

Generating learning through the crowd: The role of social media practices in supporting students as producers at scale

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Social media and higher education pedagogy have enjoyed a chequered relationship with significant debates about the efficacy of social media as a site of student centred learning, the manager/host of an individual's learning trajectory and as a tool of facilitating collaborative learning at scale. This paper presents the findings from the evaluation of Constitution UK, an innovative civic engagement and open learning project run by the London School of Economics and Political Science (UK). This was the lead initiative in an institution-wide shift in pedagogical approach, designed to transform the learning experience through supporting students to be co-producers of knowledge. 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 through experience and practice, both at scale in open, online modes as well in the face-to-face delivery environment. Challenging the dominant pedagogical approaches of other massive online programmes, Constitution UK brought together a civil community of people engaging in the process of digital citizenship that produced a crowdsourced constitution for the United Kingdom. The learning design of the project successfully engineered both learning and problem solving at scale. The key aspects of the project arising from how social media can facilitate critical thinking, engagement, peer and crowd learning have informed pedagogical change within the mainstream provision of the School for initiatives such as Students as Producers, civic engagement over Brexit and games-based learning.

Introduction

Technology and the practices facilitated through it have changed the dynamics of participation and access to higher education, managing and enhancing learning in open spaces whilst creating increasingly fragmented institutional environments (Altbach, Reisberg, & Rumbley, 2009; B. Davis & Sumara, 2009; Ferguson & Sharples, 2014). These changes have been received in higher education institutions with varying degrees of rapture, disruption, acceptance, fear and resistance, at all levels of the organisation (Flavin, 2016; Watty, McKay, & Ngo, 2016). The patterns and responses of resistance to change often make the people who engage in teaching and learning practices that 'stray from the norm' have to justify why they have chosen to innovate their practice (Blin & Munro, 2008; Bryant, Coombs, & Pazio, 2014). The result is often polarised debates about the potentials of technology, the surfacing of tensions around techno-determinism and the fears of staff about replacement and redundancy (Losh, 2014; O'Callaghan, Neumann, Jones, & Creed, 2017; Waltz, 2003). Challenges to the efficacy of

implementing strategic pedagogical change through technology have created binary positions and oppositional politics, where technology has been labelled as the enemy of good teaching and the antidote to bad (see e.g. Aagaard, 2015; Bugeja, 2007; Gupta & Irwin, 2016; Mueller & Oppenheimer, 2014; Roberts & Rees, 2014; Rosen, Carrier, & Cheever, 2013; Taneja, Fiore, & Fischer, 2015). Successfully integrating technology and the practices arising from social media into teaching and learning can offer transformative possibilities for programmes, disciplines and institutions (Manca & Ranieri, 2016). Integrating social media practices, for example, into curriculum design and delivery has offered some potential solutions to these challenges, providing opportunities for communication, student co-production, collaboration, engagement and new forms of learning outside of 'traditional' learning platforms (Selwyn, 2012), whilst presenting challenges for educators, exposing issues of learner support, interaction, privacy, identity, feedback and engagement (J. S. Davis, 2016; Dennen & Burner, 2017). Alternately, social media can be used to replicate existing broadcast pedagogies, delivering



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content in more convenient but less interactive ways (Barnes & Tynan, 2007; Kirkup & Kirkwood, 2005) which can often force students into engaging with social media outside the university ecosystem (Liote & Axe, 2016). What happens when the mode of learning demands more active engagement, where the learner is required to learn through making, to be able to critique and comment on the making of others, to participate within a democratic environment and to share and disseminate their production of knowledge?

Engaging learners in their own learning through social media

In a post-digital world, where the impacts and influences of technology are increasingly normalised, the concept of learning through experience has been transformed (Greenhow, Sonnevend, & Agur, 2016; Kaplan & Haenlein, 2016). Social media, collaboration, knowledge acquisition have changed work, play and life, and those changes are not simply potential or cutting edge, they are impacting on the critical processes of higher education from design through to delivery and assessment. Social media has facilitated a complex, co-created and immediate form of learning, where shared content and openness can challenge the closed, structured nature of modern higher education (Dabbagh & Kitsantas, 2012; McLoughlin & Lee, 2010). More than Facebook and Twitter, social media represents a complex set of interactive, participatory tools and platforms, emerging initially from the notions of web 2.0 (O'Reilly, 2006). Boyd (2014) defines social media essentially as platforms and sites where users can produce and share content. Fuchs (2017) asserts that social media is located and defined by what it means to be social and more importantly, what it means to act social.

Social media have afforded the opportunity to embed experiential approaches that support the student to participate actively in their own learning by co-producing content, curriculum, learning and knowledge (Cook-Sather, Bovill, & Felten, 2014; Lee & McLoughlin, 2007; Neary & Winn, 2009). Social media can 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, Caldwell, Ashley, & Alpert, 2008; Tapscott & Williams, 2010). Social media spaces are by their nature less structured (or indeed unstructured) and frequently not under the control of a central designer (Chen & Bryer, 2012). They can be democratic, personalised and are capable of facilitating a form of knowledge construction that is organic and collaborative (Hemmi, Bayne, & Land, 2009). They support serendipitous and sometimes fleeting encounters with information (Dantonio, Makri, & Blandford, 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 & Williams, 2010). Critically, 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 (Berthon, Pitt, Plangger, & Shapiro, 2012; Piller, Vossen, & Ihl, 2012). Learning through experience is facilitated by virtual communications, immediate responses, agile access to information and a community of people willing to provide crowd sourced opinions, answers and support (Green & Hannon, 2007; Jenkins, 2009; Kukulka-Hulme, 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 & Bryer, 2012; Ravenscroft, Schmidt, Cook, & Bradley, 2012).

