

**Peter Bryant**

## Disrupting how we 'do' on-line learning through social media: a case study of the crowdsourcing the UK constitution project

### Book section

**Original citation:**

Bryant, Peter (2015) Disrupting how we 'do' on-line learning through social media: a case study of the crowdsourcing the UK constitution project. In: Jefferies, Amanda and Cubric, Marija, (eds.) Proceedings of the 14th European conference on e-learning, university of Hertfordshire, Hatfield, UK 29-30 October 2015. University of Hertfordshire, Hertfordshire, UK, pp. 93-99. ISBN 9781910810705

This version available at: <http://eprints.lse.ac.uk/64213/>

Available in LSE Research Online: October 2014

© 2015 The Author

LSE has developed LSE Research Online so that users may access research output of the School. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LSE Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain. You may freely distribute the URL (<http://eprints.lse.ac.uk>) of the LSE Research Online website.

# Disrupting how we ‘do’ On-Line Learning Through Social Media: A Case Study of the Crowdsourcing the UK Constitution Project

Peter Bryant

London School of Economics and Political Science, UK

[p.j.bryant@lse.ac.uk](mailto:p.j.bryant@lse.ac.uk)

**Abstract:** Social media and higher education pedagogy have enjoyed a chequered relationship, with significant debates about the efficacy of social media as a site of learning, the manager/host of an individual's learning trajectory and as a tool of facilitating collaborative learning at scale. This paper presents the exploratory findings from the evaluation of Constitution UK, an innovative civic engagement run by the London School of Economics. We argue that some of the behaviours inherent in social media learning (centred on fleeting connections, digital identity and discontinuous engagement) can create the conditions for effective learning and achievement at scale. Through the project we identified a number of challenges that social media as a learning platform and mode of learning itself pose for traditional on-line education including the role of the academic, the transformative effect of harnessing the massive and difficulties in approaching learning design in an unstructured and informal environment.

**Keywords:** social media, civic engagement, innovative pedagogy, participatory dynamics, digital citizenship, massive scale learning

---

## 1. Introduction

Technology has facilitated the capability of education to be delivered at a massive scale (Ferguson and Sharples, 2014). Learning at scale has presented educators with a number of significant problems around design of the learning experience for the ‘massive’, especially in the context of the tensions between how people learn inside and outside the academy (Brown and Adler, 2008, Weller, 2011). Frequently associated with a neoliberal policy agenda or the rise of technological determinism in the form of MOOCs, the ‘massive’ has alternately been perceived as a place that learners can get lost (in the form of large scale lectures) (Gibbs, 1982) or as the predominant statistic of success for online programmes, which can be formed and reformed to excite and demonstrate institutional superiority (Riddel, 2015). Higher education institutions have embraced the concept of the massive in a variety of different ways, from the ever-increasing complexity of the episodic broadcast of knowledge (supported through technology such as Lecture Capture and the Virtual Learning Environment) to the simplified narrative and structured learning journeys of MOOCs. The spectrum of learning at scale, whether it be pejoratively or supportively described as ‘massive’ or ‘large group’ has been greeted with varying degrees of hysteria, fear, zealotism, loyalty and acceptance (Davidson, 2014, Jackson et al., 2011, Brown, 2001, Baer, 1998, Daniel, 2012, Harden, 2012). Scale presents issues of support, interaction, feedback and engagement in part solved by technology utilised in a very Web 1.0 way, that replicates and reproduces existing teaching and learning practices (Kirkup and Kirkwood, 2005, Barnes and Tynan, 2007). The Constitution UK project (which aimed to crowdsource the United Kingdom constitution over a three month period in early 2015) was in part designed to leverage the power of the massive to solve problems, learn through collective engagement and embark on a process of transformative change. This paper will explore the disruptions that occurred either through design or implementation that occurred at both an institutional and learning level, where the affordances of social media were harnessed as an instrument of empowering and enabling the massive within a learning context.

