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ORIGINAL ARTICLE

Preliminary investigations into participation patterns: The case of an iMOOC – an on-line English language learning course

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Preliminary investigations into participation patterns: The case of an iMOOC – an on-line English language learning course

ABSTRACT

Although content knowledge MOOCs have been launched at a very fast pace on various MOOC platforms, language learning MOOCs are less frequently available. The current five week "internal MOOC" (iMOOC) entitled *Essentials of Clear Writing* (ECW) was designed to address perceived English language learning support needs represented in the undergraduate population at the University and more importantly, to attain insights into student response to and participation patterns in language-related MOOCs. ECW was fashioned after MOOCs' design principles although its internal circulation meant that the 'M' or the 'massive' feature was compromised. The aim of the study was to explore possible participation and engagement patterns particular to this community of learners in the absence of student obligations to participate or credit rewards to sign up. Also, the initiative was aimed towards attaining insights into the possibility of harnessing the many purported potential benefits of the MOOC platform relating to connectivism and learning (Siemens, 2012). This study draws on the idea of engagement trajectories (Kizilcec, Piech & Schneider, 2013) in student participation rather than the monolithic notion of completion versus non-completion in participation patterns. Preliminary investigations show that engagement trajectories in this iMOOC are similar to those reported in other content MOOCs, with encouraging levels of video lectures viewership and completion of in-video quizzes and practices. Qualitative data, however, point to weak tendencies in participants' tapping of connected learning opportunities due to various possible reasons.

INTRODUCTION

A good grasp of English language proficiency is fundamental for academic pursuit and development in an English medium university (Arkoudis, Richardson & Baik, 2012). This is especially so in a large public university where, inevitably, there are students who need a review of fundamental writing and reading skills to facilitate the preliminary stages of entrance into academic courses, discourse and interactions. Traditionally, basic English courses are offered in conventional

(face-to-face) classroom settings where academic writing strategies and methods are practised. The recent advent of Massive Open Online Courses or MOOCs has given rise to exciting conversations about whether such e-platforms might constitute alternative ways to present language materials in a way that taps into the affordances that MOOC platforms may offer. Chief amongst these is the partially self-paced nature of the learning process and the fact that learners can revisit these fundamentals at their own time, in their own space and select episodes according to where they see themselves as needing support. Students, however, have to review these fundamentals within the constraints of assignment submission deadlines.

The essence of a MOOC, or what Lane (2012) calls a network-based MOOC is characterised by a goal to facilitate conversation and socially constructed knowledge related to the content rather than the teaching of content knowledge. Its pedagogical thrust is connectivist as seen in its facilitation of learning with connected participants on the open platform. The essence is on the exploration process rather than any particular content. In fact, the philosophy behind network-based MOOCs centres not just on connectivism but also networking (Daniel, 2012). In defining connectivism, Siemens (2012) asserts that technology is central to the distribution of knowledge and that the nature of knowledge is not constant but fluid, depending on context and exchanges between parties. Consequently, the underpinning learning principles are autonomy, diversity, openness, and connectivity (Downes, 2008).

Mackness, Mak and Williams (2010, p. 4) explain autonomy as allowing "learners maximum choice of where, when, how, with whom and even what to learn". The diversity of participants, reading materials, discussions and the learning environment facilitate the avoidance of group thinking or what McRae (2006) terms 'echo-chambers'. Openness ensures that there are no barriers in the entrance into and exit from MOOCs and it accommodates varying levels of engagement. Information flows freely through the network and the culture of sharing and knowledge creation are emphasised. Connectedness and interactivity build a platform that facilitates autonomy, diversity and openness so that connections are made, which allows knowledge to emerge.

Other variations of MOOCs include xMOOCs (Downes, 2013) or content-based and task-based MOOCs (Lane, 2012). xMOOCs are differentiated from network-based MOOCs in that they are perceived as being similar to "modern versions of the external correspondence courses that have been available for 50 years or more" (Boxall, 2012, p. 1) except for the fact that they are web-based. In addition, enrolments in this kind of course are massive, and content acquisition takes priority over the sense of community (Lane, 2012). The task-based MOOCs, while utilising a technology platform to distribute knowledge and catering for a

mass audience, are designed taking into account the targeted participants, their profiles and perceived or established learning needs. Nonetheless, even though community is important, it is not a primary goal (Lane, 2012). Pedagogy in this kind of MOOC is a mix of content instruction and connectivism.

