

The OpenupEd quality label: Benchmarks for MOOCs

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ABSTRACT

In this paper we report on the development of the OpenupEd Quality Label, a self-assessment and review quality assurance process for the new European OpenupEd portal (www.openuped.eu) for MOOCs (massive open online courses). This process is focused on benchmark statements that seek to capture good practice, both at the level of the institution and at the level of individual courses. The benchmark statements for MOOCs are derived from benchmarks produced by the Excellence e learning quality projects (E-xcellencelabel.eadtu.eu/). A process of self-assessment and review is intended to encourage quality enhancement, captured in an action plan. We suggest that a quality label for MOOCs will benefit all MOOC stakeholders.

KEYWORDS *MOOC, e learning, quality assurance*

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INTRODUCTION

This paper introduces the OpenupEd Quality Label, a quality assurance process for MOOCs that has emerged from the quality assurance of e-learning in distance education. Before introducing the details of this process, we briefly review the history of MOOCs, positioning this in relation to open and distance education, and note concerns about quality in MOOCs. We propose that existing e-learning quality approaches are an appropriate starting point for quality assurance of MOOCs.

Background

The rise of MOOCs has been recent and rapid (for an overview, see Daniel, 2012; Yuan and Powell, 2013; Haggard, 2013). The term 'massive open online course' (MOOC) was used by Dave Cormier in 2008 to describe a course 'Constructivism and Connective Knowledge' run by George Siemens and Stephen Downes (Cormier, 2008). This course was delivered to 25 students for credit at the University of Manitoba who were joined by 2,300 others who participated without fee and without gaining credit (Daniel, 2012). In 2011, Sebastian Thrun and colleagues gave open access to their Stanford course 'Introduction to Artificial Intelligence' and attracted 160,000 learners (Yuan and Powell, 2013). The publicity surrounding these and other early MOOCs led to an explosion of activity in 2012 and 2013 which resulted in the formation of a number of platforms and providers for higher education such as Coursera (<https://www.coursera.org/>), edX (<https://www.edx.org/>), Eliademy (<https://eliademy.com/>), FutureLearn (<https://www.futurelearn.com/>), Open2Study (<https://www.open2study.com/>) and Udacity (<https://www.udacity.com/>). These can certainly claim to provide courses on a massive scale: by early 2014, Coursera had 22 million enrolments on 571 courses, with 240,000 enrolments on the most popular course (Coursera, 2014).

However, it is also clear that many different kinds of course are labelled as MOOCs. An early distinction was made on the basis of pedagogy. Siemens (2012) used the terms cMOOC and xMOOC to contrast two forms of pedagogy. He labelled the early courses, rooted in principles of connectivist learning that emphasise creation, creativity, autonomy and social networked learning, as cMOOCs. The courses that had begun to appear on platforms such as Coursera and edX were based on a transmission model of teaching and learning; Siemens suggested the label xMOOCs for these. Other authors have since given other taxonomies and classifications. Clark (2013) identified eight types of MOOC based on different pedagogies. Conole (2013) highlighted a round dozen dimensions on which a course could vary, for example its scale of participation, use of multimedia, and amount of communication. Mulder and Janssen (2013) take a broader view still of open education by suggesting a model with five dimensions: open educational resources, open learning services, open teaching efforts, open to learner needs, and open to employability and capabilities. MOOCs as currently understood may inhabit only part of this space.

Conversely, there are other courses that are not claimed as MOOCs but which are massive, open and online; in particular there is a history of open distance learning (ODL) courses which predate the rise of MOOCs. The 'open' in the context of MOOCs is normally interpreted to mean open access, and specifically free in the sense of 'gratis'. But it also has a sense shared with the ODL community, and specifically in the Open University UK and similar institutions. Openness in that context means that courses do not require formal qualifications for enrolment; entry level courses are designed to be widely accessible to learners with limited prior knowledge. There are other meanings of 'open' in education, particularly open licencing of open educational resources (OER) that can be reused, repurposed and redistributed, and the still broader conception of open educational practices given in the Cape Town Open Education Declaration (2007).

