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Apertura e flessibilità nell'istruzione superiore: oltre l'e-learning?

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curatori

Floriana Falcinelli, Tommaso Minerva, Pier Cesare Rivoltella

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SES-B1:

I MOOC COME SFIDA PER LA FORMAZIONE SUPERIORE

A readiness gap for Opening Up education by OER and MOOCs at the University?

Sara VALLA

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Abstract

Developments in Information and Communication Technologies are not always paralleled by an equivalent number of transformations in higher education institutions. Indeed it seems that Open Educational Resources have missed the objective of transformation in spite of the potential of Open Learning to transform education. This paper reports on a part of some qualitative research carried out at the University of Parma, a case study involving teachers from UniPR Co-Lab Research Centre who share the values of being alert to innovation and aware of the importance of Technology Enhanced Learning in the academic pedagogical landscape; it examines whether educators are ready and willing to adopt open approaches in both a pedagogical and technological perspective and whether they have the necessary competences to do so. The aim was to explore the perceptions of University teachers who might become involved in the use of Open Educational Resources (OER) and the organization of MOOCs.

Keywords: Open Educational Resources, open learning, MOOC readiness, Technology Enhanced Learning

Introduction

Developments in Information and Communication Technologies (ICT) — (Laurillard, 2004) are not always paralleled by an equivalent number of transformations in education (Mishra & Koehler, 2006) (Gráinne Conole, 2007) (Kinchin, 2012) (Bryant, Coombs, Pazio, & Walker, 2014). This also apparently happened to Open Educational Resources (OER) in spite of their potential to transform education (Gráinne Conole, Mulder, & Mairesse, 2012). Missing the objective of transformation seems to be confirmed by actions being proposed as necessary for fostering it (“Paris OER Declaration,” 2012) (European Commission, 2013). Some research was carried out at the University of Parma to respond to the question whether educators are ready and willing to adopt open approaches in both a pedagogical and technological perspective and have the necessary competences to do so. The aim was to explore the perceptions of University teachers who might be or become involved in the use of OER and the MOOCs (Massive Open Online Courses).

OER and MOOCs for learning enhancement: readiness to open up education.

Technologies are described as being disruptive (Christensen, 1997) (Sharples, 2002) (Gráinne Conole, De Laat, Dillon, & Darby, 2008); however, huge changes in technology have not been followed by the same level of transformations in higher education institutions. Recommendations made to the Member States during the 2012 World OER Congress imply that open learning has still to be researched and facilitated (“Paris OER Declaration,” 2012). Moreover, some research trends and initiatives (“OPAL | Open Educational Quality Initiative,” 2011) consider openness as a situation in which “resources are no longer the sole focus (...) but the practices within a specific domain are the focus of education” (Gráinne Conole, 2013b, p. 250). Open Educational Practices (OEP) include technology, pedagogy and competences. The “Opening Up Education” initiative is an effort to improve the use/reuse of OER, starting from the belief that ICT Tools, OER and OEP may enhance education effectiveness (European Commission, 2013). In the Italian context, the results of a survey conducted in Universities were presented in 2013 and show a developing situation, in which awareness of OER has increased in the academic environment and respondents acknowledge the important role that OER can play in learning enhancement. The authors recognize a need for institutional strategies on OER, for competences and support inside institutions (Tammaro, Roncaglia,