Related to the idea of connectivism is the notion of situated learning (Lave & Wenger, 1991). They maintain that learners learn through socialisation within a targeted community that is influenced or guided by specific situations. In particular, the authors discuss learning that is situated in the workplace akin to apprenticeship. Through the process of "legitimate peripheral participation", they assert that learners who are new to a community of practice learn about the culture and identity of the community. This process, therefore, allows for all within the community to speak the same language and share similar understanding of practices within the community. The authors believe that situated learning is best accomplished through informal settings, one of which is through virtual learning platforms. In fact, Lave and Wenger's definition of situated learning draw from the principle of constructivism (Bruffee, 1993; Bruner, 1990; Vygotsky, 1978) and the concept of community of practice (Gannon-Leary & Fontainha, 2007). From the perspective of MOOC, the virtual platform optimises learner engagement in a less formal collaborative environment.

In relation to language learning, Martín-Monje, Bárcena and Ventura (2013) argue that the affordances of connectivity may explain language teachers' recent interest in open production and interaction in written and oral form, which had previously been neglected because of the sheer complexity of designing such features into the curriculum. Hibbs and Stevens (2012) point to interest amongst English language-teaching experts and educators in using MOOCs for research into language teaching and learning. Stevens (2013) highlights community interaction as a key motivation for learning a language, as learners provide one another with, and process linguistic data in the interaction process. According to Stevens (2013), if learners are "plunged… into the deep end of communication with others then it would tend toward the complex and chaotic quadrants of learning, which MOOCs might address most successfully" (p. 9). The guided but uncharted nature of MOOCs enable leaners to discover underlying perspectives and structures through networking, engaging and collaborating with other learners to find their respective pathways towards a shared goal. While Martín-Monje et al. (2013) claim that few have taken up the challenge, more recently, some have in fact mounted English language learning MOOCs such as *Principles of Written English* (Parts 1 and 2) on the edX platform and *Crafting an Effective Writers: Tools of the Trade* on the Coursera platform.

It is this context of recognising the potential possibilities of a MOOC platform that motivated an interest to start an online course inspired by features inherent in MOOCs. Entitled *Essentials of Clear Writing* (ECW), this internal MOOC (iMOOC) was mounted on the Coursera platform but was conceptualised and piloted only for a defined community, in particular, the community internal to the institution. This type of MOOC is termed an "iMOOC" (internal MOOC) at our institution, that is, a MOOC that is offered to a restricted internal community.

To manage the uncertainty and perhaps, lack of clarity on how to facilitate connectivism in the language learning context, this MOOC-inspired effort was scaled down to a task-based type for preliminary investigation that might help inform the design of a fuller version of a network-based MOOC. Although the feature of being 'massive' was compromised, iMOOCs have characteristics closely resembling those of the task-based MOOC as defined by Lane (2012). They are characterised more by the description of a "… virtual, distributed classroom that exists for six to ten weeks at a time…" (Kizilcec, Piech & Schneider, 2013, p. 170) than by the open-ended course environment with a heavy emphasis on connectivism. The learning environment is structured with instructional videos, regular quizzes and assessments and common activities such as the discussion forum, without any other further community element being incorporated. The video lectures and quizzes were designed to encourage episodes of self-learning and self-assessment within segments of time within a %-week time frame – all features associated with the design of a full MOOC.

RESEARCH QUESTIONS

In investigating this writing iMOOC, we were motivated by the following questions:

1. What are some identifiable patterns of engagement amongst the participants?
2. To what extent does participant engagement indicate the use of the four learning principles of autonomy, diversity, openness and connectivity in the task-based MOOC?

Our intention is to use observations from this investigation to further inform intervention measures in the current iMOOC, as well as in the design of and research into the next language iMOOC that would tap more fully into the four learning principles grounding MOOCs.

LITERATURE REVIEW

A survey of existing literature shows that various studies on MOOC participation have been conducted. Stewart (2010) investigates participation behaviour in a Personal Learning Environments Networks Knowledge MOOC. Her aim was to examine possible correlations between prior social media literacies among participants and the reported value experienced in the course. The findings suggest some value derived from the MOOC experience even for participants with low prior social media literacies.

Chamberlin and Parish (2011) provide personal accounts from two students' experience of MOOC learning. The account presents both students' attitudes towards the ideas of open participation, distributed learning, the credit issue, facilitation and commitment in the MOOC platform. In a similar manner, Levy (2011) provides four principles learnt from his participation in MOOC: learning from MOOC is indeed possible; learning can occur through back channels such as the chat space; systematic assessments may not be needed for learning on a MOOC platform; and a daily communique helps learning by aggregating knowledge learnt.