The 'massive' nature of MOOCs has similarities and differences to the massiveness of ODL. The dizzying numbers of students enrolled in MOOCs may have made headlines but numbers in ODL may also be very large, certainly compared to many campus-based universities. To give an example, Weller and Robinson (2001) describe the introduction of an early online course *You, your computer and the net* at the UK Open University (OU) with 12,000 students. However, what is characteristic of MOOCs is not so much their absolute size but a design which is scale-independent. At a practical level, this means being able to offer a course with no restriction on student numbers: the students should be able to learn successfully whether 50 or 50,000 students enrol. The traditional OU model of independent learning from high-quality materials can easily handle such different scales, whether using print delivery or online. However, as Weller and Robinson (2001) relate, the introduction of a new course of 12,000 students, while maintaining the OU model of supported open learning with a personal tutor assigned to a group of around 20 students, was more challenging. Some 580 new tutors had to be recruited and trained in a short timescale; additional staff posts were required to support tutors and maintain the quality assurance processes applied to teaching and assessment. By contrast, MOOCs have sought models of teaching and learning that scale more gracefully. Typically this means forgoing support and assessment from a personal tutor and instead relying on peer support through forums and some combination of automated marking and peer assessment, with limited input from teaching and associate staff. While these approaches can address the problems of scale with regard to resources and costs, it must still be asked whether the quality of the learning experience remains unchanged.

Questions about the quality of the MOOC experience were beginning to be widely asked in 2013, for example in reports by Yuan and Powell (2013) and Haggard (2013). (By contrast, open and distance learning can deliver a quality learning experience: the UK Open University has consistently ranked in the top five universities for student satisfaction in

the National Student Survey.) The concern over quality in MOOCs was coupled with a concern over high drop-out rates. The conspicuous success of MOOCs in enrolling massive numbers of students was tempered by low completion rates. A report from the University of Edinburgh (2013) on their first six MOOCs recorded that 12% of enrolled students completed. In more recent work, Jordan (2014) found that the majority of 279 MOOCs analysed had completion rates of less than 10%; the median completion rate was only 6.5%. Low completion rates might indicate that the open nature of MOOCs allows students to enrol on courses for which they are ill-prepared; however, many MOOC participants appear well-qualified, if not over-qualified. Thrun (2013) reported on a San Jose State University pilot project to deliver for-credit MOOCs. The target audience was 'students who are presently under-served and left out of higher education' and the courses were pitched at college entry level. However, 53% of the student body had post-secondary qualifications, including 20% with Masters or PhD. A presentation by Daphne Koller included figures suggesting that 80% of Coursera students already had bachelors, masters or doctoral qualifications (Koller and Ng, 2013); somewhat ironically, the presentation was titled 'Education for everyone'.

Both ODL and MOOCs attract students who might otherwise not be able to attend traditional on-campus instruction because of work, family and other obligations. MOOCs may attract participants with widely different cultures, motives and intentions, and the expectations and behaviour of MOOC students may therefore be quite different to fee-paying students studying for qualifications. There is after all a very low commitment required to enrol on a MOOC – there are typically no fees to pay and no books to buy – and correspondingly little is lost by dropping out of study. It may be that some students are achieving their goals by simply 'browsing' in a MOOC without participating in assessments (Koller et al, 2013). Perhaps, therefore, low completion rates simply go with the MOOC territory.

On the other hand, maybe the MOOC territory is not that distinctive after all. Clow (2013) analyses the 'funnel of participation' on a MOOC and two other sites (www.ispot.org.uk and www.cloudworks.ac.uk) that support informal learning communities but are not structured as courses. He finds a similar pattern of attrition. This suggests that, although MOOCs are structured as non-formal courses, they are no more successful at engaging students than are informal learning communities. (The terms formal, non-formal and informal learning here are used in the sense of the ISCED 2011 classification (UNESCO, 2012).

Does quality in MOOCs matter?