De Robbio, Panto, & De Rosa, 2013). A further phenomenon has emerged since 2012, that of MOOCs ("The Year of the MOOC", 2012); the United States were the precursors, with Europe following suit; the growth-rate of MOOCs and open courses available shows a worldwide increase ("European MOOCs Scoreboard," 2014). In spite of this, experiences in Italy are not so frequent; at the level of single academic institutions no significant research nor evidence is available that focuses on the **perceptions** of educators and learners concerning their **readiness, in a pedagogical and technological perspective, to open up education in MOOCs with a view to fostering teaching and learning** (and about them having the necessary competences). Currently, the complexity of the educational environment calls for a change, and change management theories identify readiness as an important factor for its successful implementation. Two levels of readiness are therefore to be considered: **readiness for change** on the one hand, **readiness for Technology Enhanced Learning (TEL) on the other**. The former is considered here as a necessary condition to support or refuse a change, a level of possible involvement of the members of an organizations in change (Holt, Armenakis, Harris, & Feild, 2007) (Armenakis, Harris, & Mossholder, 1993, pp. 681–2) (Jones, 2005, p. 362). TEL readiness has been discussed in the literature as readiness of institutions for e-learning; Chapnick (2000) listed psychological, sociological, environmental factors as affecting it. Human resources were considered important by Haney & Haney (2002); Aydın & Tasci (2005) confirmed this and discussed three constructs (resources, skills and attitudes) for each of the listed factors (technology, innovation, people, and self-development). Guglielmino & Guglielmino (2003) distinguished between technical readiness and readiness for self-directed learning, and identified knowledge, attitudes, skills and habits as the main aspects to be considered. Nevertheless, there seem to be no specific studies available as far as readiness for open practices or MOOCs is concerned. People are key where learning is involved; indeed there appears to be a gap in research in exploring the real perceptions of those people, i.e. learners and educators who might use/create OER, adopt OEP, or participate in MOOCs. This study aimed to gain a deeper insight into the issue at the University of Parma, from the point of view of educators with a special interest in TEL.

The University Context

The University of Parma is a middle-sized State Italian University; two-thirds of its students live outside Parma, a factor that needs to be taken into consideration when online learning and the use of ICT to enhance learning are concerned. Even though no specific strategies are present for TEL, there are administrative structures dedicated to learning and services for students, and some Centres provide services or do research related to online learning. Among these is **UniPR Co-lab, a research centre**, which started from an idea of a **collaboratory** (Wulf, 1989) (Bos et al., 2007), between the members of the Department of Information Engineering and the Department of Classics, Modern Languages, Education, Philosophy. Research is carried out **to create competences for TEL and to develop interdisciplinary collaborative networks**. The **main value** shared by members is being **alert enough to innovation and aware of the importance of TEL** in an academic environment, with a view to **enhancing learning**.

Methodology

The research question and aims about understanding teachers' perceptions are exploratory and descriptive; a **constructionism epistemology** was adopted, as well as a **qualitative approach**, primarily relying on human perception and understanding. Due to the complexity of the context and to the need to understand and gain an insight into perceptions about open learning and the phenomenon of MOOCs in a context of learning enhancement, a **qualitative instrumental case study method** was chosen. The case study was carried out on a group of University teachers who had joined the UniPR CO-Lab Centre. **Purposive sampling** was chosen as the most suitable way of identifying information-rich sources and gaining comprehensive in-depth pictures, and a **sample of convenience** was built, considering such practical issues as time, availability and willingness to participate. **Seven teachers** were included in the sample — **from different academic disciplines and subject-areas — who share UniPR Co-Lab's values**, that is, **awareness of the importance of technology as a tool to**

serve **learning enhancement** in an academic environment. The **primary sources of data** in this study were **semi-structured face-to-face interviews**; a loose guide was designed and later improved thanks to an initial pilot interview. The process comprised seven stages: thematizing, designing, interviewing, transcribing, analysing, verifying and reporting. The **secondary sources** were a **document study and analysis**, in order to be able to describe the context and the operational world in which these teachers act, and to provide an insight into institutional elements of readiness for e-learning and open learning. The trustworthiness model was adopted to establish the value of the research, including the concepts of credibility, transferability, dependability and confirmability, and the "**constant comparative analysis**" strategy was chosen for the analysis of data.

Readiness for TEL, Open Learning, MOOCs

A theoretical framework for readiness for open learning and MOOC was drafted as a tool, i.e. a list of initial concepts and directions for interpretation, to which to add themes during the analysis (Ryan & Bernard, 2003, pp. 274–277): it consisted of a schema, where people-related aspects of readiness for TEL are shown and integrated with **knowledge, feelings and skills** (Bloom, 1956) (Anderson et al., 2000). According to the constructivist and social constructivist theories, learning is an active construction of meaning; teaching is about "making learning possible" (Ramsden, 1992, p. 5) and the teacher's role is being a guide (Kelly, 1991) who promotes, facilitates, mediates (Brooks, 1999). Nevertheless, teachers also play a learners' role since they constantly need to learn and experience how to promote and enhance learning more appropriately by using technologies, and are therefore affected by the support they receive. The **domains** described in Bloom's taxonomy were therefore added to the picture; both the **technological and pedagogical perspectives** were further integrated into the schema, as they influence the domains. Starting from the concept of institutional e-learning readiness, aspects were actually limited to those specifically referring to people and their perceptions: **content and knowledge availability, attitude towards technology, towards self-development, towards innovation, sociological aspects and collaboration, technological skills**. The framework was developed and redrawn as a result of data analysis and discussion.

