

## ORIGINAL RESEARCH ARTICLE

### Participant association and emergent curriculum in a MOOC: can the community be the curriculum?

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We investigated how participants associated with each other and developed community in a Massive Open Online Course (MOOC) about Rhizomatic Learning (Rhizo14). We compared learner experiences in two social networking sites (SNSs), Facebook and Twitter. Our combination of thematic analysis of qualitative survey data with analysis of participant observation, activity data, archives and visualisation of SNS data enabled us to reach a deeper understanding of participant perspectives and explore SNS use. Community was present in the course title and understood differently by participants. In the absence of explanation or discussion about community early in the MOOC, a controversy between participants about course expectations emerged that created oppositional discourse. Fall off in activity in MOOCs is common and was evident in Rhizo14. As the course progressed, fewer participants were active in Facebook and some participants reported feelings of exclusion. Despite this, activity in Facebook increased overall. The top 10 most active participants were responsible for 47% of total activity. In the Rhizo14 MOOC, both community and curriculum were expected to emerge within the course. We suggest that there are tensions and even contradictions between 'Community Is the Curriculum' and Deleuze and Guattari's principles of the rhizome, mainly focussed on an absence of heterogeneity. These tensions may be exacerbated by SNSs that use algorithmic streams. We propose the use of networking approaches that enable negotiation and exchange to encourage heterogeneity rather than emergent definition of community.

**Keywords:** Rhizomatic Learning; Rhizo14; MOOC; social network analysis; Facebook

#### Introduction

In this paper, we explore the concept 'Community Is the Curriculum' in a 2014 Massive Open Online Course (MOOC) titled 'Rhizomatic Learning: the Community Is the Curriculum' (Rhizo14).

Recent years have seen a growing interest in how MOOCs promote the development of online communities. Bates (2015) suggests that 'MOOCs are an ideal way to bring together specialists scattered around the world to focus on a common interest or domain', but that they 'do not always incorporate what research indicates are best practices for developing communities of practice'. Higher education institutions aspire

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to promote social learning within and beyond the formal institution, and support is needed to understand how this can happen (de Laat and Prinsen 2014). Social learning is also researched outside of education, for example, connected learning that addresses the gap between in-school and out-of-school learning (Ito *et al.* 2014); yet whether or not community is congruent with social learning in MOOCs is still an open research question.

In relation to curriculum, Watters' experience of a MOOC caused her to question the academic rigour of MOOC curricula, worrying that they might become increasingly academically 'lite' and 'intellectually bland' (Watters 2015).

Rhizo14 focussed on both community and curriculum development. The questions posed at the beginning of the course were:

What happens when we approach a learning experience and we don't know what we are going to learn? Where each student can learn something a little bit different – together? (Cormier 2014a).

These questions reflect how Cormier, the course convener, interpreted Deleuze and Guattari's six principles for rhizomatic thinking (Figure 1) in the Rhizo14 MOOC (Deleuze and Guattari 1987).

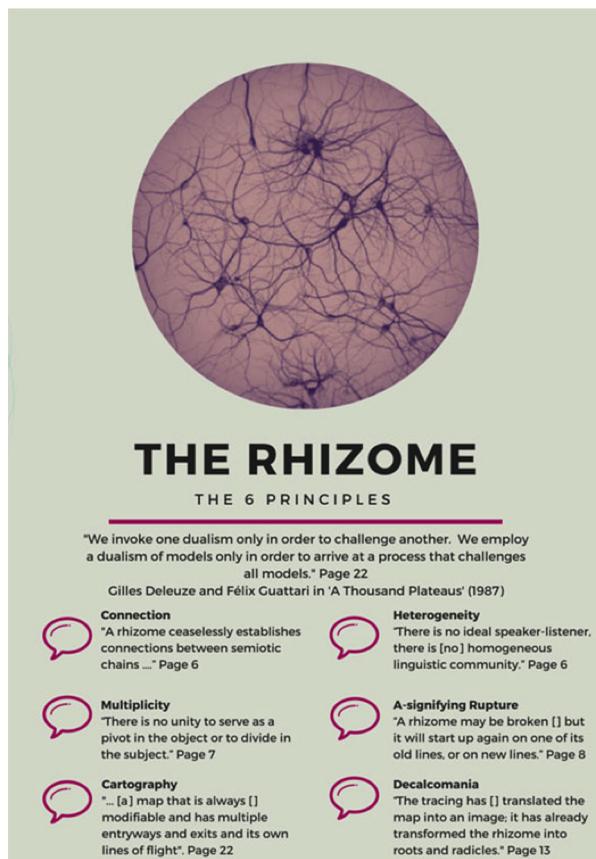


Figure 1. Deleuze and Guattari's six principles for rhizomatic thinking (Mackness, Bell and Funes 2015).

The authors were participants in Rhizo14, and found the course to be different in its pedagogical approach to their prior MOOC experience, thus stimulating their interest in researching the learner experience in this MOOC, particularly in relation to the formation of community and curriculum development. This is the third paper resulting from this research. Each paper addresses a significant aspect of the course. In our first paper, we explored positive and negative experiences of learning in Rhizo14 and the possible reasons for these (Mackness and Bell 2015). In our second paper (Mackness, Bell, and Funes 2015), we discussed the implications of using the concept of the rhizome as a metaphor for designing an open online teaching and learning space. In this final paper, we focus on how a course designed on rhizomatic principles (see Figure 1) affects the formation of community and curriculum development.