There has been a reaction amongst educators to these challenging behaviours arguing for ways to 'protect' learners from danger, teach them the risks involved with social media use and to regulate how social media can be used by both staff and students in order to be a safe space for teaching (Junco & Chickering, 2010; Peck, 2014; Tennant, Demaray, Coyle, & Malecki, 2015). These behaviours and some of the 'myths' and (mal) practices explain, in part at least, the variable and contentious uptake and use of social media within higher education, with academic professional identity and research dissemination uses outstripping the embedding of social media learning at a curricular level (Chen & Bryer, 2012; Gruz, Staves, & Wilk, 2012; Veletsianos, 2013). There has been an increasingly polarised debate about the efficacy of social media in teaching at scale, especially in the use of social media that are considered within the personal domain of learners. 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 Virtual Learning Environment into social media (Siemens & Weller, 2011) pervade the analysis of practice and challenge the wider acceptance of social media for teaching at scale.

Crowdsourcing the UK Constitution project

In 2015, the LSE launched an innovative civic engagement and open education project that was to become a critical part of the Schools approach to engaging students in their own learning through social media. One of the key intentions of Constitution UK was to leverage and magnify the power of the community and the crowd, to empower learners to engage in civic debate, co-produce learning content and come to a common agreement about the need for and the content of a UK Constitution.

The project ran for fourteen weeks from January 2015 and involved over 1500 community members and groups, who debated the relative merits of competing clauses and

then refined them to a manageable number, leading to the writing and voting on an 8000-word constitution from over a million words of debate. Run by the Institute for Public Affairs and the Learning Technology and Innovation team at the LSE, the number of active participants increased through the duration of the project, engaging with individuals and special interest groups on social media and through three Town Hall style events held across the UK. Led by Professor Conor Gearty, the academic component of the project engaged twenty LSE students as moderators, leading ten challenge tasks aligned with key aspects of a constitution (Human Rights, the Monarchy, Powers of Parliament, etc.). Figure 1 shows the interactive components of the platform including the leader board (a gamified way of encouraging and rewarding participation), content about the project for those seeking guidance or context (such as videos), the latest clauses that had been commented on or proposed and a blog for more asynchronous conversations.

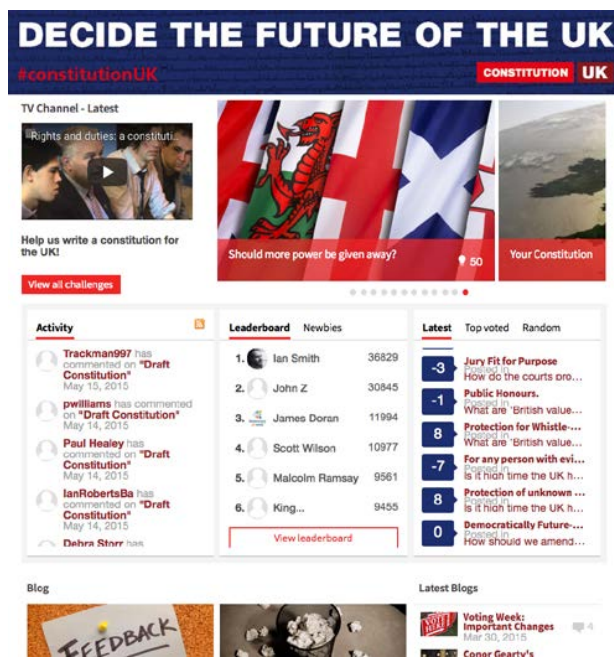


Figure 1: Screenshot of the front page of the Constitution UK platform

The project used a social media platform (Crowdicity) to support effective community-led ideation and learning. It also drew on other social media platforms to recruit community members (blogs, Facebook and Twitter) and to summarise the ever-increasing scope of the debates for new entrants to the project (Storify). The Constitution UK project was designed to facilitate a democratic approach to participation and learning, where knowledge was not broadcast from a 'sage on the stage' but instead, emerged from a community participating in open debate, ideating and solving problems collectively and democratically. It was critical for the project that participants felt safe within the social media space where the project ran, particularly as there would be debates

about potentially divisive issues like the monarchy, human rights, immigration and the future of Europe (issues which during the Brexit referendum of 2016 caused significant social and political schisms to emerge) (Lamond & Reid, 2017).

