs from initial interest in transparency and openness, followed by a lack of reuse of open educational resources (OER) and the massive boost of interest in massive open online courses (MOOCs). This article addresses educators' online behaviors and perceptions regarding participation in collaborative development of OER in online settings. Using a data-driven approach to study educators' perceptions, this article presents multiple considerations for collaborative OER development and validates a new model explaining educators' intention to participate in collaborative action. The findings reveal the contradictory nature of emotional ownership of knowledge: a critical enabling factor for commitment and a barrier to knowledge exchange in an open and transparent manner. The findings also show how outcome expectations regarding increase in reputation and status in the network do not influence the intention to share knowledge. Further interviews with idea-sharing platform users enable us to explain the favorable settings to resolve the dilemma of emotional ownership. The study contributes not only to further development of the open education movement but also to theory development of educators' collaborative behaviors online.

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## 1. Introduction

A 'digital revolution' is taking place in the field of education as the uptake of technology is redefining how people teach and learn. Considerable effort has gone into open education initiatives aimed at broadening access to the learning and training traditionally offered through formal education systems. In the context of higher education, the rise of open education, and, more recently, massive open online courses (MOOCs), has led many universities to reconsider their institutional strategies and engage in new learning practices (European Commission, 2013).

The rise of the open content movement is creating a new window of opportunity for educators and trainers to exploit open educational resources (OER), ranging from simple digital teaching assets to full courses, and related practices to secure the effective utilization of the resources (Tuomi, 2013). According to Kanwar, Balasubramanian, and Umar (2010), the mere use of OER is not enough to stimulate real change. Instead, vibrant discourse and practice must be developed so that OER can be embedded in the educational environment.

\* Corresponding author.

E-mail addresses: [henri.pirkkalainen@tut.fi](mailto:henri.pirkkalainen@tut.fi) (H. Pirkkalainen), [Jan.Pawlowski@hs-ruhrwest.de](mailto:Jan.Pawlowski@hs-ruhrwest.de) (J.M. Pawlowski), [dimitra@dat.demokritos.gr](mailto:dimitra@dat.demokritos.gr) (D. Pappa).

Despite the promise of OER, their increasing availability and a growing collection of good practices and application guidelines, collaboration and peer support in the development and reuse of OER remain low (Abujarour et al., 2015; UNESCO, 2016). Some challenges exist, mainly linked to questioning the quality of OER (Clements & Pawlowski, 2011) and aligning resources to the specific needs of each classroom (Downes, 2007; Tsai & Shen, 2014), but also associated with fundamental social inhibitors and motivational barriers, namely, the unwillingness to share or use resources produced by someone else (McKerlich, Ives, & McGreal, 2013; Pegler, 2012; Pirkkalainen & Pawlowski, 2014).

A key problem therefore exists: How can participation in the development and refinement of OER and related practices in an open and transparent manner can be stimulated online? Auvinen and Ehlers (2009) argued that collaborative development of open education can produce a virtuous cycle of quality improvement through a continual cycle of perpetual peer-creation and peer-validation, which ultimately contributes to the development of an open education culture, as described by Ossiannilsson and Creelman (2011). As the number of dedicated online spaces for collaborative OER development grows (Abujarour, 2015; Nikolas, Sotiriou, Zervas, & Sampson, 2014) and many early adopter-educators are taking a role in participatory knowledge production of new educational resources and services (Monge, Ovelar, & Azpeitia, 2009; Okada, Mikroyannidis, Meister, & Little, 2012), further research is needed to study the favorable conditions for such participatory action and to identify and address the major obstacles behind the open education movement.

This article addresses the identified gap with an in-depth technology adoption study to understand the preferable conditions for educators to contribute online in collaborative development of OER and ideation of effective practices for their utilization. The data-driven study investigates the influencing factors that affect educators' perceptions of open educational collaboration online. We especially look at collaborative efforts starting from the exchange of ideas in virtual communities that utilize collaboration tools and aim for transparency and equal access for like-minded collaborators. For the sake of clarity, our scope of OER includes open educational practices for the effective utilization of OER. Using rich data on the interests, needs, intentions and online behavior of educators, the study presents multiple considerations for collaborative work in online educational communities and validates a new model that elicits educators' behavioral intention to engage in open educational collaboration in virtual communities.

Our study provides a theoretical contribution by uncovering the critical influencing factors that can enable and even inhibit participation in specific online contexts. This study finally provides an explanation for both perspectives. As a practical contribution, this article serves as a discussion opener for further development of open educational knowledge-sharing practices that are not simplified to the dimensions of merely open and closed collaboration.

The paper is structured as follows. We first describe the theoretical background regarding open education and the related unit of analysis, educators' perceptions of online collaboration regarding new educational resources and related practices. The basis of our study is set by a data-driven approach, acquired with a rich qualitative study. The paper proceeds with a quantitative confirmatory section to validate the developed research model and finally presents further insights for discussion with supplementary interview data.

## 2. Theoretical background

### 2.1. Reuse and adaptation of open educational resources

Open educational resources, originally defined as “the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for noncommercial purposes” (UNESCO, 2002, pp. 1–3), have been considered the key ingredient of open education (OPAL, 2011; UNESCO-COL, 2011; UNESCO, 2016). With a growing number of open repositories offering free digital content for teaching, learning and research (course materials, textbooks, streaming videos, multimedia applications etc.), a plethora of examples exists for motivated individuals and organizations engaging in the production of OER (Downes, 2007; Pawlowski, McGreal, Hoel, & Treviranus, 2012).

The OER ecosystem has been the focus of scholarly research throughout the past decade. Numerous influencing factors affecting OER adoption, use and creation have been identified and reported in the mainstream literature (Clements & Pawlowski, 2011; UNESCO, 2016). As digitalization breaks through, several initiatives and projects have emerged to support the creation, collaborative development and sharing of OER as well as open educational practices (OEP), that is, didactical approaches and scenarios (Abujarour et al., 2015; Okada et al., 2012; OPAL, 2011; UNESCO-COL, 2011). Collaboration by educators or teachers is often facilitated in virtual communities that form under specific topics of interest in online platforms and sites (Abujarour et al., 2015; Chen, Fan, & Tsai, 2014; Okada et al., 2012; Pawlowski et al., 2012). Chiu et al. (2006) further described how virtual community members are brought together not only by shared interests but also because of shared goals. Some of the key activities in virtual communities are the exchange of ideas, to spark conversations and to find common ways to turn ideas to real solutions (Abujarour et al., 2015; Chiu, Hsu, & Wang, 2006; Tang & Ding, 2014). Such activities are the focus of this study.

Despite the efforts of several initiatives to facilitate open educational collaborations, the overall uptake and reuse of the resources are low (Abujarour et al., 2015; Ochoa & Duval, 2009). Online environments that facilitate OER delivery, as well as social forces and the organizational context, play a key role in the implementation of the OER lifecycle. Similarly, the joint

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