## 2. ‘Doing’ learning at scale

One of the key principles that higher education teaching and learning uses to manage scale is a curricula and programme design practice that privileges the process of scaffolding and structuring knowledge in a logical progression of activity. This model allows for personalisation through choice of activity or participation, a role for the technology to provide a hub for storage and aggregation (Kop et al., 2011) and the setting of boundaries and borders designed to ring-fence the learner from the spiralling complexity of modern knowledge (Naidoo and Whitty, 2014, Ross et al., 2014). This structured and aligned approach influences more than just the instructivist xMOOC pedagogy, with both the provision of large scale face-to-face learning and the extended spectrum of blended provision drawing on these adapted principles of constructive alignment to create ‘high quality teaching’ (Biggs and Tang, 2011, Meyers and Nulty, 2009). One consequence of this influence is the proliferation of what has been described as a ‘transmission pedagogy’, which applies the conceptual framework of constructive alignment to narrowly defined skills, areas of knowledge or competencies (Becker, 2000, Naidoo

and Whitty, 2014). Learning outcomes act as privileged frameworks and containers for the consumption of specific knowledge, with engagement achieved either through a process of acquisition or structured participation (Swan et al., 2014) and where the teacher is perceived as authoritative, but distant 'rock star' or as an abstract process leader of delivery and assessment (Ross et al., 2014). Terras & Ramsay (2015) note (in the context of the high dropout rates of xMOOCs) that there is lack of understanding of the physiological considerations of learning in a massive and open environment. They argue that the massive makes personalised learning, with pre-defined learner pathways in MOOCs problematic, thus further privileging an aligned approach. The default therefore becomes episodic, with defined beginning and end points, learning constructed in weekly sequences and the materials and information released bit by bit in order to deal with the variety of temporal and spatial contexts, psychological motivations and learning approaches that exist within the massive. Experiences are structured by an (in)visible moderator, curated for the crowd and delivered in a sequence designed to crescendo around the achievement of learning outcomes.

### **3. 'Doing' learning through social media**

Social media has facilitated a complex, co-created and immediate form of learning response, where content and openness challenge the closed, structured nature of modern higher education (Dabbagh and Kitsantas, 2012, McLoughlin and Lee, 2010). Social media has had significant impacts on the way learners connect with people and with the knowledge they require in order to learn across a variety of contexts (Chen and Bryer, 2012, Ravenscroft et al., 2012). Social media support more than user interactivity, they support the development and application of user-generated content, collaborative learning, network formation, critical inquiry, relationship building, information literacy, dynamic searching and reflection (Fischer, 2009, Hong et al., 2008, Tapscott and Williams, 2010). Represented by an ever increasing suite of platforms, cloud services, mobile applications and practices, social media remains at its heart '...a variety of networked tools or technologies that emphasize the social aspects of the Internet as a channel for communication, collaboration, and creative expression' (Dabbagh and Kitsantas, 2012, Dabbagh and Reo, 2010).

Social media spaces are by their nature less structured (or indeed unstructured) and frequently not under the control of a central designer (Chen and Bryer, 2012). They can be democratic, personalised and able to facilitate a form of knowledge construction that is organic and collaborative (Hemmi et al., 2009). They support serendipitous encounters with information (Dantonio et al., 2012) where the discovery and identification of knowledge can be instantaneous and distracting. Where learning happens within these spaces, it takes on the attributes of the media itself; autonomous, collective, collaborative, critical and flexible (Tapscott and Williams, 2010). Critically, whilst there are issues of privacy and ownership at play, there is a sense (real or imagined) that the media is owned by the crowd and can be consumed and used in ways that support personal and individual development. Amongst users of social media, new skills such as collaboration, sharing, content production and inquiry have become 'normalised' and form part of the daily work and personal lives of learners (Thomas and Brown, 2011, Selwyn, 2012). The processes arising from these skills often occur without consideration to geographic boundaries, gender, race or age. They are facilitated by virtual communications, immediate responses, agile access to information and a community of people willing to provide crowd sourced opinions, answers and support (Kukulska-Hulme, 2010, Green and Hannon, 2007, Jenkins, 2009).

There has been a variable uptake within higher education of social media, with academic professional identity and research dissemination uses often outstripping the embedding of social media learning at a curricular level (Chen and Bryer, 2012, Gruzdt et al., 2012, Veletsianos, 2013). Often perceived as a form of student timewasting or distraction in lectures or as a way of facilitating interaction at a personal level (Hrastinski and Aghaee, 2012), there have been a limited number of examples where social media has been used as a mode of learning collaboratively (many of these have been described by Selwyn (2008)). This was been an increasingly polarised debate about the efficacy of social media in teaching at scale. Perceptions such as the 'creepy treehouse' where students resist academic invasion of the personalised peer space on social media platforms like Facebook (Stein, 2008) and the encroachment of structured learning platforms like the VLE into social media (Siemens and Weller, 2011) pervade the analysis of practice and challenge the wider acceptance of social media for teaching at scale.