The three papers contribute to the need for more research on learner experience, social interaction and community building in MOOCs and other potentially innovative learning ventures, as identified by Veletsianos (2013a).

Here the question we ask is – can the community be the curriculum? We investigate how the community formed in Rhizo14, what curriculum developed and the relationship between the concept of ‘Community Is the Curriculum’ and Rhizo14 participant learner experiences in two social networking sites (SNSs).

### **Rhizo14 – The MOOC**

Rhizo14 attracted an estimated 500+ participants. It was scheduled to run for 6 weeks (the official course in what follows). It ran for a further 6 weeks (the unofficial course in what follows) organised by a small group of enthusiastic participants (Mackness and Bell 2015). The MOOC extended not only in time, but also ‘in place’ beyond its original P2PU platform (Cormier 2014a) to multiple SNSs and participant blogs. Although it was not billed as a continuing professional development course, many active participants were (or had been) employed in some professional capacity in education.

This was not a MOOC with detailed pre-planned content but one where the learning outcomes were not prescribed. Those wishing to know what the course was about were reliant on the title, the course convener’s identity, blog posts and the P2PU site to help gauge their interest.

In a post announcing Rhizo14 (Cormier 2013), learners were encouraged to Orient, Declare, Network, Cluster and Focus:

- Orient – find and organise materials, links, and sessions for each week.
- Declare – declare yourself and your place for reflection – this could be your own blog, a forum, a hashtag.
- Network – follow and connect to other people and to their work.
- Cluster – a few weeks in you will find a cluster of people with similar interest, a community.
- Focus – work on a project for you to use what you have learned (Cormier 2010).

The only formal content for the official course consisted of a weekly provocative statement for discussion and a video produced by the convener, posted in the P2PU space to introduce each week as follows:

14-Jan-14      Cheating as Learning  
21-Jan-14      Enforcing Independence

28-Jan-14	Embracing Uncertainty
04-Feb-14	Is Books Making Us Stupid?
11-Feb-14	Community as Curriculum
18-Feb-14	Planned Obsolescence

There was no assessment or formalised teaching support for participants. The course was based on the idea of decentring the role of the teacher and encouraging a ‘student as producer’ ethos (Neary and Winn 2009). As was stated earlier, the course continued beyond the first 6 weeks for a second period we have called here ‘the unofficial course’ because it was organised by a subset of participants and not the course convener. Although these were nominally ‘weeks’, they varied slightly in length. These six extra weeks were titled as follows:

25-Feb-14	The Lunatics Are Taking Over the Asylum
04-Mar-14	Demobbing Soldiers
11-Mar-14	Why Do We Need Lurkers?
22-Mar-14	Creativity: The Art of Thriving in Arid Environments
31-Mar-14	Powerful Thoughts
10-Apr-14	MOOC Missionaries

### Literature review

In this review, we explore the concepts curriculum, community and ‘Community Is the Curriculum’ in different contexts in order to inform our understanding of the data collected from Rhizo14 participants.

### Curriculum

Curriculum theory is a substantive body of knowledge (e.g. Pinar *et al.* 1995). Here we offer only a few highlights to help situate our research. Curriculum is a term usually associated with formal education and is variously expressed as,

- a written syllabus: a body of knowledge to be transmitted,
- the characteristics of the product: for example, learning outcomes or objectives, or
- a process that can help to plan a formal educational activity (Smith 2000).

Curriculum can be seen as praxis, being embodied in values, thinking abilities and intended actions. Smith (2008) sees the centre of praxis as informed, committed action, a practice that does not rely on individuals but rather on collective understandings.

Curriculum can be developed within an institution or negotiated with students on a course (Williams, Karousou, and Mackness 2011, p. 51). For example, a negotiated curriculum is key to self-managed learning (Cunningham 1999) where the creation of a learning contract by the student determines the curriculum to be covered in the taught elements of a course of study. Self-directed learning, of which self-managed learning is a subset, can be said to have ‘existed even from classical antiquity’ (Hiemstra 1994).

It is within this history that we situate modern day MOOCs and curriculum setting. In MOOCs such as Rhizo14, the curriculum can be co-created by tutors and

participants as an on-going process through the course, leading to emergent learning outcomes. The curriculum does not exist a priori and may not even be known by either the tutors or participants.

There is also the 'hidden curriculum', the unintended curriculum, the unseen influences on learning, such as norms, values and beliefs, as well as 'out of sight' activities and discussions. For example, the discourse of participation can be used to manage out dissent within a course rather than challenge power and inequality in a societal context (Crowther 2000). In MOOCs where learning takes place across distributed platforms, the curriculum can also be influenced by hidden knowledge infrastructures, software and associated practices (Edwards 2015b). Edwards has argued that 'the broader practices of knowledge infrastructures result in increasing inscrutability in the curriculum' (Edwards 2015a, p. 11). In a course like Rhizo14, the process of curriculum emergence, both vis-à-vis platforms used, and social interaction is of particular significance precisely because the curriculum is not identified or made explicit in advance.

### ***Community and other forms of association***

Community learning is an ancient phenomenon, but the definition of community is constantly changing (Yuan 2012). A number of different terms have been used when discussing social learning in communities, for example, communities of inquiry (Garrison, Anderson, and Archer 2000), communities of interest, learning communities (Palloff and Pratt 1999) and communities of practice (Wenger 1998). Community as a concept remains confusing (Cox 2005) and this is exacerbated by the growth of online networks and virtual communities as sites for social learning.