Kop and Carroll (2011) investigate participant behaviour in a MOOC to understand the importance of creativity in learning. They then investigate how this creativity might be harnessed in a vast learning network platform. Koutropoulos, Gallagher, Abajian, deWaard, Hogue, Keskin and Rodriguez (2012) investigate the role of emotive vocabulary on MobiMOOC participation – MobiMOOC being a course designed around the theme of mobile learning. The results indicate that emotive vocabulary usage did not significantly predict or impact participation retention in the MobiMOOC.

Kizilcec, Piech and Schneider (2013) study the participation patterns of what they describe as "longitudinal engagement trajectories in MOOCs" (p. 170) and focus on subgroups of learners who may not fit the 'from start to end' pattern of participation, but nevertheless can provide patterns of engagement that can help the design and adaptation of MOOC features to enhance learning. Our current investigation similarly focuses on a selection of these trajectories of learning, namely the 'disengaging' and 'sampling' trajectories, so as to inform further adaptation of our writing MOOC.

Mackness, Mak and Williams (2010) study participants' experience of the learning principles of connectivism and point out difficulties that the MOOC platform presents in the learning process. They find that the very principles of MOOC learning – autonomy, diversity, openness create paradoxes which have no easy solutions on the online platform. According to Mackness et al. (2010),

> The more autonomous, diverse and open the course, and the more connected the learners, the more the potential for their learning to be limited by the lack of structure, support and moderation normally associated with an online course, and the more they seek to engage in traditional groups as opposed to an open network. These responses constrain the possibility of having the positive experiences of autonomy, diversity, openness and connectedness/ interactivity normally expected of an online network (p. 266).

English language learning MOOCs, according to Martín-Monje, Bárcena and Ventura (2013), are almost insignificant on platforms such as Coursera, Udacity, edX, OpenupEd.edu and Canvas. Martín-Monje, Bárcena and Ventura (2013)'s first edition of the first language MOOC in Spain, which has recently taken place in the Miríada X platform seems to show many positive outcomes. Though there were many dropouts from the MOOC, the authors found that the peer-to-peer (P2P) activity which provides a platform for learner interaction was very well received. Additionally, one of the key points raised in their conclusion is to direct publicity of such MOOCs towards learners who have most need of them, such as socially underprivileged learners who are not in the formal education process.

METHODOLOGY

On Coursera, the platform on which ECW, our writing iMOOC, was mounted, analysis of participant retention is presented in three categories, namely 'signature track', 'completion' and 'enrolment'. By checking different options in each category, Coursera provides information about participant numbers (and retention) in different contexts. For example, participants who choose to be on 'signature track' will have their progress and performance tracked, usually based on completed assignments as defined by the instructor. While this approach may seem a convenient way of categorising participant numbers, it provides only a general overview of the number of participants in the course at particular junctures instead of offering insights into their engagement in the course.

Kizilcec et al. (2013) use the concept of learner trajectories to examine learner engagement with the intention of balancing between the monolithic categorisation of completers versus non-completers on the one hand, and the overcomplicated emphasis on individual patterns in MOOC engagement on the other. 'Learning trajectories' may be defined as "…longitudinal patterns of engagement with the two primary features of course video lectures and assessments" (p. 171). In establishing the learning trajectories in three computer science courses, Kizilcec et al. (2013) distributed the participants into four clusters, namely 'completing', 'auditing', 'disengaging', and 'sampling' (see Table 1).

Table 1. Kizilcec et al.'s (2013) clusters of learning trajectories

No.	Category	Description of trajectories
1	Completing	• Completed majority of assessments • Varied performance but attempted assignments • Most similar to traditional class
2	Auditing	• Did assignments infrequently • Engaged by mainly watching videos • Followed course for majority of duration • No students obtained course credit
3	Disengaging	• Marked decrease in engagement after initial participation • Disengaged in first third of course
4	Sampling	• Watched video lectures for only one or two assessment periods • Sampling at beginning of course but mainly sampling after course begins

These typologies stem from non-clustering techniques applied to longitudinal engagement patterns, survey measures of engagement and clustering techniques examining engagement with MOOC content. In fact, engagement with MOOC content takes priority as this classification prioritises knowledge as individual construction resulting from interactions with learners, resources and instructors.

