Partnership Model for Entrepreneurial Innovation in Open Online Learning

Authors

Li Yuan
l.yuan@bolton.ac.uk

Cetis - Institute for Educational Cybernetics

University of Bolton

Stephen Powell

Cetis - Institute for Educational Cybernetics

University of Bolton

Globalisation and increased competition nationally and internationally for students points towards the need for increasingly flexible learning routes, but these must also be sustainable and cost effective for institutions to deliver. Established models of higher education can be much more costly compared to those presented by open online courses. This paper discusses possible entrepreneurial initiatives in the context of open education and online learning that focus on three key areas emerging from MOOC experiments: openness; revenue models; and disaggregation of HE provision. A case study will be presented to demonstrate the development of new models around openness, collaboration, and innovation through international partnerships in an open learning ecosystem. The potential for entrepreneurship in developing open online courses and the challenges faced in a higher education context are discussed.

Tags

Open education, innovation, entrepreneurship, online learning, eLearning, MOOC

1. Introduction

Globalisation and increased competition nationally and internationally for students points towards the need for increasingly flexible learning routes, but these must also be sustainable and cost effective for institutions to run. Established models of higher education can be costly to students in terms of the fees they are charged and the opportunity costs of full-time study – e.g. the income and training they could have received through employment. In part, sustainability of the current business models in HEIs is one factor that has generated significant levels of interest in the development of new business models such as those presented by open online courses, including the developments around Massive Open Online Courses (MOOCs) (Yuan and Powell 2013). As a result, the commercial online course providers, such as Udacity and Coursera, attract large numbers of learners who are currently unserved by the higher education system and are attracted to the online and face-to-face courses on offer. The majority of these learners already have higher qualifications and are well educated. However there remains an opportunity for those who are less well educated

if institutions develop credit and award bearing courses that are offered with appropriate learner support. This approach may be attractive to learners if it offers flexible study routes at a lower cost of provision and hence lower fees.

The interest in MOOCs has created a context in which higher education institutions are re-evaluating their online learning provision. The argument that MOOCs have provided a lens through which to examine current pedagogical and business models for face-to-face as well as online distance learning, including methods of accreditation, is gaining increasing acceptance. Reports on MOOCs (BIS, 2013; Moody 2013; Kalman 2013) offer different views on their likely impact, but whatever the future holds, there may still be significant opportunities to be exploited from MOOCs for institutions' marketing activities and for academics to reach a wider audience. A significant point made by the BIS report (2013) is that further actions are needed to respond to the maturing of MOOCs, including: the exploration of a viable business model for low-cost accredited degrees; and understanding the trajectory of their technical development; and opportunities around accreditation and pedagogical innovation.

This paper discusses possible entrepreneurial initiatives in the context of open education and online learning that focuses on three key areas emerging from MOOC experiments: openness; revenue models; and disaggregation of HE provision. A case study will be presented to demonstrate the development of new models around openness, collaboration, and innovation through international partnerships. The potential for entrepreneurship in developing open online courses and the challenges faced in a higher education context are further discussed and explored.

2. Open Education, Online Learning and MOOCs

Yuan & Powell (2013) provided an analysis of the origins of MOOCs, making a direct link to open education movements that contributed to the MOOC inception (2008), which eventually led to launch commercial MOOC start ups by venture capitalists and elite institutions (2011-12). In line with this analysis and the identification of current trends, Figure 1 shows the influence of MOOCs in the HE system in the contexts of face-to-face teaching, open education, online distance learning, and possible entrepreneurial initiatives in education and training.
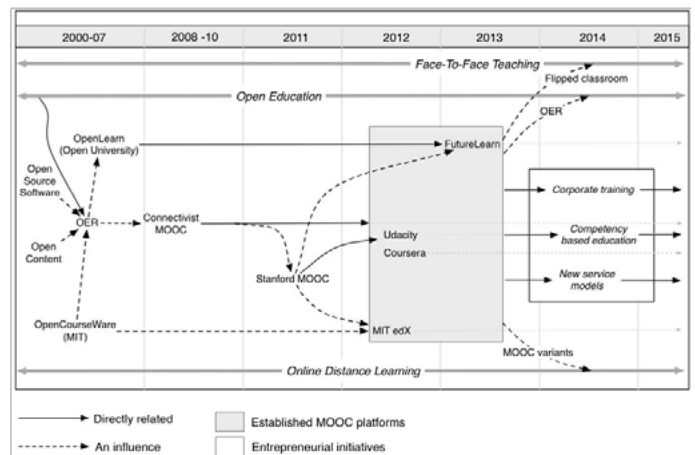