We believe that teachers in higher education should be concerned to give students a good quality learning experience, whether students are enrolled on a fee-paying credit-bearing course or a MOOC. Particularly if we think that the aim of MOOCs is to open up access to higher education, a good quality experience is important. Given that starting point, the low completion rates discussed above should be a cause for concern: how can MOOC producers claim a good quality learning experience if students are failing to complete? Others agree: for example, Anthony McClaran, Chief Executive of the UK Quality Assurance Agency for Higher Education (QAA), said in July 2013:

“Now at the outset I should say that the QAA does not have a policy or an agency position on MOOCs, at least not yet. What we do have is a frame of reference. In particular the UK Quality Code for Higher Education, our role in external review and quality assurance and in student engagement. Factors which apply to all learning opportunities regardless of location, mode of study, academic subject; MOOCs are no exception to that.” (McClaran, 2013)

It is for these reasons that the MOOC community should engage with the issue of quality assurance and quality enhancement. For many staff in conventional campus universities used to teaching relatively small classes in a largely face-to-face setting,

creating e-learning courses for very large numbers of students is a radical departure. This suggests that attention should focus on e-learning quality and its enhancement. Kear, Williams and Rosewell (2014) suggest that quality assurance procedures established for campus based universities do not necessarily fit well with e-learning and that specific resources and processes for quality assurance of e-learning are needed. This remains the case even though e-learning, particularly in the guise of blended learning, is becoming more mainstream in higher education (HE).

Ehlers, Ossiannilsson and Creelman (2013) posed a question at the start of the EFQUEL MOOC project (<http://mooc.efquel.org>): 'Can the quality of MOOCs be assessed in the same way as any defined university course with traditional degree awarding processes?'

Weller (2013a) argues that, since the aims and intentions of both student and institution differ in the context of MOOCs compared to formal education, conventional quality measures are inappropriate; for example, if many students don't have course completion as a major goal, it should not be used as a quality measure. But this is to position a MOOC as an OER open to informal learners, and seems to miss the distinctive feature that a MOOC is, by definition, a course, even if non-formal education rather than formal. Further, current higher education MOOCs are usually closely aligned to more conventional university courses. MOOCs are usually branded by an HE institution, and so the institution takes on a reputational risk unless quality is maintained. MOOCs are authored and taught by HE staff. Material is often derived from existing credit-bearing courses, or is positioned as providing an access route to credit-bearing curriculum. In practice, therefore, it is often the case that MOOCs stand in some relation to existing institutional QA processes. For example, there should be a course approval process, although this may be 'light-touch', given that MOOCs typically do not bear credit and are not part of a designed curriculum and there is accordingly less need for approval for accreditation purposes.

The simple separation of MOOC as non-formal learning from formal, credit-bearing courses is in any case beginning to break down. For example, by November 2013 the OpenupEd partnership (<http://www.openuped.eu/>) offered 174 MOOCs of which over 100 had some opportunity for recognition as ECTS credits. In some cases, such as UNED Abierta, a freemium model is used where the same MOOC can be certified at three levels: badges earned for completion of specific activities, a credential for completion of the majority of activities and a final online test, and full certificate with ECTS credit obtained after a proctored test (Read and Rodrigo, 2014).

So on balance, while there may be reasons for thinking that MOOCs and their students are different from traditional university courses, we believe that there are also good reasons for suggesting that the answer to Ehlers, Ossianilsson and Creelman's question should be 'yes, we should assess quality in the same way'. Yes, because MOOCs are produced by the same staff in the same institutions as conventional courses and are often extracts from or reversioning of existing course material. Yes, because MOOCs should have perceived value and increasingly can be recognised for credit. Yes, because students deserve a good quality experience if the intention of MOOCs is to open up higher education, either for an initial experience of higher education or for lifelong learning. Yes, because MOOCs are a form of e-learning and the HE sector's understanding of e-learning quality is still developing and cannot be taken for granted; a culture of quality enhancement is needed.