Findings and discussion: readiness gap to open up education in a pedagogical and technological perspective.

Some interviewees state that there is no specific focus by the institution on their **pedagogical preparation**: teachers are chosen for their knowledge of the discipline and literally "catapulted into the classroom" and no guidance is given on "how to explain their discipline". A need to develop a specific teaching methodology is perceived and it is argued that if no real pedagogical changes were carried out in spite of ICT being available, this was also due a general unpreparedness from a pedagogical point of view: a need is stated for coaching, to allow teachers not to only feel as if they were "carriers for scientific information". Some technologically competent interviewees perceive the gap between technology and pedagogy: "to use technology to enhance learning, the application of suitable methodologies would be necessary".

Within the framework factors were identified as "teaching experience", "knowledge and comprehension of the right approach and tools for the pedagogical approach" (**cognitive domain**), "motivation as teacher", "attitude towards teachers' role / teaching approach", "feeling about pedagogical competences" (**affective domain**), and "ability to use pedagogical skills" (**psychometric domain**). Data collection recalls a gap revealed in the literature between a personal use of technology and its use for educational purposes in Italy (Ranieri, 2012) which is probably not very different elsewhere. (Gráinne Conole, 2013a, p. ix) argues in fact that teachers are recruited because of their subject domain knowledge and research expertise and reports that many institutions in Great Britain offer introductory courses in good learning and teaching practice. The teachers in our survey, however, do not seem to perceive any specific additional pedagogical knowledge and competences needed to organize and teach in MOOCs, if compared to TEL. One refers to MOOC as not being necessarily pedagogically innovative, of its being about presentations and quizzes, and there is a general concern over teaching methodology in MOOCs.

The data analysis highlights some gaps in **technological competences and skill**; however the gaps are not so great as to prevent respondents from using technology to enhance learning; there seems to be rather a need for an improvement and development of competences, together with knowledge of sensible uses of technologies in the educational context. Time is a common issue for the interviewees; finding time for training might be difficult, so coaching is rather considered useful to judge whether a technological tool is useful or not and understanding its possible application to learning. Some add that tools are only used occasionally as a “support” and often their potential use is unclear. Some describe how they bridge the gap by using an effective conversational methodology, applied thanks to the collaboration with a technician who also has the relevant competences as a learning designer. Not all the respondents share the same perceptions about a technological gap. Engineers are aware that they have a completely different approach to technologies and are quite self-efficient; nevertheless, they are aware that a need to support teachers may exist for those whose domain is not connected to technology.

No specific experiences are reported regarding the use of technology-enhanced approaches for OEPs and in MOOCs; the technological skills reported are mostly related to the use of Learning Management Systems, web sites or specific tools for language learning and engineering, such as social bookmarking tools, social reading platforms, blogs and others.

In spite of recognizing that the majority of MOOCs include digital contents as e.g. videos and therefore acknowledging that such an emphasis on communication might require the mastering of further technological skills and competences, most of the teachers do not seem to worry about it; the impression is that the weight of such a factor might not be so relevant if compared to their pedagogical competences.

Some respondents underlined that having available technologies is nothing new; rather the point is finding the right technology for the most appropriate type of pedagogy for the subject matter. **“Pedagogy and technology must go on together”**, but technology has to be motivated and only adopted if it is a real empowerment in the teaching-learning process and it is necessary to think about “which technology” is suitable “for which pedagogy” (Mansfield, 2000). One respondent focused on students, who should be made to know how to use technology effectively to learn. There must also be a balance between the technological and pedagogical coaching. The **necessity for pedagogy not to be considered in a dichotomy with technology** was a cross topic in data collection, which is coherent with the literature on TEL (Perkins, 1991)(Maragliano, 1998)(Maragliano, n.d.). Mansfield (2000) claims: *“It is essential to understand just how pedagogy and technology should interact in order to crack the right combination to promote effective learning at all levels of linguistic achievement”* which is a similar approach to Gráinne Conole's (2012); interestingly, Conole et al. (2004) map tools for effective learning design, asserting that *“a better articulation and mapping of different pedagogical processes, tools and techniques will provide a pedagogic approach that is more reflexive and consistent with practitioners’ theoretical perspective on learning and teaching”*. Laurillard (2009, p. 6) also sees the need to *“ensure that pedagogy exploits the technology, and not vice versa”*. Such an approach is important in a context where priority seems to be for an open approach rather than for pure content. Balance and attention to both technological and pedagogical perspectives might be one of the bricks upon which readiness for open education could be built and gaps filled.