Figure 1. Potential Impact and Trends of MOOC on Education

Key ideas and trends shown in Figure 1 include:

I.   Most MOOC content is not openly licensed so it cannot be reused in different contexts. There are, however, a few examples of institutions using Creative Commons licences for their courses - meaning they can be taken and re-used elsewhere. In addition, there is a trend for MOOC to be made available 'on demand' after the course has finished, where they in effect become another source of online content that is openly available. Those OERs and online content can be used to develop blended learning courses or support a flipped classroom approach in face-to-face teaching.

II.   New pedagogical experiments in online distance learning can be identified in addition to the c/xMOOC with variants including SPOCs (Small Private Open Courses), DOCCs (Distributed Open Collaborative Course) and SOOCs (Social Online Open Course or Small Open Online Course). It is likely that they will evolve to more closely resemble regular online courses with flexible learning pathways. These will provide a range of paid-for services, including learning support on demand, qualitative feedback on assignments, and certification and credits (Yuan and Powell 2014).

III.   The disruptive effect of MOOCs will be felt most significantly in the development of new forms of provision that go beyond the traditional HE market. For example, the commercial MOOC providers, such as Udacity and Coursera, have moved on to professional and corporate training, broadening their offerings to appeal to employers (Chafkin, 2013). In an HE context, platforms are creating space for exam-based credit and competency-based programs which will enable commercial

online learning providers to produce a variety of convenient, customizable, and targeted programs for the emergent needs of the job market backed by awards from recognised institutions.

IV.   The development of online courses is an evolving model with the market re-working itself to offer a broader range of solutions to deliver services at a range of price levels to a range of student types. There is great potential for add-on content services and the creation of new revenue models through building partnerships with institutions and other educational service providers. As these trends continue to unfold, we can expect to see even more entrepreneurial innovation and change in the online learning landscape.

3. Entrepreneurship in Education – the MOOC Experiment

MOOCs have generated as much excitement amongst educational entrepreneurs and amongst established academics than any other technology related innovations in recent years. The significance of MOOC development for entrepreneurial initiatives in education involves three key areas: openness, revenue models and disaggregation of HE provision (Yuan & Powell, 2014). These are discussed below.

3.1 Openness: Scalable & Data Driven Business

The term openness in an educational context encapsulates a wide range of concepts including registration requirements, fees to access a course, or what may be done with resources (Downes, 2013). In the case of MOOCs, openness is key as it is this that makes it possible to pursue the scalability of courses and the connectivity of social networked learning beyond institutions.

Open access is an important aspect of MOOCs because it brings with it the possibility of large numbers of learners to achieve scalability at minimal additional cost. The commercial MOOC platforms developed new approaches to online learning which focus on the scalable delivery of content and data driven business.

3.2. Revenue Model: Freemium & Premium

Commercial MOOC start-ups are adopting what is known as a 'freemium to premium' business model, one that has been widely used by Silicon Valley technology and social media start-ups. The model offers services and products that are initially free, and once a consumer base has been established, a fee is then charged for advanced or additional services and products. Examples of companies that have adopted this model for their services include Google, Facebook and Twitter. Key to this approach is the level of attention generated and consumption of the free product; this provides a platform to sell premium products or services to some of the users. As the use of the free product increases, the demand for the revenue generating products increases.

In the case of MOOCs, the platform providers partner with 'elite' universities to offer free courses without credit. The premium model requires the MOOC start-ups to offer additional services for fees and this can include certification, licensing of course materials, and tuition fees for credit-based courses. The MOOC platforms also partner with other commercial providers to provide relevant services to learners. For example, Coursera receives a fee each time a student clicks through to the Amazon site to buy recommended textbooks or other products. Both Coursera and Udacity also partner with Pearson to provide examinations at their test centres.