Wenger has said that all communities are networks, but not all networks are communities (E. Wenger, personal communication, 2008). Wenger, Trayner, and de Laat (2011) see networks and communities as 'two aspects of social structures in which learning takes place'. The Internet has brought new ways to associate, communicate, organise and learn through bulletin boards, email, web sites and virtual or online communities. The impact of the Internet on the meaning of community has also been discussed by Yuan (2012) who writes that there is 'a mismatch between "community" as a traditional form of society and the Internet as a new form of materiality on liberal narratives' (p. 666) and 'a mismatch between empirical findings about online social interaction patterns and what is symbolized by the concept of community' (p. 667).

Brint (2001, p. 8) critiqued the community concept, writing that Tönnies' (1957) belief that community is based on neighbourhood, locality and strong ties, invites confusion and causes people to either romanticise or debunk community. Brint explored communities in relation to virtues and vices. He identified two groups which he named 'communitarians' and 'liberals'. Communitarians believe the virtues lie in fraternalism and mutual support, low levels of stratification and power, and informal settlement of disputes (Brint 2001, p. 14). Liberals believe the vices lie in limits to human freedom, hostility to change, authoritarian thought, hostility to innovation and creativity, inequalities of power, exclusionary behaviour, enforced conformity and illiberalism (Brint 2001, p. 19). Brint concluded that for the modern world to benefit from the concept of community, communities need to be loosely connected activity groups, which demonstrate the virtues and avoid the vices. In order to do this, they need consistent support for intergroup tolerance, trust and respect.

Yuan (2012) describes a networked approach to online community as an inadequate conceptualization of culture; Wenger (1998) writes of dysfunctional communities and the problems of idealizing communities of practice; and Brint (2001) writes that communities are rife with power and division and that 'It is perhaps unnecessary to add that not all communal social relations are amicable'. In the context of higher education, Kogan (2000) asserts that community is 'a warm glow word' implying good relations that may neither exist nor be necessary; the use of the term could interfere with the hard work of showing and making effective connections. He recommends an alternative to community that suggests that institutions, subjects and individuals could give 'each other support not by the assumed sharing of values implied by "community" but through negotiation and exchange' (Kogan 2000, p. 216). Permitting different values could sustain the diversity needed for fruitful knowledge construction (Kirschner 2015).

Media used and strength of ties can constitute each other. Haythornthwaite (2002) identifies the need for communication media that can reach all members to maintain strong and weak ties at low effort; and media that can support subgroups that are focussed on specific activities. At first view, SNSs do offer support both for maintaining connections, and focussing on specific activities by use of groups and hashtags. Streams such as in Twitter and Facebook timelines appear to offer the chance to maintain strong and weak ties, but the application of algorithms to the timelines seem to make weak ties weaker. Facebook rewards increased interaction with visibility and threaten invisibility to those who are less interactive (Bucher 2012).

### ***Community is the curriculum***

Linking the curriculum to the community can be seen as part of a broader, historical project to make education more relevant, ground it in its local context and/or to make a community within the classroom (Dewey 2013). Service learning, which links learning to service in the community, is seen as a way of enriching learning, renewing communities and giving dignity to a scholarship of community (Bingle and Hatcher 1996); and as having an impact on the community in university–community partnerships (Cruz and Giles, Jr. 2000). Service learning emerges from and is embedded in a pre-existing local community, but in the Rhizo14 MOOC both community and curriculum were expected to emerge within the course (Cormier 2008).

### **Methodology**

Rhizo14 was an experimental course which made use of a range of SNSs and emerging technologies. Veletsianos (2013b, p. 641) has pointed out that the potential of emerging technologies remains undecided. They are in a state of becoming and are neither fully understood nor fully researched. It is within this context that we have tried to make sense of community and curriculum formation in Rhizo14.

Having been participants in Rhizo14 we were aware of the dangers of projecting our experiences onto those of others. We did not want to speak 'for' others but rather to engage with what was said in survey responses, Twitter, Facebook and other spaces. This was done through participant observation and the retrospective study of course archives. We see ourselves as both insiders and outsiders (Dwyer and Buckle 2009) to this research process.

The ethical protocol for use of data was developed in consultation with Rhizo14 participants. Like Veletsianos (2013b, p. 643), we do not claim to be conducting an ethnography, but rather to have used ethnographic data collection methods, alongside surveys, social network analysis (SNA) and review of Twitter and Facebook archives.

The survey attracted 47 responses and more than 30,000 words of data. The follow-up email interviews sent to 35 participants yielded more than 15,000 words of data. Our own responses as the authors of this paper were discounted. The survey data collection for the study allowed respondents to elect for anonymity. Full details of the survey and emails interviews have been fully reported in the first two papers (Mackness and Bell 2015; Mackness, Bell, and Funes 2015), and the research process is shown in Figure 2.

We started by independently inductively coding the 47 survey responses (Thomas 2006). As new codes emerged, we rechecked the previous data to see if new occurrences could be found and created an initial clustering of codes. We checked and amended the coding where errors and inconsistencies emerged, and reviewed the clustering, revising and collapsing codes where appropriate. We then independently coded the follow-up interview data identifying core themes that emerged from our inductive analysis of survey responses and follow-up interviews. We developed narratives for these core themes.