Quality in e-learning

If MOOCs require a quality assurance process, that process should be one that is tailored to e-learning. The OpenupEd Quality Label described below is derived from the E-xcellence label (<http://E-xcellencelabel.eadtu.eu/>) which applies to e-learning and blended learning. There are other existing e-learning quality approaches although intended for use in formal, credit-bearing education. Butcher and

Wilson-Strydom (2013) provide a useful overview and guide to the issues. Some criteria-based approaches to e-learning that are not dissimilar to E-xcellence should be mentioned. The European Foundation for Quality in e-learning (EFQUEL) operates the UNIQUE certification (<http://unique.efquel.org/>). This takes a broadly similar approach to E-xcellence with self-evaluation, external review and improvement plan; there are currently 71 criteria and compliance is scored numerically (EFQUEL, 2011). The Quality Matters Program (<https://www.qualitymatters.org/>) reviews HE courses by scoring against a rubric of 41 criteria. The Sloan Consortium (Sloan Consortium, n.d.) offer a scorecard of 70 criteria. Peres, Lima and Lima (2014) recently compared six quality frameworks, including E-xcellence, UNIQUE and Quality Matters, and produced a lengthy narrative description that combines elements from all of these with additional elements derived from their own experience; however, their focus was specifically on blended learning.

Read and Rodrigo (2014) report on the quality model for UNED MOOCs. Although they later considered a draft version of the OpenupEd benchmarks, their MOOC quality process began earlier with approval and planning of a MOOC programme in 2012. UNED is a mature distance teaching university with established online programmes and so was able to draw on existing procedures and practices. High-level guidelines on course design were provided to course creators and courses were reviewed against a number of major aspects: topic, reuse of existing content, overall duration, course structure, instructional design including assessment, social learning, and teaching support. This pre-launch review was complemented by evaluation of the course presentation, using quantitative data and qualitative feedback gathered in course forums.

The remainder of this paper outlines the OpenupEd Quality Label, an approach to quality assurance for MOOCs that is derived from E-xcellence, an established approach to quality assurance of e-learning that has roots

in the experience of open and distance learning institutions.

THE OPENUPED INITIATIVE

The OpenupEd initiative was launched in April 2013 by the European Association of Distance Teaching Universities (EADTU) with support from the European Commission. OpenupEd (www.openuped.eu) is an open, non-profit partnership for MOOCs.

OpenupEd promises to bring some distinctive features to the MOOC landscape. The launch partners (see <http://openuped.eu/partners/current-partners>) will apply their extensive experience of open and distance learning to MOOCs. In addition, OpenupEd partners have a commitment to opening up education to the benefit both of learners and of wider society, while reflecting “European values such as equity, quality and diversity” (Commissioner Vassiliou in European Commission, 2013). The vision is to reach out to all those learners who wish to take part in online higher education in a way that meets their needs and accommodates their situation.

OpenupEd positions MOOCs as part of open education. The MOOCs offered by OpenupEd partners are intended to remove all unnecessary barriers to learning and provide students with a reasonable chance of success in education. This implies ‘openness’ in the sense not only of no financial cost, but also open accessibility, open licensing policy, freedom of place, pace and time of study, open entry, and open pedagogy (Weller, 2013b).

To ensure that OpenupEd courses meet this vision, partners are asked to endorse the eight distinctive features described below.

Openness to learners: This captures aspects such as: open entry (no formal admission requirements), freedom to study at time, place and pace of choice, and flexible pathways. In a broader perspective this feature stresses the importance of being open to learners’ needs and providing for a wide variety of lifelong learners.

Digital openness: Courses should be freely available online but in addition apply open licensing so that material and data can be reused, remixed, reworked and redistributed (e.g. using CC-BY-SA or similar).

Learner-centred approach: Courses should aid students to construct their own learning from a rich environment, and to share and communicate it with others; they should not simply focus on the transmission of content knowledge to the student.

Independent learning: Courses should provide high quality materials to enable an independent learner to progress through self-study.