The pedagogical approach was built on the potential that exists in leveraging and magnifying the power of the massive through social media, 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 tacitly on the application of a number of conceptual pedagogical and engagement frameworks such as peer learning (McLoughlin & Lee, 2007, 2010), incidental learning (Marsick & Watkins, 2001), digital pedagogies (McLoughlin & Lee, 2007; Siemens, 2005), crowd learning and ideation (Wexler, 2011) and the use and acquisition of crowd knowledge and crowd value for specific problems (Erickson, Petrick, & Trauth, 2012). As this project was rooted in political science as a discipline and with an outcome rooted in participatory democracy, we drew on well-established social practices such as online civic engagement (Mossberger, Tolbert, & McNeal, 2007), crowd wisdom and collective intelligence (Levy, 2015) and digital citizenship (Ohler, 2010). User stories and a design thinking approach (Meinel & Leifer, 2010) were used to help structure the activities, the learning pathway through the project and higher-level trans-disciplinary skills that would be needed to deliver on the projects ambitions. We were clear in our design that there would not be a linear pathway to participation, learning or finding meaning. The design thinking approach conceptualised the project as concentric, intersecting circles of engagement where ambiguity, redesign and tangible outcomes emerge as ways of participants creating meaning and generating content from debate and interaction.

This was not a traditional educational project, with learning outcomes and an aligned pathway towards mastery or expertise. Instead, we positioned learning as something that was incidental, tacit and exploratory. In this context learning might happen spontaneously and arise out of social structures, experiences or interactions (Johnson, 1999; Knowles, 1970; Marsick & Volpe, 1999). Constitution UK had no specified readings, and no lectures. There was no explicit dissemination of established theory. There was just a series of challenges for the community members and a semi-gamified process of engagement where points were allocated for different forms of participation (ideas, voting, commenting – see Figure 2). The project was informed by the assumption that learning can occur in informal spaces, supported by both peer and academic engagement, but not privileged by either, effectively flipping the role of the academic and academy. There was no defined entry point for the project, members being able to start as soon as they had registered and jump straight in. To that end, the size of

the community grew over the duration of the project, with new members still joining in the final week. The project facilitated the creation of publicly visible 'educational situations' within an emerging and often agile democratic dialogue (Andersson & Olson, 2014; Linders, 2012). These situations emerged 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.

learning, we used the content analysis to identify behaviors that supported the assertion that learning happened within the project. We also used the data to identify whether the civic objectives of the project (to produce a truly crowd-sourced constitution for the United Kingdom) were achieved. A limitation of this type of analysis is that it relies on the credibility of the use of the words by the participants. We adjusted for this limitation by using the statistical analysis to assess the internal consistency of the link between learning and the ways it was described.

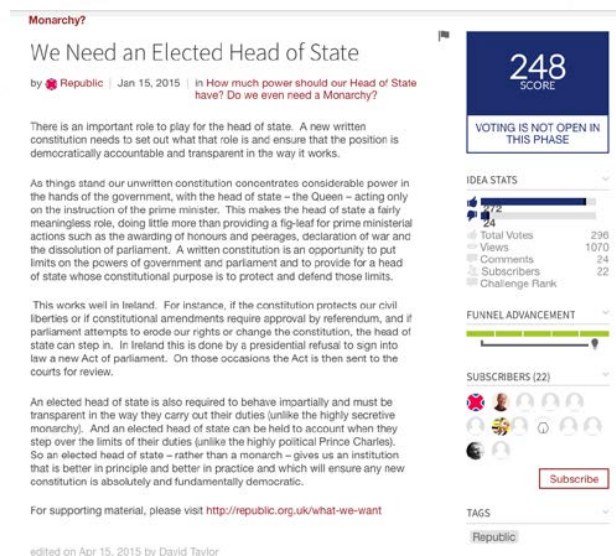


Figure 2: An example of the voting and engagement on the platform

Methodology

Due to the limited amount of analytics that were available through Crowdicity, we surveyed 208 participants in the project (124 of which completed over 70% of the survey) from a total population of 1536 active users. We also conducted qualitative interviews with 24 participants including moderators and members of the project team. The survey consisted of questions that sought to measure learning; the participant's motivations to participate, evaluations of the participation, frequency and length of participation, using Likert scale measurements against variables such as skills and knowledge gained, influence of other learners, attitudinal change, communications and motivation. The quantitative data was then analysed for the correlation between these dependent (learning) and independent variables. The qualitative data was aggregated together and subjected to a summative content analysis which looks for latent meanings within the data (Hsieh & Shannon, 2005). In this instance, the word learning (and its derivations) was used to identify patterns in the data connected to how the participants engaged in meaning making, knowledge acquisition and application (both tacit and explicit). Using what Porter and Hellsten (2014) refer to as participatory dynamics, which explore the modes in which social interaction leads to constructive action on political and social issues such as

Results

Social interaction and engagement

One of the most critical design objectives for the project was to harness the power of the crowd to collectively solve the problem of writing a constitution. We sought to achieve this through creating a learning community within the crowd, as opposed to a community of individual learners. The organic development of connections and shared behaviours helped create the environment for community members to feel comfortable sharing, to engage in sometimes-controversial debates and most critically, remain civil through the process. The analysis identified three modalities through which the project supported learning and engagement through the sociality inherent in social media; inclusivity of behaviours, facilitation of learning and engagement and civility of discourse.

a) Inclusivity of behaviours

One of the most critical aspects of the learning design for the project was that without lectures or readings, and with a non-sequential path of participation allowing for multiple points of entry and exit, learning needed to emerge from more active and flexible sources than within a traditional online course. The project learning design assumed that our community would be willing to share what knowledge the participants already had (often in the form of opinions) with the community, in an inclusive manner.