In order to gain an overview of what was happening across the different platforms and services, we collected activity data on the P2PU site, the G+ Rhizo14 community and participant blogs manually, and were able to extract data automatically from Facebook and Twitter. Activity data from different platforms are not directly comparable as the concept of a post and a comment is context-dependent but the data does offer a descriptive view. Two summaries of activity data are presented in

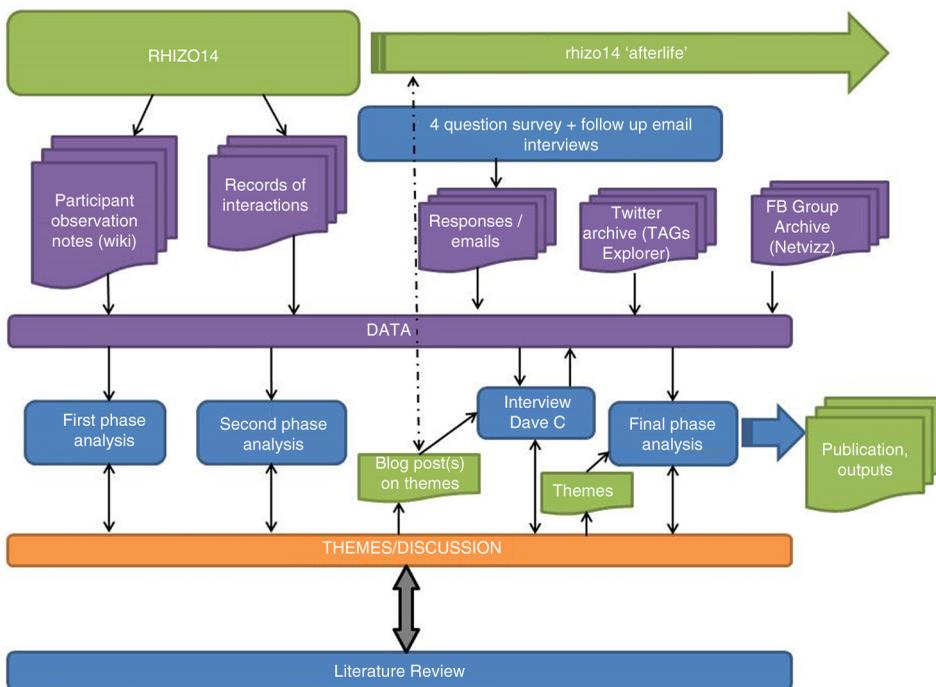


Figure 2. Organic research process (updated from (Mackness and Bell 2015)).

Tables 1 and 2. These show that the most active areas on the course were the Facebook group and the Twitter hashtag and this determined the decision to explore both these platforms in greater depth. We discuss these tables in the next section.

Twitter and Facebook activity data were analysed using SNA tools. Data from the Twitter Rhizo14 hash tag was exported from the openly available TAGsExplorer archive into Netlytic. Data from the Rhizo14 Facebook group was downloaded using the Netvizz app that creates networks and tabular files for user activity around posts (Rieder 2013), exported as a.GDF file that can then be visualised and explored further using the software Gephi (Bastian, Heymann, and Jacomy 2009).

We used the visualisations and data from Netlytic and Gephi, to identify peaks of activity that could then be explored with the qualitative data from Facebook and Twitter. The core theme narratives were considered in conjunction with a review of the Facebook and Twitter archives, directed by visualisations of activity data to guide the discussion below.

## **Discussion**

### ***Introduction***

In this discussion, we explore,

- network and community formation
- curriculum development and emergence
- the impact on the course of the most active course platforms

There were three forms of participant association highlighted in the title and introduction to Rhizo14: Networking, Clustering and Community Is the Curriculum.

We explored frequency of participant association by means of Rhizo14 activity data. There was a pattern of decline in participation across most of the Rhizo14 platforms (G+, Twitter, blogs and P2PU) between the official and unofficial courses as shown in Tables 1 and 2. These patterns of activity reflect the decline in participation and low completion rates recorded in other MOOCs (Brinton *et al.* 2014; Jordan 2014).

In Rhizo14, Twitter and Facebook were the most active spaces that supported participant observation. What stood out in the activity data was that in Facebook, unlike on the other platforms used in Rhizo14, there was an increase in the number of posts, and an increase in engagement with posts and by users (see Table 2). However, whilst activity in Facebook increased overall, it was focussed on a small minority of participants. In the official course, the top 10 of 239 active participants accounted for 47% of the engagement in Facebook increasing to 67% during the unofficial course for the top 10 of 198 active participants (see Table 2).

### ***Networking and community formation in Rhizo14***

Although our main focus was on Twitter and Facebook, we also observed events happening on participant blogs and other rich activities as links to them cropped up in the archives. Our analysis of Twitter and Facebook confirmed our event-based perspective (see Figures 3–6).

Networking was evident in all of the platforms in the busy early weeks of Rhizo14. There was also a networking activity, promoted by the course leader for

Table 1. Summary of activity on official and unofficial courses for P2PU, G+ and blogs.