Conclusions and implications.

The results have an explorative value and our conclusions are envisaged as a springboard for further research, since the idea of a readiness to adopt OERs and MOOCs with a view to Technology Enhanced Learning is complex and multi-faceted. More than a gap in the ability to use tools (skills, psychometric domain), our research evidence shows the acknowledgement of a **gap in the pedagogical knowledge, under the cognitive and affective domain**, mostly regarding the following aspects:

- 1) comprehension of the right approach/tool for the pedagogical approach;
- 2) sociological aspect of learning
- 3) pedagogical competences;

4) concerns deriving from insufficient experience of open practices.

The focus is therefore on the lack of confidence felt by teachers and the need to improve their knowledge not only of past experiences but also of the right pedagogical solutions and possible technologies to use for the pedagogical approach they adopt.

On the whole, **the gap in technological competences and skills is apparently felt as less crucial than in developing pedagogical competences**; moreover, mostly for those whose domain is not related to technologies, it was generally believed that it was not the teacher's job to be technologically competent, yet with effective support it might be possible for them to enhance learning through technology. Thus there is a general agreement in the data that the existing technological support is not enough; some teachers would like to be constantly supported in their choice for the right technology, or at least constantly informed, about how they can apply technology to enhance their students' learning. The perceptions of the support needed are diverse, but the data suggest **a need for fostering a unitary and shared approach**. Moreover, the necessity emerged for coaching that might be offered by professionals with a wide range of competences, which are not limited to technical aspects, and be carried out in a conversational and dialogue-based way; this seems consistent with the results of the study on OER by Tammaro et al. (2013) concerning the current lack of appropriate and competent institutional support.

What emerged is a cautious attitude, a non-regular adoption of open practices — apart from content delivery — and no experience with MOOCs, which is coherent with what is stated, among others, by Raffaghelli & Ghislandi (2013). Nevertheless, the data show that the **broad attitude towards openness supersedes the mere content**, and strategies and practices for the potential fostering of openness are suggested. By considering the cognitive, affective and psychometric domains as intersecting with the technological and pedagogical perspectives, **the framework of readiness might be a useful tool to evaluate readiness for open education in the context in the most holistic way possible**, a starting point for an evaluation of initial strengths and weaknesses at the University, when open learning and MOOCs are involved.

A matrix was also elaborated from the findings, that shows a tentative teacher profiling and positioning according to their perceived technological and pedagogical knowledge and competences. Different aspects were considered from the readiness framework, such as parameters to position teachers on the matrix. The “**Open Innovator**” is one who has knowledge in both fields, and is important if the aim is both to take opportunities and overcome challenges in applying an open approach to maximizing learning enhancement. Nevertheless, all profiles have characteristics that might be useful to the system. If teachers are “**PT curious**” their knowledge and skills might be improved, as motivation is important and they might make a difference when strategic decisions are necessary. The “**Tech Innovator**” technical competences might be shared; the same applies for the pedagogical knowledge of “**cautious innovators**”, who hold a critical view of technology which prevents them from using tools in the first place; they prefer to integrate technology and pedagogy.

It might be useful to consider the matrix in a system, together with the readiness framework elaborated in this contribution, and to inform appropriate decisions and strategies, based on the university context.

References

- Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., ... Wittrock, M. C. (2000). *A Taxonomy for Learning, Teaching, and Assessing — A Revision of Bloom's Taxonomy of Educational Objectives* (Allyn & Bacon.).
- Armenakis, A. A., Harris, S. G., & Mossholder, K. W. (1993). Creating Readiness for Organizational Change. *Human Relations*, 46(6), 681–703. doi:10.1177/001872679304600601
- Aydın, C. H., & Tasci, D. (2005). Measuring Readiness for e-Learning: Reflections from an Emerging Country. *Journal of Educational Technology & Society*, 8(4).

