Received 7 August 2020
Revised 29 December 2020
6 February 2021
17 February 2021
5 March 2021
Accepted 5 March 2021

Massive open online courses (MOOCs): a tool for intercontinental collaboration in archives and records management education in Eswatini

Collence Takaingenhamo Chisita and Vusi Wonderboy Tsabedze
Department of Information Science, School of Humanities, University of South Africa (UNISA), Pretoria, South Africa

Abstract

Purpose – The study aims to assess the views of archives and records management (ARM) professionals in Eswatini about massive open online courses (MOOCs). The purpose of this study is to explore the potential of MOOCs as open gateways for ongoing learning opportunities to scholars, institutions and academics across the globe. It explores the challenges of providing MOOCs in a developing country such as Eswatini.

Design/methodology/approach – The study was anchored on the interpretive research paradigm and adopted a qualitative research methodology. The study used maximum variation sampling to identify individuals that would constitute the research sample. The rationale behind this sampling is to obtain participants with a shared experience within a phenomenon but who have some demographic variance.

Findings – The findings revealed that there was lack of awareness of the potential of MOOCs in revolutionizing the delivery of ARM courses in Eswatini. The findings support the need for higher education institutions in Eswatini to adopt MOOCs to deliver ARM courses. The study revealed that access to internet connectivity was among the key inhibitors undermining the adaptation of MOOCs for the delivery of ARM courses in Eswatini.

Originality/value – The novelty of the study is that it brings into the limelight the factors that impede the adaptation of MOOCs for the delivery of ARM courses in Eswatini. It brings into focus the challenges encountered by ARM institutions in Eswatini in moving towards a MOOC-centric mode of course delivery.

Keywords MOOCs, Collaboration, Education, Eswatini, Archives and records management, National research and education networks (NRENs), Massive open online courses, Research collaboration

Paper type Research paper

Introduction

Zheng (2020) stated that the term massive open online courses (MOOCs) was coined by Cormier (2008) in Canada at the University of Manitoba to describe an open online course. The term MOOCs was used for the first time by Georges Siemens and Dave Cormier in reference to Stephen Downes and Georges Siemens' "Connectivism and Connective Knowledge" course. The course was offered by the University of Manitoba,

The authors would like to acknowledge the Department of Information Sciences at the University of South Africa (UNISA), the Records and Archival Management Institutions in Eswatini and other institutions for the support leading to the ultimate success of this publication.

Funding: There was no funding provided for this research study.

Records Management Journal
Vol. 31 No. 2, 2021
pp. 158-175

0956-5698
DOI 10.1108/RMJ-08-2020-0028

Canada with 55 participants who attended in-class along with 2,300 internet users. Course content was delivered using a variety of the online tools available at the time: a wiki, a blog, an RSS feed, the Moodle forum, the Pageflakes Web portal, Twitter and the UStream platform. The participants also discussed course material via the Second Life virtual world (Moe, 2015). MOOCs are now revolutionising learning and teaching throughout the world and Africa is no exception.

In 2011, Sebastien Thrun of Stanford University and Peter Norvig, Research Director from Google, announced that one of their courses would be offered for free on the internet. In just a few weeks, "Introduction to Artificial Intelligence" had over 160,000 enrollees ready to follow the first lessons. The size and media impact of the course made it one of the most memorable in the short history of MOOCs. The project significantly contributed to the development of MOOCs and the first American online education platforms including Coursera, Udacity and EdX (Moe, 2015).

Massive Open Online Courses (MOOCs) provide new prospects for the delivery of online education and training. MOOCs have emerged as a recent path-breaking educational paradigm promoting openness in education and increased accessibility irrespective of time and space (Chatterjee and Nath, 2014). The novel technologies provide free or relatively lower cost opportunities to those unable to attend conventional classes. Learners can enrol in and attend virtual courses from the comfort of their home or office and earn course completion certificates from well-recognised institutions. While MOOCs serve as an alternative paradigm to formal education, they can also be viewed as an efficient tool to be employed for youth skill development (Chatterjee and Nath, 2014). The impact of MOOCs on education and training can be seen and felt globally in diverse knowledge disciplines. Al-Imarah and Shields (2019) view MOOCs as special vehicles that leverage digital technologies in order to provide university-level courses to virtually anyone in the world with an internet connection. Hyman and Gore have highlighted the usefulness of MOOCs in scaling educational content to large numbers of learners with minimal costs, thus offering a more egalitarian and cost-effective alternative to traditional university education (Hyman, 2012; Gore, 2014). Dey (2020) views the provision of Online Distance e-Learning through modern technologies as "a viable solution [. . .] in times of unexpected crisis", for example, the current COVID -2019 pandemic. Chisita (2020) emphasised the use of digital technologies as a tool for leveraging teaching, learning and research during the COVID-2019 pandemic. According to that article, many institutions across China, India and Europe are leveraging and advertising their world class teaching and learning infrastructure through digital technologies. In the same vein, Blackmon (2016) and Macleod *et al.* (2015) highlight the critical role of MOOCs for professional development and credentialing. According to these authors the formalization of MOOCs was underpinned by credentialing. Wang, Hall and Wang (2019, p. 7) argue that MOOCs are unlikely to replace conventional onsite universities and may face a threat in the future if they are left out of broader university strategies [1].