Official course		No. of P2PU comments	G+ posts	G+ comments	No. of unique posters on G +	Blog posts	Blog comments	No. of posters on blogs
14-Jan-14	Cheating as Learning	184	73	254	44	28	111	22
21-Jan-14	Enforcing Independence	103	87	203	38	18	128	14
28-Jan-14	Embracing Uncertainty	47	40	102	19	12	63	9
04-Feb-14	Is Books Making Us Stupid?	38	45	136	18	17	133	12
11-Feb-14	Community as curriculum	14	35	89	15	12	54	8
18-Feb-14	Planned Obsolescence	28	64*	162*	18*	10	40	9
	Total official course	414			**	97	529	**
Unofficial course								
	# P2PU Comments							
25-Feb-14	The Lunatics Are Taking over the Asylum	31				3	9	3
04-Mar-14	Demobbing Soldiers	31				4	12	4
11-Mar-14	Why Do We Need Lurkers?	37				3	16	2
22-Mar-14	Creativity: The Art of Thriving in Arid Environments	7				4	8	3
31-Mar-14	Powerful Thoughts	27				2	2	1
10-Apr-14	MOOC Missionaries	11				1	0	1
	Total unofficial course	144			**	17	47	**
	Overall total	558	344	946	**	114	576	**

\*Because the G+ space was not organised by week in the unofficial course, Week 6, w/c 18-Feb-14, contained all posts from then until the end of the unofficial course.

\*\*Summing total no. of posters on G+ and blogs doesn't make sense because unique number of posters were summed across a week and could overlap between weeks.

Table 2. Activity data summary for Rhizo14 Twitter hash tag and Facebook group.

	Official course 8 Jan 2014 to 24 Feb 2014	Unofficial course 25 Feb 2014 to 16 Apr 2014
Total number of tweets	5089	1514
Total number of Facebook (FB) group posts	401	415
Total engagements with FB posts (likes, comments, comment likes and shares)	6248	8096
Total number of engagements by FB users (likes, comments but not comment likes or shares)	4059	4672
Number of active participants on FB group	239	198
Engagement (likes, comments) by top 10 most active participants as percentage of total engagement by active participants in FB group	47%	67%

community building. This used TAGS Explorer which provided a visualisation of connections on the Twitter hash tag (Cormier 2014b). Twitter users were encouraged to ‘click on lonely dots’ to draw participants into interactions, and this was generally welcomed by participants. This resulted in a flurry of activity, but it was short-lived (Figure 3), and there was no corresponding activity detectable in Facebook (Figure 4).

There were other participant initiatives that enabled participants to find each other’s blogs. Lockhart (2014) shared the Comment Scraper that posted outlines of MOOC blog posts and comments on one page so that readers could see which were attracting comments or not, and visit and comment on those with no or few comments. Another participant shared a Rhizo14 blogger feed list that could be used in an RSS reader (Melcher 2014) that helped participants keep track of blog postings. These initiatives supported the visibility of weak ties in contrast with the Facebook algorithmic stream that tended to make less active participants invisible (see later section, Facebook and the Algorithmic Stream, for further discussion of this point). Clustering activities were also evident as participants instigated collaborative activities, such as the emergent collaborative poem facilitated through blogs and Twitter (Lau 2014). Other sites for clustering included a Diigo group for collaborative curation of resources. Blogs could also become clusters as participants commented and linked from their own blog posts.

Rhizo14 demonstrated that people can come together on a course with minimal structure of resources or process; connect, engage, make multimedia artefacts together and, in some cases, make deep and lasting friendships. As one participant said

Learning is made more potent when it is fuelled by a sense of community and belonging

But others were unable to come together or form meaningful associations, seeming to stand on the sidelines looking in

... I never found my tribe

Mostly I have a sense of looking in from the outside or far away at what are they doing – I seldom had a feeling of belonging to this community

I wish I had not felt so peripheral

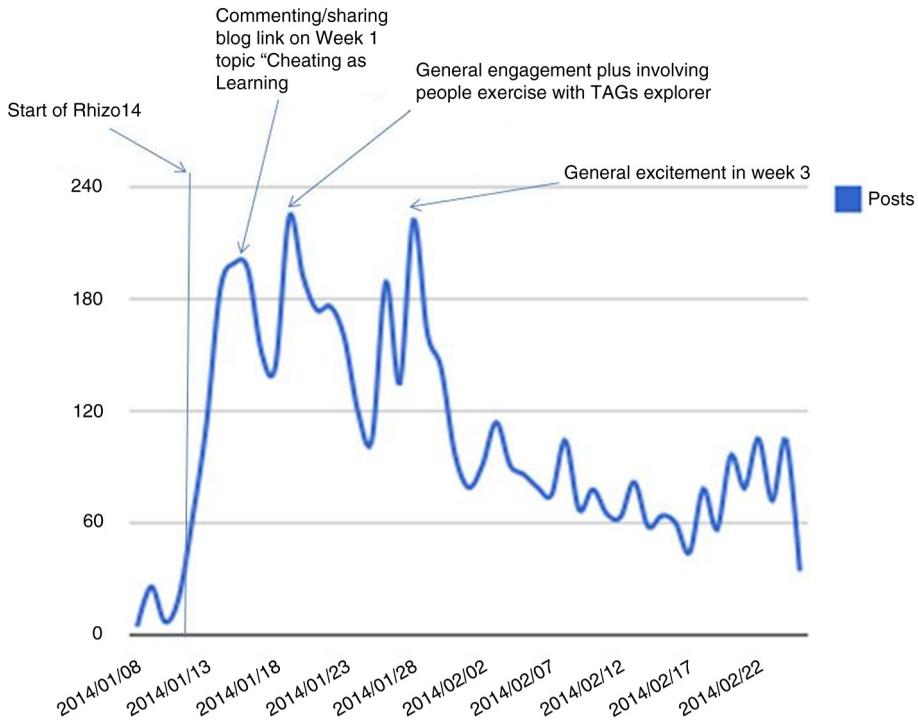


Figure 3. Tweets (posts on Twitter) by date in official course via TAGS Explorer and netlytics.org.