3.3 Service Disaggregation: Unbundling and Re-bundling

Christensen, Anthony and Roth (2004, 227 – 250) provide a useful perspective to help understand the concept of disaggregation. In simple terms, companies can "choose to integrate, executing most of the activities themselves, or they can choose to specialize and focus on a narrow range of activities, relying on suppliers and partners to provide other elements of value added", (ibid, p225). Applying this theory to higher education, the integrated model is dominant and HEIs are responsible for the full range of activities required to deliver programmes: curriculum design, marketing, recruitment and enrolment, delivery, and assessment and accreditation. However, MOOCs represent an unbundling of the traditional services, which higher education institutions (both distance and campus) have been delivering (Universities UK, 2013, p24).

If unbundling is pursued, institutions will need to identify new ways of packaging, planning and organising their courses, services and learning support activities. They can then focus on their unique disciplinary, reputational and/or geographical strengths. For example, institutions could provide contextualised local and personalised learning experiences through re-bundling different components and elements from other organisations

to create certificates and degree programmes that meet local demand. Some universities have started to experiment with re-bundling by embedding courses from MOOC platforms into their existing face-to-face courses. Re-bundling is a possible threat to HEIs, but also an opportunity as those institutions which re-bundle effectively may find a way to take advantage of MOOCs by incorporating them into revenue-producing degree programmes. There is also a case to be made that educational publishers such as Pearson, will make an attempt to develop new business models by applying digital publishing techniques to the HE market place.

Clearly, MOOCs have generated significant interest from commercial companies and venture capitalists that see a business opportunity to be exploited in higher education through open access and disaggregating of teaching from content delivery and assessment to pursue marketing activities with different pricing strategies. The early MOOC experiments framed themselves around the disruptive innovation theory (Bower & Christensen, 1995) that promise to disrupt the standard higher education model with a focus on developing new business models and the new markets for potential profits. Although MOOC start ups may not be able to replicate the pattern of disruption seen in other marketplaces, increasingly, openness will play an important role in driving innovations in education and developing entrepreneurship in the HE market.

4. International Opportunities

Increasingly, openness in education is providing opportunities for experimentation and innovation in teaching and learning. It also allows new for-profit providers to enter the higher education market (Weller, 2014). OERs and MOOCs largely came about as a result of engaging with the possibilities of technological innovation in sharing and using course content and delivery of online learning in higher education. However, as Weller (2014) pointed out, most of the open education movement, with notable exceptions, is seeking to supplement or complement existing education. This activity is undertaken by people working in higher education and are largely supported by not-for- profit institutions. The emergence of MOOCs has raised the profile of open education in the HE context and has stimulated debates around adaptive learning and business models in higher education (Daniel, Cano & Cervera, 2015). Weller (2014) suggests that "the presence of commercial interests in the field can create a healthy mix of competition, innovation and different perspectives" in higher education

resulting in a renewed interest in financial and business models that can be developed around online learning provision. For example, companies such as Udacity and Coursera have taken the MOOC concept to experiment with new business models that claim to disrupt the existing HE market. However, the diversity of students' needs between sophisticated online learners and those new to higher education makes developing a model that is based on MOOCs difficult. This has tended to drive providers towards more restrictive training models that offer pre-packaged solutions which negate further exploration of new pedagogical approaches and teaching and learning methods. This provides opportunities for developing the partnership model of new entrepreneurships with a focus on open online education more broadly to provide services that meet the diverse needs of the educational market.

International education has gained public attention as one result of the rapid development of MOOCs, which promise to expand universities' market reach and promote the globalisation of higher education, a big market for HEI in the UK, USA and Australia. The increased pressures of lower direct public funding for higher education means that universities have to seek alternative sources of income. In our work researching and writing reports about the impact of MOOCs on the higher education system, we identified one of the impacts on institutions as forcing "established providers to re-visit online learning and open education as strategic choices for the future" (Yuan and Powell 2013).

Higher education institutions need to assess, prepare and adapt their global engagement strategies to the new opportunities presented by open online learning. A significant area of interest for UK HEIs is how opportunities in overseas markets like China can be exploited. However, there are some fundamental challenges for English language MOOCs and other online course if they are to succeed in the mass Chinese market. These include: technical constraints that limit or prevent learner access to these courses; the provision of pedagogically appropriate versions of courses; delivery in a different language, and in different cultural and educational settings; and, given a different approach to financing education in China, finding and developing business models that are sustainable over the longer term. A partnership model is one possible solution to this problem in helping universities in the UK and China to design and delivery affordable, flexible and effective international education through online or blended provisions. This provides the opportunity for large numbers of Chinese students to experience a UK higher education

and enrich and internationalise the curriculum in Chinese universities. In return UK universities will be able to market their higher degrees through these Open Online Courses and recruit better prepared students.