Iniesto *et al.* (2020) highlighted that the benefits of MOOCs when compared to other online learning opportunities include openness within a structured learning framework, low cost of learning, scope for individual planning in terms of the learner's time and their preferred pace and place, opportunities for social learning and the chance to gain new skills and knowledge in the increasingly technology-driven twenty-first century digital environment. However, provision of access to MOOCs in developing countries like Eswatini is impeded by a lack of affordable internet connectivity. Lobelle *et al.* (2015) recommended that it was prudent for every African country to establish a National Research and

Education Network (NREN) to provide accessible access to affordable internet connectivity for all universities. Through NRENs, academic institutions would be able to use MOOCs at an affordable or low cost, as well as share huge amounts of data (Lobelle *et al.*, 2015). Chisita and Rusero (2016) viewed the development of NRENs in Africa as a "magic formula" for the democratization of access to scholarly communication. According to the authors, the strength of NRENs lie in their social capital in the form of radical partnerships at regional and international levels and the use of common standards and protocols to build a common gateway to support the information needs of researchers and scholars. NRENs as non-commercial internet service providers provide the required technology that delivers MOOCs to enhance access to scholarship at an affordable cost.

Archives and records management (ARM) institutions in developing countries cannot ignore the digital revolution if they are going to remain relevant and competitive in a world anchored to digital technological progress. As a discipline and a profession within the African context, ARM has encountered several challenges over the last fifteen years which has resulted in poor governance (Tsabedze and Ngoepe, 2020; Nengomasha, 2013; Ngoepe and Van der Walt, 2009; Wamukoya and Mutula, 2005). This challenge was compounded by the lack of infrastructure, outdated legislation relating to the management of electronic records and only a small number of higher education institutions (HEIs) that offer ARM education (Ngoepe and Keakopa, 2011; Ngoepe and Saurombe, 2016; Onyancha *et al.*, 2015). Indeed, several factors work against a thriving ARM field in some African countries including Eswatini; for example: the failure to implement university-level degrees, which many experts argue is the preferred form of ARM education. This scenario is also affected by:

> [. . .] low numbers of qualified ARM personnel, virtually non-existent research, poor quality of educational materials and outdated programmes and educational methodologies based on the model of rote memorization that do not encourage critical thinking, problem solving and creativity (Katuu, 2015, p. 107).

Furthermore, according to the InterPARES Trust – Team Africa (2018) study conducted by its African team contended that the absence of university-level educational opportunities in ARM makes it extremely difficult to prepare and produce techno-centric graduates who can fit in the world of the technology-driven sector. Wamukoya and Mutula (2005, p. 75) cite the following challenges that are encountered in the ARM field in Africa:

- absence of core skills in archives and records management;
- absence of organisational strategies for digital records management;
- low awareness on the importance of records management in support of organisational efficiency and accountability;
- lack of stewardship and coordination in the handling of both paper as well as electronic records;
- absence of up-to-date legislation and policies to guide management of both paper and electronic records;
- absence of budgets dedicated to archives and records management;
- poor security and confidentiality controls;
- lack of records retention and disposal policies; and
- absence of migration strategies for e-records.

It should be noted that while Wamukoya and Mutula (2005, p. 75) highlighted the aforementioned challenges as key factors affecting the development of the ARM sector in Africa, Mosweu and Rakemane (2020) also reemphasized poor records management due to a myriad of factors including but not limited to skills, budgets and technology.

The root causes of problems associated with ARM in Africa is the lack of ARM education in most HEIs. Globally, the MOOCs scenario reveals that the prime hubs for this means of delivering education and training lie concentrated within developed countries, such as the UK, the USA, Canada and Australia, while countries such as China, South Africa and India contribute the majority of students (Chatterjee and Nath, 2014, p. 16).

The Inter PARES study (2018) reports that out of 26 South African universities only 3 offered full-fledged ARM education and training, all in South Africa: the University of South Africa, University of KwaZulu-Natal and University of Fort Hare. In nearby Namibia, the University of Namibia is the only HEI that offers ARM programmes. The report also states that in Botswana ARM programmes are only offered by the University of Botswana and the Institute of Development Management (IDM). The situation is similar in Eswatini as there is only one institution that offers ARM education at undergraduate certificate and diploma levels, its own associated IDM.