One participant described the enthusiasm about community as an obstacle to connection as the prevailing narrative was too divisive. It seemed to this participant that in order to belong one had to buy into the idea that,

we are great.

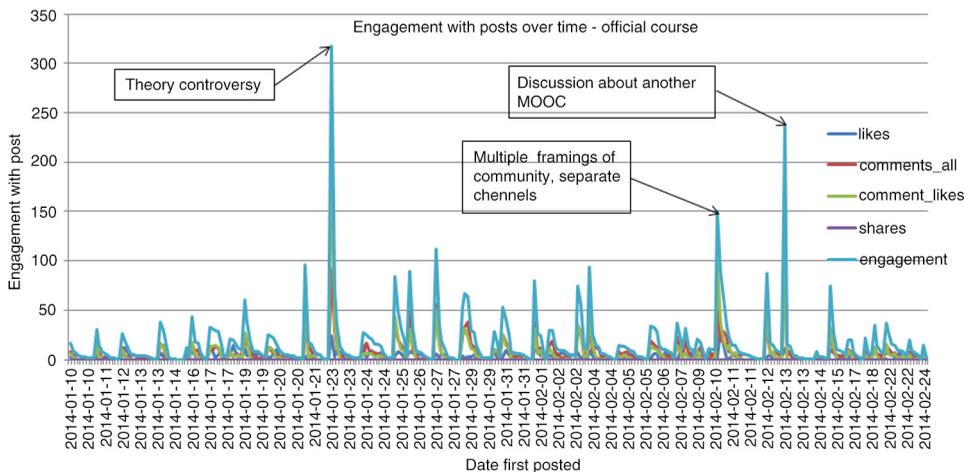


Figure 4. Engagement with Facebook posts during official course via Netvizz, Gephi and Excel.

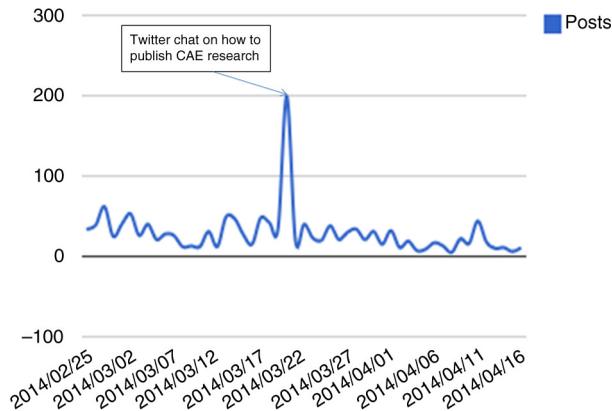


Figure 5. Tweets (posts on Twitter) by date in unofficial course via TAGS Explorer and netlytics.org. CAE is Collaborative Auto Ethnography.

We have no way of knowing where and how those standing on the sidelines, or turned off by an enthusiasm for community, were engaging with Rhizo14. There was no designated main community space. They could have been posters of Facebook posts that attracted no engagement (14 in the official course, and 13 in the unofficial course).

There was a substantial thread of discussion about community in the Facebook group at the beginning of Week 5, whose topic was ‘Community Is the Curriculum’ (Figure 4). Whether Rhizo14 was a community or a network was discussed, along with how it was framed and in which spaces it was performed. Some thought sub-communities aligned with platform, while others did not. This confirms Cox’s assertion that community can be a confusing concept (Cox 2005). The discussion on this thread

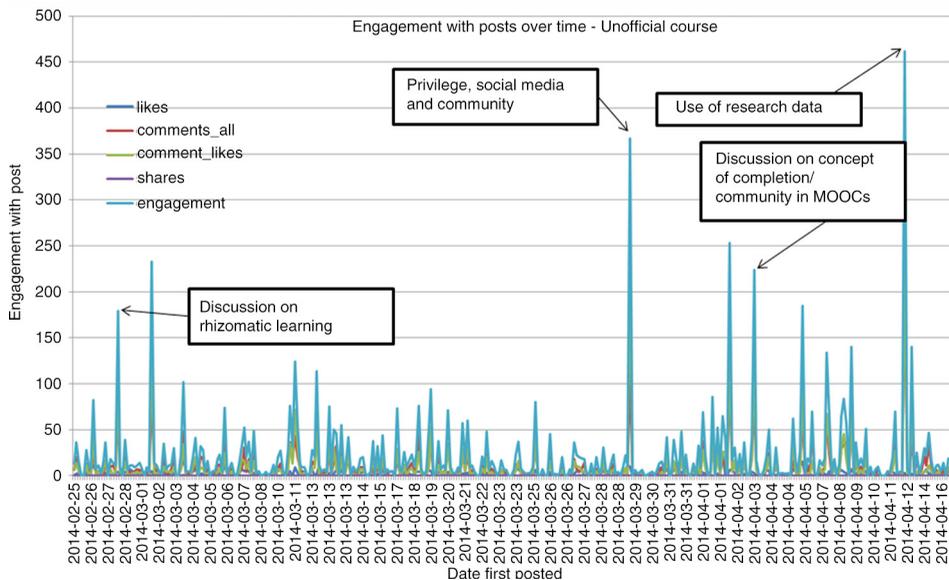


Figure 6. Engagement with Facebook posts during unofficial course via Netvizz, Gephi and Excel.