For example, the project engaged the community in a debate about the role of the Queen in a future UK society governed by this constitution. We invited representatives from both the Monarchists and the Republicans special interest groups, who each brought to the project a set of principles and knowledge about why the monarchy represents the best (or worst) form of governance for the country. Instead of taking their respective cases to the people through own social media 'echo chamber', we used the platform to present their views to the wider community. We used the mechanism of idea generation to focus the debate around the need to put forward, defend or amend an idea for a constitutional clause. Under that idea, participants could argue for or against, make suggestions for amendments, refine and eventually vote the idea up or down. The views of participants were

open to be challenged and tested by those with a different set of views. Within that practice of sharing and defending, some of the most powerful and transformative learning experiences occurred. 88% of participants were influenced by these community-led discussions and 50% of participants stated that working with others directly contributed positively towards their learning. A strong correlation emerged between the skills gained by the participants from the project and the influence that community discussions had on their participation. It was also clear that the positive, engaging nature of these interactions supported the desire to gain skills and knowledge, with 80% of respondents identifying the importance of a positive characterisation of the interactions as important or very important. It was clear that our community learnt through interacting with each other. This association was significantly stronger than the interactions with the participants had the wider academic presence and with the institution-created content, such as summaries, blogs, videos and Twitter.

b) Facilitation of learning

One of the risks of facilitating learning and civic engagement through social media arises from the potential for superficial learning, which manifests itself in processes like slacktivism and clicktivism, where engagement requires nothing more than a click, a like or a name on a virtual petition. Superficial learning in social media is not necessarily a pre-ordained outcome, but can present the illusion of meaningful engagement (Morozov, 2009). A critical role in most social media communities is the role of the moderator in facilitating social interaction and engagement (Kamboj & Rahman, 2016). Moderators can play a supporting or guiding role (Greenhow & Lewin, 2016) or can shape or influence the nature or patterns of the discourse by maintaining or infringing on the distance between the participants and the institution (Carter, Martin, & O'Malley, 2014; Joksimović et al., 2015).

Constitution UK embraced the views of over 1500 people on controversial topics such as the monarchy, human rights, citizenship, democracy and yes, the role of Europe. The community argued, debated, disagreed, came together, refined and voted, moderated in part by the small group of LSE student facilitators. An example in the data set that evidenced the impact of facilitation of learning was the role of the moderators, which evolved over the duration as they became partially engaged community members, participating in debates and in some cases driving the process of refining ideas into a coherent statement to vote on. In some cases, they were perceived as teachers, where community members sought validation or approval from them on specific ideas. In other cases, they simply performed essential maintenance functions like promoting voting, encouraging participation and promoting the various gamified aspects of the project. Overall the impact of the facilitators on learning came out as neutral or slightly negative in the study, with one participant noting:

This project belongs to the community not to the facilitators and it was - and is - absolutely wrong to give them the key role of drafting the ideas into a constitution. (Participant free text comment)

c) Civility of discourse

From the capacity for misinterpretation that arises from text based communications through to the potential loss of deliberation, reflection and potential for increased hostility (Coffey, Kohler, & Granger, 2015), effective civic engagement is both democratised and challenged through social media. Superficial learning has the potential to impact the civility and cohesiveness of the community. This exposure can overcome some of the downfalls associated with clicktivist interactions as well as the dilution of the depth of engagement that can occur through the sometimes 'narcissistic and attention seeking' nature of likes (Rahm & Fejes, 2015). Equally, this superficial social engagement can create interactions between participants that can be abusive, discriminatory, offensive or dangerous, either through the impact of this fractured social dynamic or through the toxicity of a single participant (McFarland & Ployhart, 2015).

Whilst in the main, inclusivity and civility drove engagement between the community members (and was represented positively in both the qualitative and quantitative data), when the debate spilt into Facebook, the exact opposite occurred. When a call for participation on Facebook identified the need for greater female participation in the democratic discourse and in parliament (in part to address our own gender bias within the project), a misogynistic argument ensued in the comments, tainted with sexist vitriol, misinformed hate speech and implied threats of violence against women and their 'sympathizers', littered amongst some serious attempts at a cohesive debate. On the ideation platform, there were less than a handful of interactions that could have been perceived in the same light. There was some evidence that there were meaningful deeper connections built up between community members, mainly within specific areas of debate. This manifested itself in several deeply experiential ways. Conversations between some community members spanned the entire duration of the project. Issues of critical personal importance such as the rights of EU immigrants, the importance of human rights, discrimination and tolerance were described and argued in the form of personal experiences and were shared widely. Some community members argued they learnt from both the sharing of these stories and the construction of meaning that arose from that sharing.

This was not a universal pattern with the level of regular engagement patchy and the connections made sometimes fleeting (simple comments like 'agree' or 'disagree', voting up or down or simply reading and following the debate). What we observed through these fleeting connections was what Lewis, Pea and Rosen

(2010) called 'generative learning' where the learning and engagement grew as the project expanded. Within the design, we ensured that the connections being made were not limited by 'rules of engagement' or bounded by a more traditional sequence of topics approach. The delivery of the project was designed to ensure that there was no specified start point and only a logistical end (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 engagement modes, 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 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)

Digital identity and community membership

The capacity of a community to move from simply being a collection of individuals to one that has its own momentum and identity shaped by those individuals is integral to supporting successful civic engagement in a digital age. The characteristics and tropes of social media define the way in which identity can be represented and its influence on the way people behave. The analysis exposed two modalities that explained the relationships between identity and community with the capacity of the project to support learning.

a) Community member identity

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. 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, Fleming, Lundqvist, & Parslow, 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*).