Media-supported interaction: Course materials should make best use of online affordances (interactivity, communication, collaboration) as well as rich media (video and audio) to engage students with their learning.

Recognition options: Successful course completion should be recognised as indicating worthwhile educational achievement.

Quality focus: There should be a consistent focus on quality in the production and presentation of a course.

Spectrum of diversity: Courses should be inclusive and accessible to the wide diversity of citizens; they should allow a spectrum of approaches and contexts, accounting for a variety of language, culture, setting, pedagogics and technologies.

A distinctive aspect of OpenupEd is the promise of a quality educational experience that can bridge between informal and formal learning and provide recognition for the student’s achievement. This promise is to be encapsulated in a ‘quality label’.

THE OPENUPED QUALITY LABEL

The OpenupEd Quality Label is intended to encourage quality enhancement for MOOCs and their providers. It was derived from the

E-xcellence label (<http://E-xcellencelabel.eadtu.eu/>) which provides a methodology for assessing the quality of e-learning in higher education (HE). E-xcellence has evolved over a series of projects commencing in 2005 (Williams, Kear, Rosewell and Ferreira, 2011). E-xcellence now provides a series of tools, including a manual (Williams, Kear and Rosewell, 2012) and interactive ‘quick scan’ self-assessment, that support a review process based around a number of benchmark statements. There are 35 benchmark statements which are grouped into six areas: Strategic Management, Curriculum Design, Course Design, Course Delivery, Staff Support and Student Support. The manual provides supporting text and more detailed indicators of good practice.

For the OpenupEd Quality Label, we drafted a revised set of benchmarks and a self-assessment and review process better suited to MOOCs. These were first presented at a master class at the 2013 EADTU conference (<http://conference.eadtu.eu/>). This draft was updated using feedback gathered at this event, and then made available for further review, with comment invited from OpenupEd partners and E-xcellence assessors. The final version was published in January 2014 (<http://openuped.eu/mooc-features/openuped-label>).

The resulting benchmarks are listed in Appendix 1 below. The benchmarks are divided into two major groups, one that applies at the institutional level and another that applies to individual courses. As

described below, each MOOC should be considered against the course-level benchmarks, but the institutional-level benchmarks are intended only for periodic review. The institutional-level benchmarks are grouped into the same six areas as the E-xcellence benchmarks.

An outline of the OpenupEd Quality Label process is as follows. OpenupEd partners are expected to be higher education institutions (HEI) that meet national requirements for quality assurance and accreditation. The HEI should have an internal procedure to approve a MOOC; this is expected to be a ‘light-touch’ version of the institutional quality assurance systems that apply to their formal courses. New partners will obtain the OpenupEd Quality Label by a self-assessment and review process that will consider benchmarks both at institutional and course level (for two courses initially). The HEI should endorse the eight distinctive OpenupEd features listed above; in particular, every MOOC must demonstrate the features ‘openness to learners’ and ‘digital openness’. The OpenupEd Quality Label must be renewed periodically. Between institutional reviews, additional MOOCs will be reviewed at course level only. The institution is expected to evaluate and monitor each MOOC in presentation, providing quantitative data including participation, completion and student satisfaction, and a qualitative assessment of equity, quality, and diversity. The OpenupEd partnership will collaborate to share standardised evaluation data.

A		B		C		D				E			
Benchmark/indicator		OL	DO	LC	IL	MI	RO	QF	SD	NA	PA	LA	FA
Course level													
22	A clear statement of learning outcomes for both knowledge and skills is provided.	10			x								
23	There is reasoned coherence between learning outcomes, course content, teaching and learning strategy (including use of media), and assessment methods.	11		x	x	x		x					
24	Course activities aid students to construct their own learning and to communicate it to others.			x									

Figure 1 Part of the quick scan checklist.