approached a consensus on feelings of closeness to others in a Rhizo14 community, analogous to Kogan's characterisation of community as a 'warm glow word' (Kogan 2000). In the absence of any shared understanding of community, the notion of community may have been 'romanticised' as proposed by Brint (2001).

As we can see from Figure 4, by Week 5 activity was sustained on Facebook whilst it was falling away on Twitter (Figure 3) and P2PU, G+ and blogs (Table 1), with Facebook becoming the main community space towards the end of the official course, and this was reinforced during the unofficial course.

### ***Curriculum development in Rhizo14***

In Rhizo14, the curriculum was a praxis (Smith 2008) in which participants shared and created multimedia such as the collaborative poem already discussed. The weekly provocative statements (see earlier description of course) gave a broad steer to topics, and hinted at what was the preferred view of the course convener who shared his perspective on the topic in the weekly video. Activity related to some topics (e.g. 'Cheating as Learning') was clearly observable on Twitter (see Figure 3), but links to further topics became less clear as activity declined. On Facebook there were several very long threads only loosely associated with the weekly topics. As there were no stated objectives for the course, expectations for the curriculum relied initially on the title and introductory blog posts. The implicit expectation was that participants would discuss and model Rhizomatic Learning, and form a community through which the curriculum would emerge.

In the official course, a defining early event that related to ideas of community and influenced curriculum development was a controversy in Week 2 played out mainly on Facebook. The controversy was about whether or not Deleuze and Guattari's ideas about rhizomatic thinking should be discussed. A blogger wrote a post expressing the personal view that some engagement with the theory that underpins Rhizomatic Learning was necessary. Another participant took exception to this post, feeling that discussion of theory would exclude non-academics. This controversy led to the longest thread in Facebook during the official course (Figure 4), in which the discussion was rich, although opportunities for exploring how disagreements and misunderstanding in online spaces can be resolved were not realised.

As the course progressed, the influence of this controversy became more evident as theory came to be associated with privilege. Theory and practice were discussed in terms of academics and non-academics, theorists and pragmatists: in other words categorisations of participants rather than of concepts, and the theorists/academics came to be associated with privilege. Although the main protagonists in the theory controversy had disappeared from Rhizo14 within a couple of weeks, the legacy of this incident was the emergence of a kind of discourse that set a binary opposition of 'academics vs pragmatists' and this led to theory being largely off the curriculum. Some representative quotes from these themes show the oppositional nature of the discourse that emerged,

I could have done with a lot less of the theoretical and lot more of the practical application of the principles in the classroom. . . . I almost quit when the theoretical bloviating reached a fever pitch and just about pegged my bullshit-0-meter, but there were always enough pragmatists out there to reel me back in.

In the normal course of things, I would have gone back to first principles and read ‘the’ theory, but I was so hacked off by academic posturing around D&G on Rhizo14 I’ve set my face against them.

Another participant noted that the theory controversy led to discussion that focussed on people rather than ideas:

... it seemed to me that theoretical explorations and advocacy for the sake of discussion were being unconsciously conflated with underlying belief systems about how people ‘should’ react/behaviour/respond to the rhizomatic theory

We present these quotes to show the discomfiture of some participants with exposure to other participants’ learning goals and styles of communication. Heterogeneity is one of the principles of the rhizome (Figure 1), a principle that expects difference, and does not require a ‘homogeneous linguistic community’. In Rhizo14, a convergence of one community emerged rather than heterogeneous sub-communities, with Facebook as the main space for sharing and communication. We discuss this further in the following section.

### ***Facebook and the Algorithmic Stream***

A further significant influence on curriculum development was the tendency for Rhizo14 participants to discuss blog posts within the Facebook group as well as at the blog itself. When someone posts a link within a Facebook post, content from the link is pulled through into the Facebook site. In the case of blog posts, this seemed to invite comment within the Facebook thread, possibly without commenters even visiting the blog and without the blogger knowing that their post was being discussed. Thus Facebook’s emergence as the main Rhizo14 discussion space significantly affected the formation of community and curriculum development.

Some participants in the Rhizo14 Facebook group experienced close emotional connection, and even lasting friendship. Facebook was favoured by many participants as a congenial environment for sharing ‘creative expression, play, and multi-modal formats of communication’ (survey respondent). One participant noted that Rhizo14 gave her the space ‘to talk to other like-minded people’. Kirschner (2015) has confirmed this capacity of Facebook for creating networks of friends based on similarity and suggests that, as such, Facebook is a poor environment for fruitful argumentation and discussion: it connects ‘likeminded people who discuss, confirm, validate and strengthen the group’s position’ (p. 622). Whilst we cannot know the specific details of the operation of the algorithm at a given time for a given user, we can assume that in Facebook we are more likely to see posts with a high engagement score and from people to whom we are more connected (Backstrom 2013). If posts with no engagement are ‘competing’ with posts engaged with by participants who are friends with each other on Facebook, the more engaged posts will tend to come to the top of more streams. In turn, they attract more engagement, particularly from more closely connected participants, and the posts with no engagement become less noticeable, as they disappear from busy streams. This threat of ‘invisibility’ wielded by the stream and algorithms in Facebook was noted by Bucher (2012) and helps to explain the wide disparity in engagement that we

observed between participants, and the ‘more by fewer’ effect between the official and unofficial courses (Table 2). In Rhizo14, groups of learners who only participated on one platform could become invisible to other groups participating in different platforms and within Facebook itself posts that were not engaged with by the most active participants disappeared to the bottom of the stream supported by the Facebook algorithm.