- Bloom, B. S. (1956). *Taxonomy of educational objectives: the classification of educational goals Handbook I, Handbook I*. New York; New York; London: McKay ; Longman.
- Bos, N., Zimmerman, A., Olson, J., Yew, J., Yerkie, J., Dahl, E., & Olson, G. (2007). From Shared Databases to Communities of Practice: A Taxonomy of Collaboratories. *Journal of Computer-Mediated Communication*, 12(2), 652–672. doi:10.1111/j.1083-6101.2007.00343.x
- Brooks, J. G. (1999). *In Search of Understanding: The Case for Constructivist Classrooms*. ASCD.
- Bryant, P., Coombs, A., Pazio, M., & Walker, S. (2014). Disruption, destruction, construction or transformation? The challenges of implementing a university wide strategic approach to connecting in an open world. Presented at the 2014 OCW Consortium Global Conference: Open Education for a Multicultural World, Ljubljana, Slovenia. Retrieved from <http://conference.ocwconsortium.org/2014/>
- Chapnick, S. (2000). Are You Ready for E-Learning? *Learning Circuits: ASTD's Online Magazine All About ELearning*. Retrieved from http://blog.uny.ac.id/nurhadi/files/2010/08/are_you_ready_for_elearning.pdf
- Christensen, C. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail* (1st edition.). Boston, Mass: Harvard Business Review Press.
- Conole, G. (2007). An International Comparison of the Relationship between Policy and Practice in E-Learning. In *The SAGE Handbook of E-Learning Research*, Richard Andrews & Caroline Haythornthwaite (Eds) (pp. 286–310). London: SAGE Publications. Retrieved from <http://dx.doi.org/10.4135/9781848607859>
- Conole, G. (2010). Bridging the gap between policy and practice: a framework for technological intervention. *Journal of E-Learning and Knowledge Society*, 6(1), 13–27.
- Conole, G. (2012, October 19). *E-Learning in Higher Education*. Presented at the New Technologies and education for multilingualism, European Parliament, Brussels. Retrieved from <http://www.slideshare.net/GrainneConole/conole-keynote>
- Conole, G. (2013a). *Designing for Learning in an Open World* (Vol. 4). Retrieved from <http://www.springer.com/education+%26+language/learning+%26+instruction/book/978-1-4419-8516-3>
- Conole, G. (2013b). Realising the Vision of Open Educational Resources. In *Designing for Learning in an Open World* (pp. 245–264). Springer New York. Retrieved from http://link.springer.com/chapter/10.1007/978-1-4419-8517-0_13
- Conole, G., De Laat, M., Dillon, T., & Darby, J. (2008). “Disruptive Technologies”, “Pedagogical Innovation”: What’s New? Findings from an In-Depth Study of Students’ Use and Perception of Technology. *Computers & Education*, 50(2), 511–524.
- Conole, G., Dyke, M., Oliver, M., & Seale, J. (2004). Mapping Pedagogy and Tools for Effective Learning Design. *Computers & Education*, 43(1), 17–33.
- Conole, G., Mulder, F., & Mairesse, P. (2012). Opening up Content - Opening up education through technologies: towards a more systemic use for a smart, social and sustainable growth in Europe.

Presented at the Ministerial Conference “Opening up education through technologies: Towards a more systemic use for a smart, social and sustainable growth in Europe,” Cyprus. Retrieved from http://ministerialconference2012.linkevent.no/discussion_paper_content.pdf

European Commission. (2013, September 25). Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources. Retrieved from http://ec.europa.eu/education/news/doc/openingcom_en.pdf

European MOOCs Scoreboard. (2014). Retrieved February 12, 2014, from http://www.openeducationeuropa.eu/en/european_scoreboard_moocs

Guglielmino, P. J., & Guglielmino, L. M. (2003). Are your learners ready for e-learning? In G. M. Piskurich, *The AMA Handbook of E-learning: Effective Design, Implementation, and Technology Solutions* (pp. 87–98). New York, NY, USA: AMACOM.