Identity also played into the complexity of the task put before the community. The writing of a constitution is a dense, specialised and sometimes arcane discipline with deep understanding arising from an expertise in history, civics, law and human rights. We identified from previous attempts to crowd-source a constitution that it was very easy to construct an environment where the participants felt like imposters, writing a document in the abstract, almost as an intellectual or gamified experience. In the context of critical reflection, Brookfield (1994) identifies impostership as a reflective barrier to accepting that your engagement and interactions are real and valued, and that you are not an imposter or a fake in the discourse. The risks that the project faced were two-fold, firstly would people outside of those worlds participate and engage on a deeper level (the answer was overwhelmingly yes) and secondly would the community feel they needed to demonstrate a set of behaviours and knowledge to have legitimacy in the discourse and to ensure that the final constitution meant something (or at least had meaning). After the completion of the project, we found that neither of these things mattered to the community. What mattered to them was the process, the engagement in an open and constructive civic debate and the repositioning of academic authority away from the arbiter of legitimate constitutional design.

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)

On the whole I found the experience very stimulating and to discover there are a lot of folk out there who are thinking along very similar lines to my own leads me to hope that such exercises are the seed to seeing real change in this country. (Participant free text comment)

b) Academic identity

Most traditional online courses require a number of delivery roles for the academic; including the teacher, the validator and the facilitator (Goodyear, Salmon, Spector, Steeples, & Tickner, 2001). As noted earlier there was not a strong correlation identified between the role of the facilitators and learning. There was however a strong correlation between the role of the lead academic (represented on the platform generally by weekly videos and interviews) and learning. The lead academic took a relatively passive delivery role, acting not as a validator or

facilitator but more as a leader or a guru. A number of participants questioned the potential impact of the 'academic voice' within the platform, arguing that it represented a privilege that diluted the community, whilst others were concerned that the involvement of a university in the process might render the project and its outcomes academic:

(I) 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)

From the start, the nature of the project was unclear. Was it simply an academic outreach project or was LSE open to the possibility that getting people to write a constitution might launch a serious, popular movement for constitutional reform? (Participant free text comment)

Problem Solving

The learning design approach of Constitution UK sought to cultivate learning through finding collective and crowd informed solutions to a problem. One of the key assumptions was that to collectively (and successfully) solve that problem, community members needed to bring and apply knowledge, as well as be open to acquiring new skills and knowledge through that process of sharing. This manifested itself in two ways; collective problem solving and supporting solutions through discontinuous engagement.

The idea that learning can be discontinuous, chaotic and self-paced and, critically, allow for self-selected community members to bring to the project a wide variety of schema, learning trajectories and experiences was a key part of the learning design for the project. The learners chose when to engage and when to withdraw, and most interestingly, when to return. Participation was not a linear process. Social media both through its asynchronous engagement and through common use of discussion forum style modes of comment encourages linear debates, where the idea that started the discussion can get lost in a never-ending scroll of conversation. In the end, the problem may never be solved, it just gets exhausted. The learning design for the project positioned the problem to be solved at centre of the process, returning members back to it iteratively and built it into the fabric of the delivery and engagement activity. Ideation, intervention, debate and agreement became tools within the platform that supported collective problem solving.

Community members 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. 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 with an assumption that the 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 the connections they were trying to build. Being a part of the solution was a critical motivation for a majority of participants with the capacity to find different learning pathways within the project especially important. Although interestingly, in terms of participation, the engagement with community peaked at the second to last phase of writing and refining the final document, with the last stage that voted the constitution up or down involving less than 5% of the total users (and narrowly voting the final constitution down).

Conclusions

The use of social media on Constitution UK as both a platform for collective community (or crowd) problem solving and as a site for deep experiential learning threw out a stark challenge to the dominant pedagogical approaches that have been utilised previously across a variety of online and blended projects, especially in terms of learning at scale. We argue that our use of social media has 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. Much of the discourse has centred on social media as a way of facilitating communications and interaction between individuals and the academy, often described only in terms of the tropes and user experiences of Facebook and Twitter. Constitution UK tested the capacity of social media to integrate learning and citizenship by facilitating innovative pedagogical practices like making, ideation, creation, critique, sociality, connected practice, crowd-sourcing, entrepreneurship, digital citizenship, media making, identity, politics and policy. Not all of these practices were present in the initial design, but as the project grew, they emerged from

within the learning community, supported by a civil and inclusive environment.

These practices in themselves work towards redefining what constitutes successful learning at scale. The communities formed by Constitution UK were equally fleeting as they were lasting, large as they were intimate, collaborative as they were individual. The project supported lurkers, talkers, loudmouths, itinerants and the simply curious or aspirational. But through the process of problem solving and civic engagement, the project supported learning, explicit and tacit and expected and unexpected for the clear majority of community members. Constitution UK was a community made up of experts, emerging experts, novices and those members seeking to gain expertise through engagement. There were experts, but they didn't dictate in any way what the community should think. There were novices, people who had never engaged in higher education or political discourse. There were people participating in the project who were advocates for civic engagement but had never thought about a constitution. To that extent, it also challenged the role of the academic as expert and questioned the ways higher education 'does' 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 fair accompli.