### **4. Crowdsourcing the UK Constitution project**

In January 2015, the London School of Economics and Political Science launched an innovative civic engagement project which aimed to crowd source the United Kingdom Constitution. One of the key intentions of the project was to leverage and magnify the power of the community and the 'massive', in order to empower citizens to

engage in debate, identify solutions and come to a common agreement about the need for and the content of a UK Constitution in the 800<sup>th</sup> anniversary year of Magna Carta. The project involved over 1500 participants, generating hundreds of ideas and thousands of comments and votes about specific UK constitutional issues. The crowd generated the clauses of the constitution, commented on them, voted them up and down, debated the relative merits of competing clauses and then refined them to a manageable number, which led to the writing of a crowd sourced constitution at the completion of the project. The interaction was facilitated through a social media ideation platform (where ideas can be generated, debated, voted on and refined through debate) and ran for ten weeks.

The project was informed by an innovative model of engagement and participatory online learning that challenged the structured assumptions of many on-line pedagogies and designs. The approach was built on the potential that exists in leveraging and magnifying the power of the community and the 'massive' through social media, in order to empower citizens to engage in debate and identify solutions to what may be intractable, impossible or controversial problems or challenges. The design model drew on the application of a number of conceptual frameworks such as peer learning (McLoughlin and Lee, 2007, McLoughlin and Lee, 2010), incidental learning (Marsick and Watkins, 2001), digital pedagogies (McLoughlin and Lee, 2007, Siemens, 2005), crowd learning and ideation (Wexler, 2011) to a higher education informed online environment. It also integrates some aspects of participatory practices such as hacktivism, making and digital citizenship which allowed the project to explore the notion of learning as incidental, tacit and exploratory. There were no readings, there was no 'course', no lectures, no explicit theories, just a series of challenges, a semi-gamified process of engagement and a framework to create, motivate and empower the community to make something based on what they knew and had learnt. The project was informed by the assumption that learning can occur through a variety of informal and formal methods, supported by both peer and academic engagement, but not privileged by either, effectively flipping the role of the academic and academy (Greenhow and Robelia, 2009, Greenhow et al., 2009). Many of the practices of civic engagement, societal capacity development, information search, participation, action and social change that occurred within the platform and on other social media facilitated the creation of publicly visible 'educational situations' within an emerging and often agile democratic dialogue (Andersson and Olson, 2014, Linders, 2012). This occurred at non-sequential points within the project, as new users entered, old users bounced in and out and the community embraced and rejected opinion and thought leaders that arose from within the community itself.

## **5. Methodology**

Using what Porter and Hellsten (2014) call 'participatory dynamics' as a point of understanding what 'happened' in the social media platform, we utilised participant survey and qualitative data, as well as in-depth interviews of the participants and actors to explore and interrogate the technological, instrumental and social determinations that arose from the way the community has engaged with the project. This study is coming at a very early stage of our data analysis and represents the first insights about the modes and efficiencies of learning that occurred within the platform. For us, the key questions were;

- What were the behavioural implications of learning at scale using social media?
- How did these behaviours impact on the learning of the participant and most importantly the learning of the rest of the community?

As we were interrogating these broader questions during the runtime of the project, we observed three learner behaviours that we determined to be reasonably unique to way people engage with and use social media for learning.

### **5.1 Fleeting connections (social determination)**

One of the critical aspects of the design was to ensure that there was no specified start point and only a logistical end point (where the platform would be switched off). There were some process points where the project moved from an ideation phase to a refining of ideas phase with many of the same practices of communication, debate and construction continuing unabated throughout. The project also encouraged participation and learning within a wide spectrum of modes of engagement, from idea generation to debate and discussion through to up/down voting on ideas. This created the conditions for a community relatively unbound to each other to act and interact at asynchronous times and perhaps only cross paths fleetingly.