Drawing on these notions of learning trajectories, this study intends to trace individual participants' patterns of engagement in a five-week course, ECW, which was mounted on the Coursera platform. Similar to modules mounted as MOOC, ECW has a video lecture component. However, one key difference between ECW and other modules and unlike the three computer science courses studied by Kizilcec et al. (2013), there was no assessment in ECW and no modular credit for those who participated in it. While there were exercises which participants could attempt as many as 100 times, there was no grading and no grades were assigned to the participants. Therefore, in terms of motivation and level of engagement, the observations and implications could be interestingly different. In fact, as noted by Chamberlin and Parish (2011), lack of commitment – whether scholarly or financial – has been a concern for sustainability and connectedness for MOOC participants.

Another key difference concerns membership. Unlike MOOCs, ECW is an internal MOOC accessible only to members within the university community. This raises questions about the definition of mass and diversity, both of which will be discussed in a later part of this paper.

Briefly, ECW is a five-week course with four topics, namely (a) structure of an essay, (b) language accuracy, (c) idiomatic expressions, and (d) coherence,

conciseness and clarity. Each week, one topic was presented and each topic was divided into three 30-minute segments. In each segment, participants viewed a 10- to 12-minute lecture (which included in-video quizzes). This was followed by exercises which usually took around 20 minutes to complete. The fifth and final week was a consolidation of all four units of the module. Participants were asked to revise two paragraphs based on the lessons or learning points in the previous four weeks. In addition to lectures and exercises, participants could interact with other members of the community via the discussion forum. In all there were 16 segments, each with a duration of between 20 and 30 minutes. Participation in ECW was entirely voluntary. It was open to the entire university community, whether staff members or students. In case of students, the course had no influence on their academic standing or status.

While there are some significant differences between Kizilcec et al.'s (2013) MOOCs and our own in terms of course design, motivation as well as targeted participants, fundamentally both studies are keen to look at engagement patterns which will provide insights into learner trajectories for MOOC courses. Therefore, to more intimately capture the distinct features (as well as differences) in ECW, while keeping closely to the original notions of engagement trajectories, these categories have been adapted accordingly to identify and discern engagement patterns in ECW. It is intended that observations made in this study will allow us to make strategic changes to the course that better appreciate learning behaviours and engagement strategies on the iMOOC as opposed to other kinds of MOOCs.

Table 2 describes categorisations and respective definitions of engagement pattern for ECW. In the case of the first category, 'engaged', what we are interested in ascertaining is sustainability of participants throughout the five weeks given that ECW was an iMOOC with no extrinsic reward for the participants – completion of the course was of little significance. As such, 'engaged' is used instead of 'completing'. The 'interested' category denotes engagement of a lesser degree than 'engaged'. Instead of watching video lectures AND doing exercises (as defined for 'engaged'), participants who demonstrated either one would have been considered as having shown a certain degree of interest in ECW. With regard to the third category, 'attempted', which is similar to Kizilcec et al.'s (2013) 'disengaging', the pattern highlights those who were active in the first third of the course. In the case of the fourth category, 'explored', the intent is to identify participants who showed some interest in at least the first to third segments of the course. This concept is similar to that of Kizilcec et al.'s 'sampling' but it differs in terms of the duration of engagement. For Kizilcec et al, 'sampling' refers to viewing of one video lecture. However, for ECW, 'exploring' refers to accessing the first few segments of ECW and attempting some in-video quizzes

Table 2. Adapted definition of engagement categories

Category	Definition
Engaged	Participants who did at least 60% of the in-video quizzes AND attempted at least 60% of practices (homework)
Interested	Participants who did at least 60% of in-video quizzes but attempted practices infrequently OR Participants who attempted at least 60% of practices but viewed video lectures infrequently
Attempted	Participants who did in-video quizzes OR attempted practices for at least the first four segments but presence was sporadic or lacking thereafter
Explored	Participants who did in-video quizzes OR attempted practices for at least the first segment to third segment but presence was sporadic or lacking thereafter
Disengaged	Participants who might have viewed the lectures but did not attempt any of the in-video quizzes or practices

and practices. The fifth category, 'disengaged', is a newly created classification to reflect those who registered for the course but exhibited no movement at all throughout the course.

Perhaps the most significant adaptation in our definitions of engagement categories is a higher requirement for engagement (as opposed to Kizilcec et al's).