Key: A – benchmark number; B – Benchmark statement; C – cross-reference to E-xcellence manual; D – mapping to OpenupEd features; E – grid for recording benchmark achievement

The self-assessment and review are focussed around the benchmarks given in Appendix 1. A 'quick scan' checklist is provided (**Error! Reference source not found.**) which lists the benchmarks with an accompanying grid to record two aspects. First, an overall judgement can be made on the extent to which the benchmark is achieved (on a four-point scale: not achieved, partially achieved, largely achieved, or fully achieved). Secondly, a mapping can be made between each benchmark and the eight OpenupEd distinctive features; an initial mapping is provided but this can be adapted where necessary. For example, in Figure 1 benchmark #22 'A clear statement of learning outcomes for both knowledge and skills is provided' is mapped to the distinctive feature 'IL – Independent learning' to suggest that evidence gathered in relation to the benchmark is also likely to provide evidence of a course suited to independent learning.

The quick scan can be used to give an initial picture of areas of strength and weakness. It can also highlight: where benchmarks may not be fully appropriate; where they may fail to capture good practice in a particular HEI or MOOC; and where additional detailed

indicators might be helpful. The quick scan should then be fleshed out by a more detailed self-assessment process, ideally including different stakeholders such as academics, managers, course designers and students. This should gather evidence for each benchmark, including the extent to which it supports the distinctive OpenupEd features. A plan detailing improvement actions is then prepared. The documented self-assessment and the improvement plan form the basis of a final review and discussion with external assessors, who then prepare a final report including their recommendation for the award of the OpenupEd Quality Label.

A number of documents support this process, including templates for the quick scan checklist, evidence gathering and action plan. Assessor's notes are provided that cross-reference the OpenupEd benchmarks to additional indicators and background material in the E-xcellence manual (Williams, Kear and Rosewell, 2012), with supplementary material provided for MOOC-specific aspects where necessary (**Figure**). It is anticipated that this documentation will be extended in the light of experience.

31 Assessment is explicit, fair, valid and reliable. Measures appropriate to the level of certification are in place to counter impersonation and plagiarism.

See comments to Benchmark 29 above.

The advent of digital badges (for example Mozilla open badges) provides a method of rewarding achievement that may be appropriate for MOOCs. The award of digital badges can be linked to automated or peer assessment. Digital badges have an infrastructure that verifies the identity of the holder and provides a link back to the issuer and the criteria and evidence for which it was awarded. Badges thus may provide a validated award that can be kept distinct from the HEIs normal qualifications.

See also:

E-xcellence benchmark #17
Chapter 3 *Course design*
§ 2.4 Assessment procedures
§ 3.4 Assessment
§ 4.2.5 Online assessment

Figure 2 Example additional assessor's note, with references to the E-xcellence manual

There is considerable diversity in institutional approaches to opening up education by the use of MOOCs, and the OpenupEd label should embrace this. It is not therefore expected that every benchmark will be achieved by every institution. In our approach, benchmarking is intended as an improvement tool; a process of comparing the institutional performance with best practices as currently understood in the field of MOOCs and open education. This process guides institutions to look critically at their own position and practices, and leads to identification of weaknesses and strengths in comparison to other universities. Institutions that use the OpenupEd Quality Label should be guided towards improving their performance in e-learning and in opening up education by the use of MOOCs.

The initial MOOCs offered through the OpenupEd portal have been courses from EADTU members that had undergone institutional quality procedures that were judged sufficient by the EADTU board to meet the OpenupEd label without following the process outlined above. Evaluation of the quality label process will follow as MOOCs are subject to the full process.

CONCLUSION

The OpenupEd Quality Label is offered as a way of ensuring that MOOCs offer a good quality educational experience. It does this by adopting a quality enhancement approach, based on initial self-assessment against benchmark indicators, followed by external review leading to an improvement action plan. This process is designed to complement both an institutional course approval process, and ongoing evaluation and monitoring of courses in presentation. The overall approach and the benchmarks are derived from the E-xcellence e-learning quality projects, emphasising the importance of e-learning features. The OpenupEd Quality Label process is a lighter-touch version of E-xcellence since it separates institutional level benchmarks which need be checked only periodically from course level benchmarks that can be applied to each course. The benchmarks have also been

adapted to be more appropriate to the MOOC context.