The sheer scope and scale of many social media communities can create a shattered web of fleeting connections or weak ties between users (Mackey and Evans, 2011, Manago, 2015, Siemens, 2005). Users pass by each other in disconnected and transient ways, connecting with some by the way of a single photo or a comment. Rarely do users go back to those interactions to form lasting bonds. However, Siemens (2005) argues that these ties can create small hubs of innovation and creation, as users are exposed to networks wider than their own. Whilst present in other forms of teaching, the longer episodic approach of 'traditional' learning scaffolds 'user' engagement along with the knowledge component of pedagogical design. Within the Constitution UK platform, there were meaningful longer connections built up between participants but these were regarded as relatively unimportant (less than 30% ranked social engagement as important to their participation), yet every participant engaged fleetingly with other participants to varying degrees. What we observed through these fleeting connections was what Lewis, Pea and Rosen (2010) called 'generative learning' whereby the community grew as the project expanded. The fleeting connections were not limited by a sequence of rules of engagement, but expanded both inside and outside the platform, to other social media, to physical events and different topics within the platform itself. The patterns of communication did not follow what we had been told from other crowdsourcing projects or what we had predicted ourselves (hard to generate substantive ideas, easy to get votes). The generative learning emerged where we did not provide 'formal participation structures of interaction' but supported the emergence of interpretive communications (the community formed its own rules) and that people were not restricted to a single topic on offer that week, but could roam or be constrained to whatever scope of topics and debates they felt comfortable with, with one participant noting;

*'...community members were surprisingly good at separating their own views (I voted this idea down) from the broader task (but the community supports it, so what is a workable provision).'*  
(Participant free text comment)

## **5.2 Digital identity (technological determinant)**

The Constitution UK project was designed to allow the participants the opportunity to represent themselves in whatever context or construct they felt comfortable with. They were asked for a user name (which did not have to be their own name) and for an email. The demographics were basic and relatively unutilised within their engagement with the platform. One of the affordances of social media learning is that online interaction affords both the opportunity to represent ourselves in different and (sometimes) untraceable and hidden ways as well as the ability to express ideas, opinions and emotions that because of the apparent anonymity of the virtual environment, we might be unwilling to do face to face (Stoller, 2013, Williams et al., 2012). Many participants took user names with historical contexts (*Boadicea, King Richard Third, Titus Alexander*) whilst others used the opportunity to have a user name that represented their political views (*Liberty, LiberalAnne, English Democrat*). Whilst there were some issues with diversity (the community skewed towards white males), the demographics, socio-economics or locations of participants did not impact on their participation, with the majority of participants finding their interactions with the community positive (71% where  $n=107$ ) and supportive (77% where  $n=107$ ). What was especially interesting in this behavioural domain was the role of the academic. A number of participants questioned the 'academic voice' within the platform, arguing that it represented a privilege that diluted the community. The 'academics', which were generally students from the LSE acting as facilitators, were not identified as academics, nor did they 'act' in that capacity, but through perhaps tone of voice, authority or the way a debate or argument was constructed were identified as such, with one participant noting;

*'...have noticed there was a tendency to assume only academics could properly understand and assess the issues, a common problem not just with academics but other professionals, we tend to assume it is only our own professions that can really grasp the issues in full.'* (Participant free text comment)

## **5.3 Discontinuity (instructional determinant)**

The idea that learning can be discontinuous, chaotic and self-paced and, critically, self-structured underpinned the pedagogical design of Constitution UK. Whilst the observations of generative learning and the resistance to privileged identity roles that facilitated learning (such as the teacher) occurred *during* the project runtime, the notion of discontinuity was integrated at the initial pedagogical design stage. Our intention was to encourage participants to bring to the project (and not be bound or prejudiced by) a wide variety of schema, learning trajectories and experiences. Participants were involved in developing and structuring their own learning (or lack thereof). They chose when to engage and when to withdraw, and most interestingly, when to return.