Haney, D., & Haney, D. (2002). Assessing Organizational Readiness for E-Learning: 70 Questions To Ask. *Performance Improvement*, 41(4), 8–13.

Holt, D. T., Armenakis, A. A., Harris, S. G., & Feild, H. S. (2007). Toward a Comprehensive Definition of Readiness for Change: A Review of Research and Instrumentation. *Research in Organizational Change and Development*, 16, 289–336. doi:10.1016/S0897-3016(06)16009-7

Jones, E. R. (2005). The impact of organizational culture and reshaping capabilities on change implementation success: the mediating role of readiness for change. *Journal of Management Studies*, 42(2), 361–386.

Kelly, G. (1991). *The Psychology of Personal Constructs*. Routledge.

Kinchin, I. (2012). Avoiding technology-enhanced non-learning. *British Journal of Educational Technology*, 43(2), E43–E48. doi:10.1111/j.1467-8535.2011.01264.x

Laurillard, D. (2004). E-learning in higher education. *Changing Higher Education: The Development of Learning and Teaching*, 71–84.

Laurillard, D. (2009). The pedagogical challenges to collaborative technologies. *Computer-Supported Collaborative Learning*, 4:5(20). doi:10.1007/s11412-008-9056-2

Mansfield, G. (2000). BALL, PALL, LALL or CALL? Or which technology for which pedagogy and for which purpose? In Rossigni Favretti Rema, *Linguistica e Informatica: Multimedialità. Corposa e Percorsi di Apprendimento*. Bulzoni.

Maragliano, R. (1998). *Tre ipertesti su multimedialità e formazione*. Laterza.

Maragliano, R. (n.d.). “Vuoi mettere?!” Cose che l’insegnamento in presenza non può fare “. *Quaderno Di Comunicazione*, 95–100.

Mishra, P., & Koehler, M. J. (2006, June). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record*, 108(6). Retrieved from http://punya.educ.msu.edu/publications/journal_articles/mishra-koehler-tcr2006.pdf

OPAL | Open Educational Quality Initiative. (2011). Retrieved March 31, 2014, from <http://www.oer-quality.org/>

- Paris OER Declaration. (2012, June 22). 2012 WORLD OPEN EDUCATIONAL RESOURCES (OER) CONGRESS UNESCO, PARIS, JUNE 20-22, 2012. Retrieved from http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration_01.pdf
- Perkins, D. N. (1991). Technology Meets Constructivism: Do They Make a Marriage? *Educational Technology*, 31(5), 18–23.
- Raffaghelli, J., & Ghislandi, P. M. M. (2013). Opening-up higher education. Analisi di strategie attraverso un caso di studio. In T. Minerva & A. Simone (Eds.), *Politiche, Formazione, Tecnologie*. Roma: Si-eL Editore.
- Ramsden, P. (1992). *Learning to Teach in Higher Education*. Routledge.
- Ranieri, M. (Ed.). (2012). *Risorse educative aperte e sperimentazione didattica*. Firenze: Firenze University Press - Università degli Studi di Firenze. Retrieved from <http://www.fupress.com/catalogo/risorse-educative-aperte-e-sperimentazione-didattica/2206>
- Ryan, G. W., & Bernard, H. R. (2003). Data Management and Analysis methods. In N. K. Denzin & Y. S. Lincoln, *Collecting and interpreting qualitative materials* (Vol. 3). London: SAGE.
- Sharples, M. (2002). Disruptive devices: Mobile technology for conversational learning. *International Journal of Continuing Engineering Education and Lifelong Learning*, 12, 504–520.
- Stake, R. E. (2010). *Qualitative Research: Studying How Things Work*. Guilford Press.
- Tamaro, A. M., Roncaglia, G., De Robbio, A., Panto, & De Rosa. (2013). OER nelle Università italiane: primi risultati di un'indagine conoscitiva del Gruppo CRUI OA-OER. In T. Minerva & A. Simone (Eds.), *Politiche, Formazione, Tecnologie*. Roma: Si-eL Editore.
- The Year of the MOOC. (2012, November 2). *New York Times*. Retrieved from http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=all&_r=0
- Wulf, W. A. (1989). The national collaboratory—a white paper. *Towards a National Collaboratory*, 17–18.