5. A Partnership Approach for Entrepreneurships in International Education – a Case study

The case study discussed below is based upon a new business start up to unlock market potentials through promoting openness, collaboration and innovation in higher education, and to help UK institutions to adapt their global engagement strategies to the new opportunities presented by open online learning in China:

- A China-based platform – Wolearn has been developed to make UK MOOCs/Open Courses easier to find and more accessible through adaptation to the local context;

- Services have been offered to broker partnerships between UK institutions and Chinese institutions, who in turn want to offer an affordable international educational experience for their students by integrating open online UK courses into their programmes, and for UK institutions to expand their markets in China;

- A collaborative blended delivery model has been developed to create an interactive, responsive and pedagogically effective online and face-to-face experience.

UK partners were identified through those universities that have produced OERs, open online courses and MOOCs, and want to expand their international market. The proposition put to institutions is that this approach will lead to the development of partnerships between UK and Chinese universities, and through the integration and delivery of identified courses deeper institutional collaboration will be made possible.

In September 2014, the University of Southampton Web Science MOOC, hosted on the FutureLearn Platform in the UK, was used as an integrated component of an introduction to computer science course being delivered by Beijing Normal University. Chinese students were asked to register on the course so that they could access the resources in addition to attending lessons as normal, delivered by their own university. Online discussions were held between students and their Chinese teachers focussing on the MOOC resources and held

on a third party platform provided by the WoLearn company. In addition, a limited number of online seminars were delivered by academics from Southampton with the summative assessment of the 87 students being undertaken by the Chinese tutors. Figure 2 illustrates how the different partners organisational arrangements.
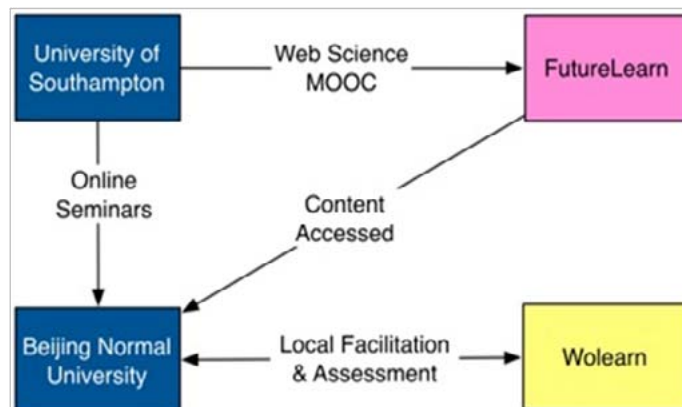

Figure 2. Partner Organisational Relationships

The business model has been developed to take the advantage of unbundling and re-bundling of courses, where Chinese Universities pay for additional services (online lectures and seminars), on top of free online course content. Content produced by UK universities can be localised and re-used by many Chinese learners. Support for learners is provided by local institutions' staff making it economical and affordable. This division of labour is key to the business model as the more significant costs of scaling up numbers is borne by the local Chinese institutions, allowing collaborations to take advantage of the different cost-bases in the UK and China. Therefore, the model is made commercially and financially viable by moving the costs associated with scalability to the Chinese institution.

6. Method

At the end of the collaborative blended course from BNU and Southampton, Wolearn conducted a survey to evaluate the overall course and gather feedback for improvements. 72 students completed the questionnaires and submitted. The return rate was 82% and effectiveness was 100%. In additional to the questionnaire survey, focus group interviews have also been conducted with 12 students who have participated in the courses. Two interviews with professors from Beijing Normal University and the University of Southampton, who have been collaboratively delivering this blended course, were conducted

respectively. The interviews were recorded, transcribed and translated into Chinese and English. For the purpose of this paper, we have provided relevant results from the questionnaire survey and the interview with BNU students to evaluate the values and outputs of this collaborative blended learning course. Furthermore, data collected from the interviews with teachers in the University of Southampton provided a basis for discussing the possibilities and challenges in developing entrepreneurial innovation in open online learning in higher education.