Participation was not a linear process within the platform. Participants chose to 'dip in and out' of the project at a variety of different stages, with some returning for voting or for refining to defend or promote their ideas and other orphaning their own ideas to engage with others. A number of the drop-outs from the project indicated reasons such as 'said everything I needed to say' and 'didn't agree with the end product'. Both of these comments represent examples of the self-structured learning pathway taken by participants. The project experienced a significant boost in participation when voting was introduced as a priority task (it was the last chance to decide which ideas go through to the next stage). These humps run counter to the statistical experiences of most MOOCs that have a large drop off between registration and commencement of the course, then a progressive decline in engagement as each week progresses (Kizilcec et al., 2013, Ross et al., 2014). This project experienced the exact opposite with numbers progressively increasing over the course of the platform being open, including a huge bump in the last two weeks (over 30% of participants joined the project in this time). There was no penalty for joining late, although there was a task attached (the sheer volume of contributions and the breadth of the debates) which for some was simply too big (around 15% dropped out for this reason). The discontinuity allowed participants the opportunity to enter assuming that the answers or solutions had not already been found. During the refining phase (where ideas were aggregated and debated to find some agreed collaborative clauses for the Constitution) we encouraged participants to nuance slightly different approaches to the same problem and have their voice heard even in the last days. There was no privileging of an idea that had been there since day one or one that had been posted on day 57. Participants could dip in one day and visit their idea or contribution weeks later and encourage people to support it. They could 'orphan' an idea and see others take up the mantle and make connections. This kind of discontinuous engagement was strongly supported by the participatory principles of social media, as Porter and Hellsten (2014) argue '...participation through social media is best explained as an outcome of the motivations, goals, and interests of the user'. This was clearly demonstrated in the Constitution UK project with one participant noting;

*"...many other participants were considerably more educated than I am, and I don't usually get the opportunity to attend things like this, while I expect it is more normal for the (large!) group of people who had postgraduate degrees. It was wonderful to be included." (Participant free text comment)*

## 6. Conclusions

It is important to note that these findings have emerged from a relatively exploratory analysis of the data arising from the first pilot of this pedagogical design. The scale of the pilot (1500 participants) is significantly smaller than the larger MOOC programmes on offer. It is still larger than any single course offered at the School. We also note that the project had a predominantly UK focus (although there were no specific limitations on this). Those limitations aside, our use of social media as a mode of learning threw out a stark challenge to the dominant pedagogical approaches we have utilised previously across a variety of online and blended projects, especially in terms of learning at scale. It utilised the massive through facilitating collaboration and community formation within a social media platform. We argue that our use of social media have exposed an inherent volatility and tension within higher education with the complexities of social interaction, the breakdown of logical patterns of subject search and linear consumption of information and the blurred and sometimes dark constructions and representations of identity within social media running counter to the shining idealism (and some would argue blind hype) of MOOCs and face to face learning at scale. Equally, our use of social media as a way of harnessing the massive challenged the ways we 'do' learning, both as actors and as directors. The 'traditional' constructs and practices that define scaffolded learning, course design and pedagogy and constructive alignment can be flipped to entrust learning to an engaged, creative and critical community interacting through social media and that these participants perhaps did not need to be presented with the beginning, middle and end as a fait accompli. There is a significant opportunity to engage in further research into the impacts of non-linear learning through social media. With the vast majority of 'formal' educational provision structured and aligned in variations of a weekly sequence, how does learning change and adapt to discontinuity and flexible learning that is facilitated by the power of social media?

## References

- ANDERSSON, E. & OLSON, M. 2014. Political Participation as Public Pedagogy – The Educational Situation in Young People's Political Conversations in Social Media *Journal of Social Science Education*, 13, 115-126.
- BAER, W. S. 1998. *Will the internet transform higher education?*, RAND.
- BARNES, C. & TYNAN, B. 2007. The adventures of Miranda in the brave new world: learning in a Web 2.0 millennium. *ALT-J*, 15, 189-200.