RESULTS AND DISCUSSION I

In presenting the data, a general trend for video lectures, in-video quizzes, and exercises is discussed. This is followed by analysis and discussion of learner trajectories based on the four engagement categories.

In this section, we will attempt to answer the first research question, which concerns the identification of patterns of engagement amongst the student participants.

(a) Number of participants

When ECW ended, records show that the total number of participants was 1096. Table 3 displays participant numbers according to the week in which they registered, from week 1 with 784 new registrants to 36 in Week 5.

Table 3. Number of new participants over five weeks

	Week 1	Week 2	Week 3	Week 4	Week 5	Total
Registration	784	94	81	42	36	1096

Total number of active* participants: 909

As observed in Table 3, the number of participants was 784 at the start of the course in Week 1. However, the number dropped drastically in Week 2, approximately 8 times fewer participants than in Week 1. The decline in the number of new participants can be observed throughout the five weeks. This general trend seems consistent with that of courses offered as MOOC on Coursera and other similar platforms (Clarke, 2013; Kizilcec at al., 2013).

Nonetheless, in the case of ECW, it is interesting to note that there were 36 new registrants in Week 5, the last week of the course during which consolidation of content in the first four weeks was done. Another noteworthy point is that while there were 1096 registrants, data from Coursera indicate that only 909 were active participants. This means that 187 (approximately 8.3%) among those who registered did not view any lectures or attempt any of the exercises. They constitute the category of participants that we define as 'disengaged'.

(b) Viewership

Viewership refers to the number of participants who viewed the ECW lectures. There were altogether 15 short video clips in ECW, three for each topic and week. Table 4 summarises viewership in each week, categorised based on the total number of times the lectures were watched as well as unique viewership for content put up for the week. Lecture view provides an overall statistics on the total number of times lectures were viewed. Unique view, on the other hand, refers to individual viewing from specific participants. The figures refer to the number of participants but not the number of times lectures were watched. For example, in the case where a participant viewed a lecture 10 times, the statistics for 'total lecture view' is 10 and for 'total lecture unique view', it is one.

As shown in Table 4, in Week 1, there were 759 viewing of lectures, out of which 309 were unique participants. This means that on average, each participant might have viewed the lectures at least twice. In the subsequent weeks, namely Weeks 2 to 4, while the number of viewing remained high, the number of unique views fell. Interestingly, the total lecture view increases slightly in Week 5, which consisted of the consolidation of the four weeks of lessons, but the total lecture unique view increased significantly. One suggestion is that as the course progressed, in general, the participants' level of engagement increased. This

Table 4. Number of participants who viewed lectures in each week

	Week 1	Week 2	Week 3	Week 4	Week 5
Total lecture view	759	616	456	390	636
Total lecture unique view	309	159	109	99	112

can be observed from the ratio between unique viewership and total lectures viewed, which was approximately 1:2 in week 1, 1:3 in Week 2, 1:4 in Weeks 3 and 4, and 1:6 in Week 5.

(c) Level and pattern of engagement

A closer investigation of participants' pattern and level of engagement was done through an analysis of participants who did the in-video quizzes presented within the lectures and the practices. Data show that among 1096 who registered for the course, there were 157 participants who attempted at least one in-video quiz or one practice at any one or multiple points of the course. This is approximately 14% of the total number of registrants (of 1096). The engagement pattern of these 157 participants was then analysed based on the first four categories of learning trajectories (see Table 5).

Table 5. Breakdown of engagement categories

	Number	%
Engaged	19	12.1
Interested	21	13.4
Attempted	47	15.9
Explored	70	44.6
Disengaged	0	0
Total	157	

Of interest from this set of data is that, for a course such as ECW, where motivation for enrolment is based primarily on interest and with no commitment demanded, it is noteworthy to observe that besides viewing lectures, 14% demonstrated in a more concrete and substantial way of engaging with the course. Moreover, among this 14% (namely 157 participants), 12.1% did at least 60% of both the 11 in-video quizzes as well as the 16 practices, 13.4% did at least 60% of either, and 15.9% attempted at least one quarter of either. The percentages for the 'engaged' and 'interested' can be said to reflect good levels of participation when compared to the respective trajectory percentages in Kizilcec at al.'s (2013) study. This is because our adapted notions of 'engaged'