Finally, this project was the touchstone for a wider ambition to embed similar principles centred on the power of the crowd to support students as co-producers of knowledge and content. The key lessons learnt here that ranged from the critical importance of civility and collegiality through to how to ensure not all knowledge production needs to be equal informed nearly seventy projects since the completion of Constitution UK, from media making through to research informed teaching through to the co-design of transferable skills developments. Our conceptualisation and implementation of how to use social media to harness the power of the crowd has extended into more connectivist approaches of pedagogical design, building on the capacity of social media practices to support engagement across and through wider professional and personal networks, affording even greater opportunities for learning.

References

- Aagaard, J. (2015). Drawn to distraction: A qualitative study of off-task use of educational technology. *Computers & Education*, 87, 90-97. <https://doi.org/10.1016/j.compedu.2015.03.010>
- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2009). Trends in global higher education: Tracking an academic revolution: UNESCO Pub.; Sense. <https://doi.org/10.1163/9789004406155>
- 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(4), 115-126.
- Barnes, C., & Tynan, B. (2007). The adventures of Miranda in the brave new world: learning in a Web 2.0 millennium. *ALT-J*, 15(3), 189-200. <https://doi.org/10.3402/rlt.v15i3.10930>
- Berthon, P. R., Pitt, L. F., Plangger, K., & Shapiro, D. (2012). Marketing meets Web 2.0, social media, and creative consumers: Implications for international marketing strategy. *Business horizons*, 55(3), 261-271. <https://doi.org/10.1016/j.bushor.2012.01.007>
- Blin, F., & Munro, M. (2008). Why hasn't technology disrupted academics' teaching practices Understanding resistance to change through the lens of activity theory. *Computers & Education*, 50(2), 475-490. <https://doi.org/10.1016/j.compedu.2007.09.017>
- Boyd, D. (2014). *It's complicated: The social lives of networked teens*. New Haven, CT: Yale University Press.
- Brookfield, S. (1994). Tales from the dark side: A phenomenography of adult critical reflection. *International Journal of Lifelong Education*, 13(3), 203-216. <https://doi.org/10.1080/0260137940130303>
- Bryant, P., Coombs, A., & Pazio, M. (2014). Are we having fun yet? Institutional resistance and the introduction of play and experimentation into learning innovation through social media. *Journal of Interactive Media in Education*, 2014(2), Art. 4. <https://doi.org/10.5334/jime.ad>
- Bugeja, M. J. (2007). Distractions in the wireless classroom. *Chronicle of Higher Education*, 53(21), C1-C4.
- Carter, C. J., Martin, L., & O'Malley, C. (2014). Understanding the social media ecologies of employees within higher education institutions: a UK-based case study. *An Education in Facebook?: Higher Education and the World's Largest Social Network*, 217.
- 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(1), 87-104. <https://doi.org/10.19173/irrodl.v13i1.1027>