- BECKER, H. J. 2000. Findings from the teaching, learning, and computing survey. *education policy analysis archives*, 8, 51.
- BIGGS, J. & TANG, C. 2011. *Teaching for quality learning at university*, McGraw-Hill International.
- BROWN, J. S. Learning in the digital age. In: DEVLIN, M., LARSON, R. & MEYERSON, J., eds. *The Internet and the university: 2001 Forum*, 2001 Boulder, CO. EDUCAUSE, 71-86.
- BROWN, J. S. & ADLER, R. P. 2008. Open education, the long tail, and learning 2.0. *Educause review*, 43, 16-20.
- CHEN, B. & BRYER, T. 2012. Investigating instructional strategies for using social media in formal and informal learning. *The International Review of Research in Open and Distributed Learning*, 13, 87-104.
- DABBAGH, N. & KITSANTAS, A. 2012. Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and Higher Education*, 15, 3-8.
- DABBAGH, N. & REO, R. 2010. Impact of Web 2.0 on higher education. *Technology integration in higher education: Social and organizational aspects*, 174-187.
- DANIEL, J. 2012. Making sense of MOOCs: Musings in a maze of myth, paradox and possibility. *Journal of Interactive Media in Education*, 2012, Art. 18.
- DANTONIO, L., MAKRI, S. & BLANDFORD, A. 2012. Coming across academic social media content serendipitously. *Proceedings of the American Society for Information Science and Technology*, 49, 1-10.
- DAVIDSON, C. N. 2014. 10 Things I've Learned (So Far) from Making a Meta-MOOC. *Hybrid Pedagogy* [Online]. Available: <http://www.hybridpedagogy.com/journal/10-things-learned-from-making-a-meta-mooc/>.
- FERGUSON, R. & SHARPLES, M. 2014. Innovative Pedagogy at Massive Scale: Teaching and Learning in MOOCs. *Open Learning and Teaching in Educational Communities*. Springer.
- FISCHER, G. Cultures of Participation and Social Computing: Rethinking and Reinventing Learning and Education. 2009 Ninth IEEE International Conference on Advanced Learning Technologies, 15-17 July 2009 Riga, Latvia. IEEE Computer Society, 1-5.
- GIBBS, G. Twenty terrible reasons for lecturing. 1982. Standing Conference on Educational Development Services in Polytechnics.
- GREEN, H. & HANNON, C. 2007. *Their space: Education for a digital generation*. London, UK: Demos.
- GREENHOW, C. & ROBELIA, B. 2009. Informal learning and identity formation in online social networks. *Learning, Media and Technology*, 34, 119-140.
- GREENHOW, C., ROBELIA, B. & HUGHES, J. E. 2009. Learning, Teaching, and Scholarship in a Digital Age. *Educational Researcher*, 38, 246-259.
- GRUZD, A., STAVES, K. & WILK, A. 2012. Connected scholars: Examining the role of social media in research practices of faculty using the UTAUT model. *Computers in Human Behavior*, 28, 2340-2350.
- HARDEN, N. 2012. The end of the university as we know it. *The American Interest* [Online], 8. Available: <http://www.the-american-interest.com/2012/12/11/the-end-of-the-university-as-we-know-it/> [Accessed 20th May 2015].
- HEMMI, A., BAYNE, S. & LAND, R. 2009. The appropriation and repurposing of social technologies in higher education. *Journal of Computer Assisted Learning*, 25, 19-30.
- HONG, C., CALDWELL, L., ASHLEY, T. & ALPERT, V. Trans-Cultural Perspectives on Digital Practices and the Arts in Higher Education. *Dance Dialogues: Conversations Across Cultures, Artforms and Practices : World Dance Alliance Global Summit*, 2008 Brisbane, Australia.
- HRASTINSKI, S. & AGHAEI, N. M. 2012. How are campus students using social media to support their studies? An explorative interview study. *Education and Information Technologies*, 17, 451-464.
- JACKSON, M. J., HELMS, M. M., JACKSON, W. T. & GUM, J. R. 2011. Student Expectations of Technology-Enhanced Pedagogy: A Ten-Year Comparison. *Journal of Education for Business*, 86, 294-301.
- JENKINS, H. 2009. *Confronting the challenges of participatory culture: Media education for the 21st century*, The MIT Press.
- KIRKUP, G. & KIRKWOOD, A. 2005. Information and communications technologies (ICT) in higher education teaching—a tale of gradualism rather than revolution. *Learning, Media and Technology*, 30, 185-199.
- KIZILCEC, R. F., PIECH, C. & SCHNEIDER, E. Deconstructing disengagement: analyzing learner subpopulations in massive open online courses. *Proceedings of the third international conference on learning analytics and knowledge*, 2013. ACM, 170-179.
- KOP, R., FOURNIER, H. & MAK, J. S. F. 2011. A pedagogy of abundance or a pedagogy to support human beings? Participant support on massive open online courses. *The International Review of Research in Open and Distributed Learning*, 12, 74-93.
- KUKULSKA-HULME, A. 2010. Learning Cultures on the Move: Where are we heading? *Journal of Educational Technology and Society*, 13, 4-14.
- LEWIS, S., PEA, R. & ROSEN, J. 2010. Beyond participation to co-creation of meaning: mobile social media in generative learning communities. *Social Science Information*, 49, 351-369.
- LINDERS, D. 2012. From e-government to we-government: Defining a typology for citizen coproduction in the age of social media. *Government Information Quarterly*, 29, 446-454.
- MACKEY, J. & EVANS, T. 2011. Interconnecting networks of practice for professional learning. *The International Review of Research in Open and Distance Learning*, 12, 1-18.
- MANAGO, A. M. 2015. Media and the Development of Identity. *Emerging Trends in the Social and Behavioral Sciences: An Interdisciplinary, Searchable, and Linkable Resource*.
- MARSICK, V. J. & WATKINS, K. E. 2001. Informal and incidental learning. *New directions for adult and continuing education*, 2001, 25-34.