Facebook becoming established as the main space led to clustering around ties that were already strong, thereby limiting the potential benefit of weak and latent ties (Haythornthwaite 2002). It was not a universally popular location for discussion, even with those who ultimately became active members of the Facebook group. One such participant wrote, ‘I really hate Facebook and I really like Google+’ and of having to adapt to Facebook in order to join the discussion. There were others who were not even aware of the discussions in Facebook. Another participant who was not a member of Facebook wrote:

What I found most interesting for me, anyway, is that I never was part of the Facebook arm (Hand? Fingers?) of Rhizo14, and in fact, I didn’t know the FB element of Rhizo14 existed until a few months after Rhizo14 ended (if it ever really ended). . . . Mostly, I am OK with that. But realizing later that there were discussions unfolding and people connecting outside of my own realm of Rhizo14 leaves me feeling a little lost, as if maybe what I thought was happening didn’t quite happen the way I thought it had.

What was notable was that choice of platform was generally observed rather than discussed in a critical fashion.

## **Conclusions**

In this paper, we asked the question: can the community be the curriculum? This paper has explored how community formed during Rhizo14, the curriculum that developed and the relationship between the concept of ‘Community Is the Curriculum’ and Rhizo14 participant learner experiences in two SNSs in particular.

A key insight from our work here is the need to critically assess the hidden impact of the software platforms used in determining both curriculum and community. We spoke earlier about Facebook being a less than ideal environment for fruitful dialogue because in its design it connects those who already think alike (Kirschner 2015). If we add to this the ‘more by fewer’ effect found in our data (see Table 2 for details) and the stated design principle of both community and curriculum emerging within the course in Rhizo14, we can see how tensions and contradictions can remain hidden from view as those who are not ‘likeminded’ may be silenced by default, if not design.

Below we sum up key issues the paper raises and conclude with what we feel is this paper’s contribution to MOOC research overall.

### ***The formation of community***

Advice to participants at the beginning of Rhizo14 encouraged them to network and then cluster to find those with shared interests – a community. The idea of community was also embodied in the title of the course ‘Community Is the Curriculum’.

There was confusion over what community meant, and where and how to perform it in Rhizo14, as participants brought different tacit understandings of the term to the course. The ‘warm glow’ communitarian notion of community emerged as a shared meaning that often defined both interaction and curriculum.

The alternative approach, as recommended by Kogan (2000), that support could be offered through negotiation and exchange rather than the assumption of shared values was not available. For participants, the move from networking to clustering became a process of convergence, and this we see as in contradiction with the rhizomatic principle of heterogeneity.

### ***The development of curriculum in a community***

Collaborative use of multimedia was evident and participants enjoyed these self-organised activities, contributing to the curriculum in concrete ways by producing digital artefacts. As Facebook became the main space, social learning guided loosely by the weekly provocative statements became the curriculum – an emergent curriculum of praxis.

The controversy over links between Deleuzian theory and Rhizomatic Learning we discussed earlier revealed the influence of community formation in Facebook on what became an acceptable curriculum. The reduction of links between Facebook and other spaces over time rendered alternative curricula less acceptable. The ephemeral nature of the algorithmic Facebook stream militated against the creation of a negotiated curriculum, and relied more on shared interests and activities. As the social links in Facebook deepened, the rhizomatic principle of heterogeneity was lost as difference was filtered out either through explicit commenting on appropriateness or through the algorithm demoting posts that lacked engagement.

### ***Our contribution to theory and practice***

We found that choice of SNSs impacts on community and curriculum formation. Teachers, facilitators and learners should reflect on their choice of platforms and how these are used to avoid creating learning environments that contradict the chosen pedagogy. This requires understanding of SNS platform design and what it is designed to encourage or discourage. Further work can explore the digital and media literacies required by educators and learners in innovative learning ventures.

Tensions between the lack of agreed objectives, minimal curriculum and the need to form community impacted on the experiences of learners. This may have been an intentional element in the course design, yet from a theoretical perspective Rhizomatic Learning is intended to encourage heterogeneity rather than convergence to the discourse acceptable to the most active participants amongst hundreds.

If educators wish to achieve a more heterogeneous participation and curriculum, in the absence of explicit learning goals, we have argued that it may be more suitable to consider encouraging Kogan’s approach of negotiation and exchange in networks, in place of an emphasis on a term like community with its inherent conceptual challenges. This seems particularly important in a course that is based on an emergent approach to both community and curriculum.

Finally, we believe that other research in MOOCs that include Facebook groups can benefit from adopting the methodological approach this paper illustrates to make greater sense of participants’ experiences and responses to social learning.

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