- Coffey, D. J., Kohler, M., & Granger, D. M. (2015). Sparking debate campaigns, social media, and political incivility. *Controlling the message: New media in American political campaigns*, 245.
<https://doi.org/10.18574/nyu/9781479886630.003.0016>
- Cook-Sather, A., Bovill, C., & Felten, P. (2014). *Engaging students as partners in learning and teaching: A guide for faculty*. John Wiley & Sons.
- 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(1), 3-8.
<https://doi.org/10.1016/j.iheduc.2011.06.002>
- 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), 1-10.
<https://doi.org/10.1002/meet.14504901002>
- Davis, B., & Sumara, D. (2009). Complexity as a theory of education. *TCI (Transnational Curriculum Inquiry)*, 5(2), 33-44.
- Davis, J. S. (2016). *Building a Professional Teaching Identity on Social Media: A Digital Constellation of Selves*. London, UK: Springer.
<https://doi.org/10.1007/978-94-6300-702-3>
- Dennen, V. P., & Burner, K. J. (2017). Identity, context collapse, and Facebook use in higher education: putting presence and privacy at odds. *Distance Education*, 1-20.
<https://doi.org/10.1080/01587919.2017.1322453>
- Erickson, L., Petrick, I., & Trauth, E. (2012, August 9-12). *Hanging with the right crowd: Matching crowdsourcing need to crowd characteristics*. Paper presented at the Proceedings of the Eighteenth Americas Conference on Information Systems, Seattle, Washington.
- Ferguson, R., & Sharples, M. (2014). Innovative Pedagogy at Massive Scale: Teaching and Learning in MOOCs *Open Learning and Teaching in Educational Communities* (pp. 98-111): Springer.
https://doi.org/10.1007/978-3-319-11200-8_8
- Fischer, G. (2009, 15-17 July). *Cultures of Participation and Social Computing: Rethinking and Reinventing Learning and Education*. Paper presented at the 2009 Ninth IEEE International Conference on Advanced Learning Technologies, Riga, Latvia.
<https://doi.org/10.1109/ICALT.2009.207>
- Flavin, M. (2016). Technology-enhanced learning and higher education. *Oxford Review of Economic Policy*, 32(4), 632-645.
<https://doi.org/10.1093/oxrep/grw028>
- Fuchs, C. (2017). *Social media: A critical introduction*. Thousand Oaks, CA: Sage.
- Goodyear, P., Salmon, G., Spector, J. M., Steeples, C., & Tickner, S. (2001). Competences for online teaching: A special report. *Educational Technology Research and Development*, 49(1), 65-72.
<https://doi.org/10.1007/BF02504508>
- Green, H., & Hannon, C. (2007). *Their space: Education for a digital generation*. Retrieved from [http://www.demos.co.uk/files/Their space - web.pdf](http://www.demos.co.uk/files/Their%20space%20-%20web.pdf)
- Greenhow, C., & Lewin, C. (2016). Social media and education: reconceptualizing the boundaries of formal and informal learning. *Learning, media and technology*, 41(1), 6-30.
<https://doi.org/10.1080/17439884.2015.1064954>
- Greenhow, C., Sonnevend, J., & Agur, C. (2016). *Education and Social Media: Toward a Digital Future*. MIT Press.
<https://doi.org/10.7551/mitpress/9780262034470.001.0001>
- 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(6), 2340-2350.
<https://doi.org/10.1016/j.chb.2012.07.004>
- Gupta, N., & Irwin, J. D. (2016). In-class distractions: The role of Facebook and the primary learning task. *Computers in Human Behavior*, 55, 1165-1178.
- Hemmi, A., Bayne, S., & Land, R. (2009). The appropriation and repurposing of social technologies in higher education. *Journal of Computer Assisted Learning*, 25(1), 19-30.
<https://doi.org/10.1111/j.1365-2729.2008.00306.x>
- Hong, C., Caldwell, L., Ashley, T., & Alpert, V. (2008). *Trans-Cultural Perspectives on Digital Practices and the Arts in Higher Education*. Paper presented at the Dance Dialogues: Conversations Across Cultures, Artforms and Practices : World Dance Alliance Global Summit, Brisbane, Australia.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, 15(9), 1277-1288.
<https://doi.org/10.1177/1049732305276687>
- Jenkins, H. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. Boston, MA: MIT Press.
<https://doi.org/10.7551/mitpress/8435.001.0001>
- Johnson, D. S. (1999). A learning model for learning organizations. *Futurics*, 23(1/2), 74.
- Joksimović, S., Kovanović, V., Jovanović, J., Zouaq, A., Gašević, D., & Hatala, M. (2015). *What do cMOOC participants talk about in social media?: a topic analysis of discourse in a cMOOC*. Paper presented at the Proceedings of the Fifth International Conference on Learning Analytics And Knowledge.
- Junco, R., & Chickering, A. W. (2010). Civil discourse in the age of social media. *About Campus*, 15(4), 12-18.
<https://doi.org/10.1002/abc.20030>

- Kamboj, S., & Rahman, Z. (2016). The influence of user participation in social media-based brand communities on brand loyalty: age and gender as moderators. *Journal of Brand Management*, 23(6), 679-700.
<https://doi.org/10.1057/s41262-016-0018-0>
- Kaplan, A. M., & Haenlein, M. (2016). Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster. *Business horizons*, 59(4), 441-450.
<https://doi.org/10.1016/j.bushor.2016.03.008>
- 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(2), 185-199.
<https://doi.org/10.1080/17439880500093810>
- Knowles, M. (1970). *The modern practice of adult education*: Association Press New York.
- Kukulka-Hulme, A. (2010). Learning Cultures on the Move: Where are we heading? *Journal of Educational Technology and Society*, 13(4), 4-14.
- Lamond, I. R., & Reid, C. (2017). The 2016 EU Referendum *The 2015 UK General Election and the 2016 EU Referendum* (pp. 51-59): Springer.
<https://doi.org/10.1007/978-3-319-54780-0>
- Lee, M. J. W., & McLoughlin, C. (2007). Teaching and learning in the Web 2.0 era: Empowering students through learner-generated content. *International Journal of Instructional Technology and Distance Learning*, 4(10), 21-34.
- Levy, P. (2015). Collective Intelligence for Educators. *Educational Philosophy and Theory*, 47(8), 749-754.
- 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(3), 351-369.
<https://doi.org/10.1177/0539018410370726>
- 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(4), 446-454.
<https://doi.org/10.1016/j.giq.2012.06.003>
- Liote, L., & Axe, h. (2016). *LSE 2020: Capturing the Student Voice On the Future of Educational Technology*. Retrieved from London, UK: <http://iti.lse.ac.uk/wp-content/uploads/2016/08/LSE2020visionReport-FINAL.pdf>
- Losh, E. (2014). *The war on learning: Gaining ground in the digital university*: MIT Press.
<https://doi.org/10.7551/mitpress/9861.001.0001>
- Manca, S., & Ranieri, M. (2016). Facebook and the others. Potentials and obstacles of social media for teaching in higher education. *Computers & Education*, 95, 216-230.
<https://doi.org/10.1016/j.compedu.2016.01.012>
- Marsick, V. J., & Volpe, M. (1999). Informal learning on the job. *Advances in Developing Human Resources*, Berrett-Koehler, San Francisco.
- Marsick, V. J., & Watkins, K. E. (2001). Informal and incidental learning. *New directions for adult and continuing education*, 2001(89), 25-34.
<https://doi.org/10.1002/ace.5>
- McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. <https://doi.org/10.1037/a0039244>
- McLoughlin, C., & Lee, M. J. W. (2007). *Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era*.
- 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(1), 16.
<https://doi.org/10.14742/ajet.1100>
- Meinel, C., & Leifer, L. (2010). Design thinking research. *Design thinking: understand—improve—apply*. Springer, Heidelberg.
<https://doi.org/10.1007/978-3-642-13757-0>
- Morozov, E. (2009). The brave new world of slacktivism. *Foreign Policy*, 19(05).
- Mossberger, K., Tolbert, C. J., & McNeal, R. S. (2007). *Digital citizenship: The Internet, society, and participation*. Boston, MA: MIT Press.
<https://doi.org/10.7551/mitpress/7428.001.0001>
- Mueller, P. A., & Oppenheimer, D. M. (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological science*, 25(6), 1159-1168.
<https://doi.org/10.1177/0956797614524581>
- Neary, M., & Winn, J. (2009). The student as producer: reinventing the student experience in higher education.
- O'Reilly, T. (2006). What is Web 2.0: Design patterns and business models for the next generation of software. Retrieved from <http://www.oreillynet.com/lpt/a/6228>
- O'Callaghan, F. V., Neumann, D. L., Jones, L., & Creed, P. A. (2017). The use of lecture recordings in higher education: A review of institutional, student, and lecturer issues. *Education and Information Technologies*, 22(1), 399-415.
<https://doi.org/10.1007/s10639-015-9451-z>
- Ohler, J. B. (2010). *Digital community, digital citizen*. Thousand Oaks, CA: Corwin Press.
<https://doi.org/10.4135/9781452219448>