The OpenupEd label should benefit all stakeholders in MOOCs. Students can be reassured about the experience they are committing to. Employers can recognise the content and skills demonstrated by a MOOC certificate. MOOC authors can achieve recognition for their input. Institutions can protect their brand reputation. Funders can be reassured that products are worthwhile. Quality agencies, who work on behalf of all the above parties, may find their task eased.

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APPENDIX: OPENUPED QUALITY BENCHMARKS

Institutional level

Strategic management

1. The institution has a MOOC strategy that relates to its overarching strategies for e-learning, open education and open licensing.
2. Research and monitoring of developments in education and technology inform the design of MOOCs. There is an organisational framework to foster this.
3. The institution has a strategy for the appropriate resourcing of MOOC development. It has a business model, appropriate to the institutional mission, that addresses the sustainability of MOOCs.
4. The institution has a service relationship to MOOC participants that addresses ethical and legal dimensions including accessibility and data protection.
5. Collaborative and partnership activities have clearly defined roles and responsibilities and operational agreements exist where appropriate. Policies exist to cover issues such as intellectual property rights and open licensing.
6. The institution has a quality policy that relates to national frameworks, and the MOOC offering is related to that policy.

Curriculum design

7. The institution makes explicit the relationship between its MOOC portfolio and its mainstream curriculum.
8. The MOOC portfolio provides for the development of students' cognitive skills, key/transferrable skills, and professional/practical skills in addition to knowledge and understanding.

Course design

9. The institution provides templates or guidelines for layout and presentation of MOOCs to support consistency across the portfolio. These templates have the flexibility to accommodate a range of teaching and learning methods.
10. Course materials, including the intended learning outcomes, are regularly reviewed, up-dated and improved using feedback from stakeholders.
11. The institution specifies an open licence for MOOC components, and has a mechanism to track intellectual property rights.

Course delivery

12. The MOOC platform is reliable, secure and assures appropriate levels of privacy. Provision is made for system maintenance, monitoring and review of performance.
13. The MOOC platform provides a range of online tools which are appropriate for the educational models adopted.
14. Mechanisms exist to monitor and evaluate MOOCs using quantitative and qualitative approaches.

Staff support

15. The institution provides appropriate training for academic and support staff to develop the skills required to develop and deliver e-learning.
16. Educational research and innovation in e-learning are regarded as high status activities. There are mechanisms for the dissemination of good practice.
17. The institution provides adequate support and resources to MOOC staff and manages workloads appropriately.

Student support

18. MOOC students are provided with clear and up-to-date information about courses including aims/objectives, learning and assessment methods, workload and prerequisite knowledge. Where possible,

- courses should be related to national or European academic frameworks or specifications.
19. The rights, roles and responsibilities of MOOC students and those of their institution are clearly stated.
 20. The institution uses social networking to foster academic communities among MOOC students.
 21. MOOC students have clear routes to academic, technical and administrative support. The level of support provided by the institution is clearly stated.
32. Course materials are reviewed, updated and improved using feedback from stakeholders.

Course level

22. A clear statement of learning outcomes for both knowledge and skills is provided.
23. There is reasoned coherence between learning outcomes, course content, teaching and learning strategy (including use of media), and assessment methods.
24. Course activities aid students to construct their own learning and to communicate it to others.
25. The course content is relevant, accurate, and current.
26. Staff who write and deliver the course have the skills and experience to do so successfully.
27. Course components have an open licence and are correctly attributed. Reuse of material is supported by the appropriate choice of formats and standards.
28. Courses conform to guidelines for layout, presentation and accessibility.
29. The course contains sufficient interactivity (student-to-content or student-to-student) to encourage active engagement. The course provides learners with regular feedback through self-assessment activities, tests or peer feedback.
30. Learning outcomes are assessed using a balance of formative and summative assessment appropriate to the level of certification.
31. Assessment is explicit, fair, valid and reliable. Measures appropriate to the level of certification are in place to counter impersonation and plagiarism.