7. Findings and discussion

7.1 Students' perceptions

7.1.1 Overall satisfaction of students toward this collaborative blended course

	Number of students	Percentage	
Very satisfied	17		24%
Somewhat satisfied	31		43%
Neither satisfied nor dissatisfied	17		24%
Somewhat dissatisfied	4		6%
Very dissatisfied	3		4%
总计	72		100%

Table 1 Overall satisfaction of students toward the MOOC-based collaborative course

As table 1 shows, the majority of students were satisfied with the course (67%). Several reasons were mentioned by students in the free texts and the focus group interview including: (1)the course expanded their subject knowledge in computer science and provided opportunities for them to practice their use of English: (2) Gained new perspectives and exposure to Western learning styles that would be useful for their future career or studying abroad: (3) Compared with completely independent MOOCs, this blended collaborative course enabled them to engage with UK professors and gain different learning experiences: (4) The course was enjoyable and meaningful, as lecturers from both China and the UK worked together to encourage students to think and share ideas which made the course very interesting to learn.

For example, one student pointed out:"In the past, the things we learnt in the class were very generic. In the Web Science

MOOC and the online seminar this semester, we discussed lots of hot topics and help me better understand what I have learnt in the lessons. It is very unique that the professors from Southampton could answer our questions directly" Another student commented on the course that "I learned lots of new topics on computer science which changed my view about this subject. I didn't like computer science much before but I found it was interesting now".

The reason for dissatisfaction were identified, including language being one of the major barriers that prevented students communicating with UK professors, which affected the effectiveness of the course.

7.1.2 The value of different components in the course

	Very valuable	Somewhat valuable	Little value	No value
Web Science MOOC	34%	49%	14%	3%
Online seminars	34%	43%	17%	6%
WoLearn	26%	49%	21%	4%
Face to face discussions	37%	45%	15%	3%

Table 2 The value of different components in the course

Table 2 shows that most of students think that all four components of the blended course were valuable with 96% on Southampton MOOC on Web Science, 85% on the online seminar valuable and 90% on the online discusses in the forum at Wolearn platform respectively. Some students pointed out that it would be better if students have more time to communicate with professors from Southampton. One students also suggested that "I expect that we could be able to communicate with students from Southampton and understand more about how they learn, not just communicate with professors."

7.1.3 Likelihood of studying an online degree offered by Southampton

	Number of students	Percentage	
More likely	17		24%
Somewhat likely	40		56%
Less likely	9		13%
Not likely	6		8%
Total	72		100%

Table 3 likelihood of studying an online degree offered by Southampton

An important cornerstone of the business model being developed by the collaborative, blended model is the extent to which students experiencing a UK university are more likely to study with them in the UK or online. In this case, there is evidence that students were more likely to consider studying with the University of Southampton, with 24% of students responding that they were more likely and 56% of students that they were somewhat likely to study online with Southampton. The focus group interviews helped to better understand this online proposition. For example, one student explained that it was quite expensive to live and study in the UK. If there were some online degree available for him with lower cost, he did prefer to take that. It should be more efficient. Another student expressed her view that the only factor for her to take online degrees or not depended on whether the courses provided are interesting enough. However, students also pointed out some concerns about online verses face to face learning. For example, it was essential that qualifications were recognised by the Chinese government if they were to consider studying with an institution as if this wasn't the case they would find it difficult to use the qualification to gain employment. Further, they expressed reservations about how teaching and learning online may not be able to adequately replicate lab experiences and the development of practical skills and abilities. Lastly, the students were very clear that because online courses may not be as effective as studying on campus they believed that the fees should be lower.

7.2 Academics' perceptions

Many UK universities have a strategic priority to have a global reach and part of this is the development of international partnerships. The academics from Southampton reflected that "this course appeals to the university approach to make more international partnerships. In particular, how MOOCs can be used to help achieve this goal". Developing MOOC provision is a significant investment, and it was pointed out that "we're looking around for opportunities to leverage this resource and the investment that we've made to get more use and value out of it in all different contexts. That in itself was very appealing." It was suggested that the feedback from students were very positive, therefore, it is worth continuing with experiments, especially, how to connect with teaching practice in the university.