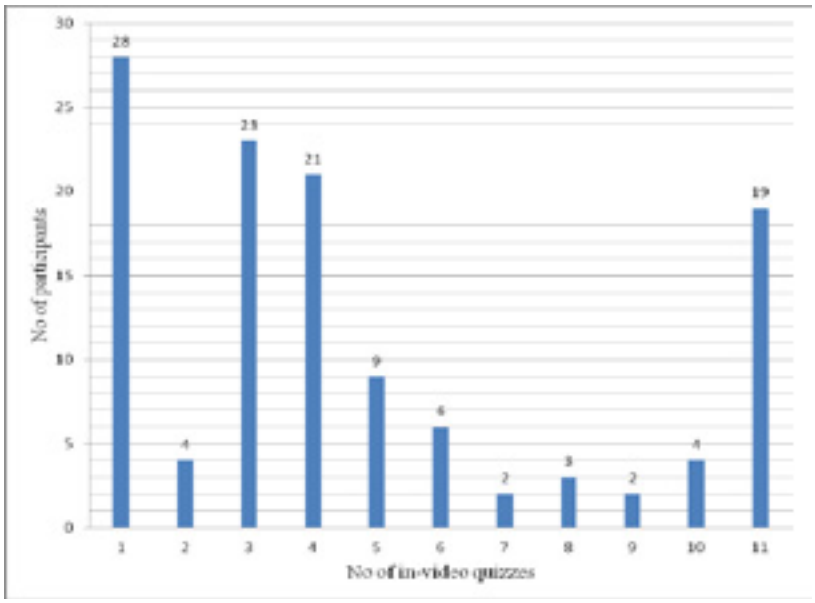

Fig. 1. Number of participants attempting in-video quizzes.

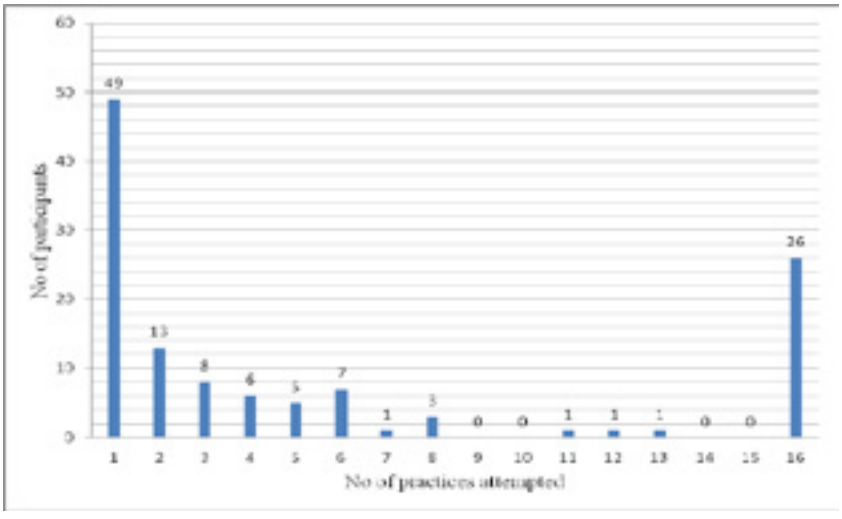

Fig. 2. Number of participants attempting practices.

and 'interested' set in-video quizzes and practice completion benchmarks at a minimum of 60%. This suggests a reasonable degree of sustainability, persistence and engagement for an iMOOC.

When statistics for in-video quizzes and practices were analysed separately, the results revealed a similar general trend. In particular, the trend was sporadic for both the in-video quizzes (see Figure 1) as well as practices (see Figure 2). Perhaps coincidentally, the total number of participants for each was 121. However, unlike practices where most of the attempts concentrate at the first and final lessons, for in-video quizzes, there seems to be spikes of activities in lessons 3, 4 and 5.

Another dimension that could provide further insights into learning trajectories is scores from the practices. However, in this study, as participants were allowed as many as 100 attempts and unlimited time to complete each practice, the scores could not be meaningfully used to establish student progress or performance. Nonetheless, for a glimpse of the effort that the participants put into doing the practices, our iMOOC data revealed that on average participants attempted each practice 1.8 times as evidenced from actual submission (see Table 6).