- Peck, J. L. (2014). Social media in nursing education: responsible integration for meaningful use. *Journal of Nursing Education*, 53(3), 164-169. <https://doi.org/10.3928/01484834-20140219-03>
- Piller, F. T., Vossen, A., & Ihl, C. (2012). From social media to social product development: The impact of social media on co-creation of innovation. *Die Unternehmung*, 65(1). <https://doi.org/10.5771/0042-059X-2012-1-7>
- 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(4), 1024-1041. <https://doi.org/10.1111/jcc4.12065>
- Rahm, L., & Fejes, A. (2015). Ubiquitous computing, digital failure and citizenship learning in Swedish popular education. *Citizenship Teaching & Learning*, 10(2), 127-141. https://doi.org/10.1386/ctl.10.2.123_1
- 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(3), 235-249.
- Roberts, N., & Rees, M. (2014). Student use of mobile devices in university lectures. *Australasian Journal of Educational Technology*, 30(4). <https://doi.org/10.14742/ajet.589>
- Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and texting made me do it: Media-induced task-switching while studying. *Computers in Human Behavior*, 29(3), 948-958.
- Selwyn, N. (2012). Social media in higher education. In A. Gladman (Ed.), *The Europa world of learning* (pp. 1-10). London, UK: Routledge.
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 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(1), 164-170. <https://doi.org/10.7238/rusc.v8i1.1076>
- Stein, J. (2008). Defining Creepy Treehouse. Retrieved from <http://flexknowlogy.learningfield.org/2008/04/09/defining-creepy-tree-house/>
- Stoller, E. (2013). Our shared future: social media, leadership, vulnerability, and digital identity. *Journal of College and Character*, 14(1), 5-10.
- Taneja, A., Fiore, V., & Fischer, B. (2015). Cyber-slacking in the classroom: Potential for digital distraction in the new age. *Computers & Education*, 82, 141-151. <https://doi.org/10.1016/j.compedu.2014.11.009>
- Tapscott, D., & Williams, A. D. (2010). Innovating the 21st-Century University: It's time! *Educause review*, 11.
- Tennant, J. E., Demaray, M. K., Coyle, S., & Malecki, C. K. (2015). The dangers of the web: Cybervictimization, depression, and social support in college students. *Computers in Human Behavior*, 50, 348-357. <https://doi.org/10.1016/j.chb.2015.04.014>
- Veletsianos, G. (2013). Open practices and identity: Evidence from researchers and educators' social media participation. *British Journal of Educational Technology*, 44(4), 639-651.
- Waltz, S. B. (2003). Everything new is old again: Technology and the mistaken future. *Bulletin of Science, Technology & Society*, 23(5), 376-381. <https://doi.org/10.1177/0270467603259792>
- Watty, K., McKay, J., & Ngo, L. (2016). Innovators or inhibitors? Accounting faculty resistance to new educational technologies in higher education. *Journal of Accounting Education*, 36, 1-15.
- Wexler, M. N. (2011). Reconfiguring the sociology of the crowd: exploring crowdsourcing. *International Journal of Sociology and Social Policy*, 31(1/2), 6-20. <https://doi.org/10.1108/01443331111104779>
- Williams, S., Fleming, S., Lundqvist, K., & Parslow, P. (2012). This Is Me: Digital Identity and Reputation. *Digital Identity and Social Media*, 104. <https://doi.org/10.4018/978-1-4666-1915-9.ch008>

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