On academic pointed out that the reason innovation is not common in UK universities teaching is that "we can all just

manage doing the same thing year after year and nobody has to worry about doing anything complicated." They pointed out that the challenge of working in this was that it was not possible teach as before and, therefore, there was a requirement to try new things like the 'flipped classroom' and to consider the different needs of the Chinese students in particular pitching ideas at an appropriate level to "stimulate them to think about the topics but not to make it too difficult". The academics speculated about different approaches they could develop including teaching the same courses simultaneously in China and the UK so that students can learn together, and recording lectures to be re-used at a later date. This 'moving on' of teaching practice has potentially significant benefits for the wider institution and a striking observation was how enthused the UK lecturers became about their teaching. The academics observed that although teaching between institutions was possible, if each institution handles their own assessment and quality assurance then there are fewer barriers to working together.

7.3 The Partnership Model

The approach developed in this case had a clear delineation of the responsibilities of the organisations involved and is shown by figure 3. The bulk of the work is undertaken by the Chinese institution so that the additional costs associated with the involvement of the UK institution don't become over burdensome due to the significant differences in costs. In addition, the company (WoLearn) takes on the organisational, and coordinating role in the UK as well as providing the learning platforms and the pedagogic design.
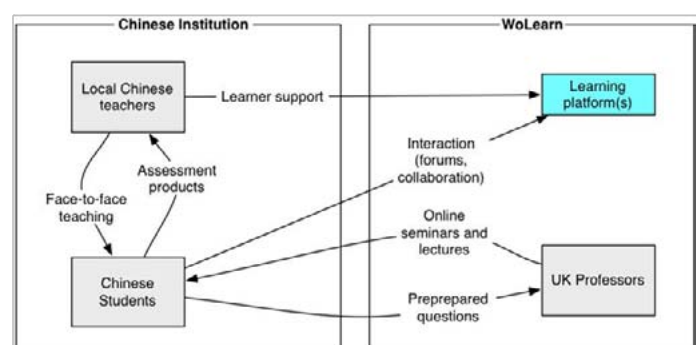

Figure 3. Partnership Model

Learners were supported during this course by both academics and non academics. The academic support was carried out by the local teacher in the classroom and the online facilitation of the forums. The non-academic support was undertaken by

the course administrators from Wolearn, who were responsible for coordinating the seminars and the overall course implementation. There was also the need for non-academic support from a teaching assistant at Southampton, who dealt with technical issues at the Southampton end including recording the videos during the seminars. Both aspects were important in making run the project smoothly.

The most difficult challenge for developing entrepreneurship in open online learning is to work out a sustainable business model. One academic pointed out "at this stage no credit involved so no quality issues. Simply doing something as invited guest speakers. As soon as you go beyond that there is a whole load of bureaucracy stuff and there has to be a business model for doing that". Another academic commented that "further up the hierarchy people may complain about who is going to pay for your time in this, a more bean counter attitude. The existence of a bilateral or multilateral experiment in this area may be enough justification in itself ".

The partnership model developed addresses this problem head on. It recognises that there will need to be a flow of money, but by making an attractive proposition to both sides it is anticipated that this can be kept at a sustainable level. UK universities gain fee paying students with Chinese universities investing a modest amount of money in internationalising their curriculum so that students can gain an internationalised educational experience.

8. Conclusions

The early MOOC development opened up debates around new pedagogical approaches and business models in higher education. The three key areas of MOOC experiments on openness, revenue models and unbundling encouraged the developing entrepreneurship around open online courses. This may offer a low-cost, flexible alternative for those students, who choose to study in universities in their home countries but also gain an international experience (something that is highly valued) through studying courses online (MOOCs, the OU's OpenLearn, etc.) that are integrated into their own university curriculum.

This collaborative, blended course based on the Web Science MOOC and integrated into the Introduction to Computer Science for students studying at BNU provided an new opportunity for UK universities to develop their brand internationally and to expand their international marketing. In this case, MOOCs have become the testing ground for the online components that can be used in commercial online and blended courses.

The course was designed and delivered collaboratively by academics in the UK and China with the technical and administrative support from Wolearn. This collaboration demonstrated a new way for developing entrepreneurship and exploring how universities and commercial companies could work together to address technical, pedagogical and financial challenges in innovation in education. Technology will continuously impact on teaching and learning in universities globally, and there is a need to develop new entrepreneurship that encourages openness, collaboration and innovation which make face to face and online learning more effective in higher education.

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