In summary, what these statistics reflect are trends typical of MOOCs where the level of participation is high at the start of the course, but falls quickly especially after the initial one or two segments or periods. In the case of ECW, the drop-out

Table 6. Average number of times of submission for practices

Practice	**Submission (multiple)**	**Submission (unique)**	**Submission (average)**
1_1	253	155	1.63
1_2	183	86	2.13
1_3	142	71	2.00
1_4	98	63	1.56
2_1	90	62	1.45
2_2	75	57	1.32
2_3	87	49	1.78
2_4	80	44	1.82
3_1	79	42	1.88
3_2	84	39	2.15
3_3	94	39	2.41
3_4	88	37	2.38
4_1	55	35	1.57
4_2	60	32	1.88
4_3	51	33	1.55
4_4	57	33	1.73
Overall	1576	877	1.80

number stabilises after the first third of the course that is between Weeks 2 and 3 or segments 5 and 6. The high attrition rate is an issue commonly experienced and highlighted by MOOC course developers and instructors (Clarke, 2013; Kizilcec et al., 2013; Watters, 2013; Jordan, 2013). In fact, Jordan (2013) found that fewer than 10% of participants who enrolled in 24 xMOOCs, primarily from Coursera, edX, Udacity and MITx, completed the courses.

Nonetheless, one interesting observation of the ECW data is the significant increase in lecture viewership during the consolidation lesson, although the number of participants remained relatively unchanged. A similar trend can be seen in attempts at practices. This might have implications for MOOC course developers to consider in terms of the periodic incorporation of a consolidation or review component for a long course and in the case of a short course at the end of it.

RESULTS AND DISCUSSION II

Our second research question asks to what extent participant engagement indicates the use of the learning principles of autonomy, diversity, openness and connectivity in the task-based MOOC. We started out with the understanding that this is an iMOOC in contrast to a network-based MOOC. As such, the core feature of connectivism and the accompanying learning principles were not prioritised although any glimpse afforded by the engagement pattern would be useful for future design or the reshaping of ECW. Also, the iMOOC was internal to the university community and as such, it was to be expected that the features of diversity and openness would be limited.

We found that there was indeed little indication of connectivity in the posts from participants in the discussion forum over the 5-week course. Table 7 provides general analytics for the discussion forum activities.

Table 7. Analytics for discussion forum

Item	Number
Total threads	19
Total posts	34
Total comments	3
Number of participants (posting)	12
Number of participants (commenting)	2

As observed in Table 7, the level of participation in the discussion forum is low, compared to the potential number of registrants at the launch of the iMOOC, with only 19 threads. In all threads, the responses were from various course instructors and not from peers, though the question might have been posted for anyone to answer. These threads ranged from questions on administrative matters (e.g. downloading of video content) to questions on the content of the course.

With regard to content questions, there were two sub-types: firstly, requests to clarify in-video quiz answers and requests for further explanation and secondly, where students asked for answers to questions. Examples of a clarification question and a question requesting an answer are given below:

Question on clarification

- I also like to ask why the use of present perfect tense – 'has taken' is incorrect.

  Present perfect tense is used to show that something has been done from the past up to the present.

  I interpreted the sentence to mean that massive deforestation has been taking place since from the past (mid-eighteen century) to the present.

  Could someone please explain why (3) and (4) should be replaced with past tense and past perfect tense respectively?

Question requesting answers

- I want the answers for Q2 and Q4 of the Language focus section
- Would it be possible to provide the answer for the above question, i.e. examples of related/similar words in the paragraph. I've not been able to get a single correct answer for this question thus far – please help!

There is very little indication of connectivity, although the participants could be said to be autonomous in clarifying what they thought need clarification and in putting forth their own perspectives on what they thought should or should not be the correct answers to their quiz questions. The request for answers may indicate that participants wanted to calibrate their own performance and understanding of the lectures, which would be another indication of the participants' autonomous charge of learning in that segment.

Separately, from the pre iMOOC survey of 421 responses, 93% were responses with students indicating what and why they wanted to learn from the iMOOC. Fewer than 5% of the responses indicated reasons other than an independent

expectation to learn something from the platform – for example, "curiosity" or "My teacher told me to sign up". In many cases, the indication of wanting to learn is general, for example, "I would like to improve my writing skills" – but in about 20% of the responses, participants listed specific aims for joining the iMOOC with statements such as this: "For my Final Year Project it will be helpful". In a broad way, these responses alluded to the expression of an autonomous decision to participate in the iMOOC with varying levels of engagement trajectories after the first initial sign in.