- MCLOUGHLIN, C. & LEE, M. J. W. Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era. 2007.
- MCLOUGHLIN, C. & LEE, M. J. W. 2010. Personalised and Self Regulated Learning in the Web 2.0 Era: International Exemplars of Innovative Pedagogy Using Social Software. *Australasian Journal of Educational Technology*, 26, 16.
- MEYERS, N. M. & NULTY, D. D. 2009. How to use (five) curriculum design principles to align authentic learning environments, assessment, students' approaches to thinking and learning outcomes. *Assessment & Evaluation in Higher Education*, 34, 565-577.
- NAIDOO, R. & WHITTY, G. 2014. Students as Consumers: Commodifying or Democratising Learning? *International Journal of Chinese Education*, 2, 212-240.
- PORTER, A. J. & HELLSTEN, I. 2014. Investigating Participatory Dynamics Through Social Media Using a Multideterminant "Frame" Approach: The Case of Climategate on YouTube. *Journal of Computer-Mediated Communication*, 19, 1024-1041.
- RAVENSCROFT, A., SCHMIDT, A., COOK, J. & BRADLEY, C. 2012. Designing social media for informal learning and knowledge maturing in the digital workplace. *Journal of Computer Assisted Learning*, 28, 235-249.
- RIDDEL, R. 2015. Coursera's Stiglitz: MOOC revolution is just beginning *Education Dive* [Online]. Available: <http://www.educationdive.com/news/courseras-stiglitz-mooc-revolution-is-just-beginning-sxswedu-2015/374642/>.
- ROSS, J., SINCLAIR, C., KNOX, J., BAYNE, S. & MACLEOD, H. 2014. Teacher experiences and academic identity: The missing components of MOOC pedagogy. *MERLOT Journal of Online Learning and Teaching*, 10, 56-68.
- SELWYN, N. 2008. An investigation of differences in undergraduates' academic use of the internet. *Active Learning in Higher Education*, 9, 11-22.
- SELWYN, N. 2012. Social media in higher education. *The Europa world of learning*.
- SIEMENS, G. 2005. Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2, 3-10.
- SIEMENS, G. & WELLER, M. 2011. Higher education and the promises and perils of social network. *Revista de Universidad y Sociedad del Conocimiento (RUSC)*, 8, 164-170.
- STEIN, J. 2008. Defining Creepy Treehouse. Available from: <http://flexknowledge.learningfield.org/2008/04/09/defining-creepy-tree-house/> [2011].
- STOLLER, E. 2013. Our shared future: social media, leadership, vulnerability, and digital identity. *Journal of College and Character*, 14, 5-10.
- SWAN, K., VAN PROOYEN, T., DAY, S. & BOGLE, L. 2014. AMP: A tool for characterizing the pedagogical approaches of MOOCs. *e-mentor*, 75-85.
- TAPSCOTT, D. & WILLIAMS, A. D. 2010. Innovating the 21st-Century University: It's time! *Educause review*, 11.
- TERRAS, M. M. & RAMSAY, J. 2015. Massive open online courses (MOOCs): Insights and challenges from a psychological perspective. *British Journal of Educational Technology*.
- THOMAS, D. & BROWN, J. S. 2011. *A new culture of learning: Cultivating the imagination for a world of constant change*, CreateSpace Lexington, KY.
- VELETSIANOS, G. 2013. Open practices and identity: Evidence from researchers and educators' social media participation. *British Journal of Educational Technology*, 44, 639-651.
- WELLER, M. 2011. A pedagogy of abundance. *Revista Española de Pedagogía*, 223-235.
- WEXLER, M. N. 2011. Reconfiguring the sociology of the crowd: exploring crowdsourcing. *International Journal of Sociology and Social Policy*, 31, 6-20.
- WILLIAMS, S., FLEMING, S., LUNDQVIST, K. & PARSLow, P. 2012. This Is Me: Digital Identity and Reputation. *Digital Identity and Social Media*, 104.