There were only 26 comments in the post iMOOC survey. Some of the comments indicated participants' intention to learn from the iMOOC content beyond the five weeks at their own pace, or in areas that they needed to revisit:

- I did not follow the schedule due school works. *I plan to finish watching all the videos and doing the all the practices this week*.
- I want to know more about how to write a proper report and some rules that I need to follow when I write the report. *I will continue other video when I am free, I will download all video to study*.
- to improve language or English which always the problem in my study. Time management, would wish to study it again during break or holidays period.
- I did the practices first and only watched the video lectures for which I felt that I did not understand after the practice. I did not watch the other videos as *I felt that I understood those topics*.
- primarily motivated by my drive to improve my language and writing skills, especially as i have been generally weak in it. Also, *watching video lectures are more appealing* than reading notes/text off the screen.

These responses may indicate the desired trait of autonomy that is a necessary principle of learning on a MOOC platform. This is a dimension that could be further explored through focus group discussions or semi-structured interview sessions with participants.

Mackness et al. (2010, p. 271) clarify that "[a]utonomy does not mean casting learners adrift but it does require learners to embrace independent learning." In their experience of the MOOC, it seems that not all participants appreciated independent learning space, as the valued principle of autonomous learning was jeopardised when constraint was perceived as absent. Lea et al's (2009) study of undergraduates' digital literacies shows that students depend heavily

on institutionally sanctioned sites of information to guide them in the use of online information. The participants inevitably visited sites that were referred to in lecture notes to begin their information search. It is not unreasonable to posit then, that faculty members' explicit indication and participation that highlight the usefulness of online collaboration and connectedness may help students use this platform more wholeheartedly. Perhaps, appropriate/ intermittent instructor supervision is an area to consider, as suggested by the authors, and especially in language learning where the notion of competent usage may need instructor guidance. In the case of this iMOOC, there were some expressions of autonomy in decisions to participate in the course and in the selection of what to learn and perhaps even how to learn the necessary content beyond the five-week period. However, the small number of participants in the discussion threads and the post course survey means that these observations about autonomy pertain to only this exploratory study. Also, the discussion forum threads show some interest in connection but mainly between teacher/ administrator and participants.

In the experience of another language learning MOOC where P2P interaction was designed into a MOOC, it was found that though both the teaching team and participants welcomed the opportunity to interact in a language MOOC, participants failed to utilise the interaction platform due to the extra time and effort to interact on the MOOC platform. The authors recommend that participants should be well oriented to collaborative learning and the need for it to prepare participants to use the connectivity to further develop the principles of connected learning on the course (Martín-Monje et al., 2013). Indeed, connectivity in itself may not be a sufficient condition for connectedness and collaborative learning (Mackness et al., 2010).

IMPLICATIONS AND CONCLUSION

There is further room for exploring the potential of harnessing the MOOC platform for English language learning, given the engagement trajectories reflected in this current iMOOC. Three areas of observation are pertinent for subsequent design of MOOCs for language learning purposes.

First, the increase in participation level at the consolidation week in the course is unexpected as explained earlier and a useful pattern to note as it may indicate the need to provide periodic consolidation of learning emphases, especially in MOOCs with longer duration than the five-week period. Related to this is the observation about the ratio between unique lecture view and total lecture view, where there is an increase in total lecture view with every unique lecture view as the ECW iMOOC progressed. This implies a higher degree of participant

engagement with the lesson as the course proceeded especially towards the Consolidation lesson. Anecdotal observation from conventional classroom seems to show a similar pattern of attendance and participation.

Second, careful and purposeful scaffolding of lesson content as well as in the design of practices and assessments is very important to enable learning for MOOC participants who enter and exit the learning platform in ways that cannot be constrained. Indeed, for learning to take place in an environment where the learning space is frequently interrupted and sustainability is a challenge, it is crucial that course developers consider and make concerted effort in addressing how learning can be optimised in such an environment.

Third, the connectedness in language learning MOOCs needs further detailed investigation but it is reasonable to say that participants need to be well prepared for collaborative work for the feature of peer learning or learning from the community to be effective. In this iMOOC, participation in the discussion forum was low and more mainly directed at course instructors. In another language learning MOOC experience, participants were reticent in the use of scoring rubrics amongst peers because of various reasons. Although a characteristic not of focus in task-based MOOCs, connectivity with the community may present good potential for interaction in language learning MOOCs. However, the path to competent use of connectivity needs to be paved with participant preparation and measures to ensure correct and confident usage of these potentialities.

In essence, the mounting of an iMOOC has provided useful observations that can inform the further design of language MOOCs.

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