Ngoepe (2017) foresaw a challenge when it came to sustaining ARM education by HEIs in Africa because of the low number of students that enrol in available programmes. Without students, ARM institutions cannot exist (and without ARM programmes, ARM graduates cannot exist). The number of students registering has declined in most ARM institutions in Africa, whereas the number of students enrolling in ARM with more diversified qualification programmes (either broader information orientation or specialised information qualifications) has either increased or stabilized (Tsabedze, 2019). For example, in Eswatini, there were only 10 students registered for ARM at IDM on a full-time basis in 2015; in 2016, there were 18 students registered on a full-time and part-time basis; in 2018, there were 23 students registered on part-time and full-time bases. This can be attributed to the fact that most ARM personnel are already employed, and their schedules do not allow them to study full time (Tsabedze, 2019, p. 16). These and other challenges resulted in the International Council on Archives (ICA) designing a five-year strategy for Africa (2015–2020). One of the key objectives of the ICA strategy was to support ARM education and training in HEIs in Africa (Lowry, 2017, p. 17). African educators and archivists have repeatedly raised the need for support to redesign HEIs' curriculum so that it reflects international good practice and recent developments in the field.

There have been initiatives in the past to address the lack of education and training in ARM in Africa. Katuu (2015) reported that in the mid-1960s the ICA, with support from the Society of American Archivists (SAA) and UNESCO, conceptualised regional centres that would be attached to universities and offer archival training. Two such centres were created, one for Anglophone countries in Accra, Ghana and the other for Francophone countries in the Senegalese capital of Dakar (Evans, 1988; Smith, 1976). However, due to fiscal and logistical challenges, those initiatives did not last longer than a decade, and since their demise national education and training programmes have emerged. It is worth noting that the recent Director of the National Archives of Eswatini for the duration (2003-2019), Nqoba Msibi, was one of the beneficiaries of the programme in the early 1980s (Tsabedze and Ngoepe, 2020, p. 7).

Despite these interventions, the provision of ARM education and training is still in its infancy in African countries such as Eswatini (Katuu and Ngoepe, 2015; Katuu and Ngoepe, 2017). As mentioned earlier, Eswatini only offers undergraduate programmes to civil servants through the IDM (InterPARES Trust – Team Africa, 2018). This programme is not without problems, as its main beneficiary, the Eswatini National Archives (ENA), as well as

the regulator and the Eswatini Higher Education Council (EHEC) all lamented that the programme was failing to address public sector needs in the country and remains below the expected standards of the ARM industry (Tsabedze, 2019).

The purpose of this study is to investigate MOOCs as an alternative open gateway for ongoing learning opportunities for scholars, institutions and academics across the globe. Globally, many HEIs are now offering MOOCs in the field of ARM. The justification for this development is premised on the notion that the opportunities for ARM institutions in Eswatini will be widened. The constraints of inadequacy ARM lecturers, limited education and training institutions, low skills levels, the paucity of funds and limited infrastructure, all serve as barriers to the effective delivery of ARM education in Africa with specific reference to Eswatini. Hence, an effort has been made in this study to explore how this new mode can create opportunities for ARM institutions. The study also elaborates on and presents a developing country's perspective on the types of intercontinental collaborations that can be forged to promote better teaching and research.

The study provides background information on education and training in Eswatini, followed by a discussion on the methodology that was applied and findings presented. Areas of intercontinental collaboration are explored and, lastly, recommendations such as the "flipped classroom environment" are presented.

Education and training in Eswatini

The challenges of ARM education and training in Eswatini include how to make ARM education and training relevant and effective to the industry. It is no secret that the circumstances affecting ARM education and training in Eswatini have changed drastically just in the past decade. There are several factors in this change. As Smith (1993, p. 11) argues, one is technological development in the field of information creation and dissemination, which includes the increasing use of computers, microforms, word processing equipment and a wide range of developments in the field of communications, including satellites. This technological change continues to pose a challenge to the ARM field.

The challenges specific to ARM education and training in Eswatini include a lack of the following:

- adequate education and training institution;
- adequate ARM educators;
- an ARM professional body; and
- the impact of ARM education on Eswatini government ministries.

These challenges are outlined in greater detail below.

Lack of adequate education and training institutions

There is a reasonably significant number of registry officers whose professional interests need to be addressed in Eswatini, but they do not have the opportunities for further or continuous professional development due to limited opportunities. Because the IDM is the only institution which offers an ARM programme at certificate and diploma levels, Eswatini has been sending prospective ARM professionals for training in other countries such as Botswana, Namibia and South Africa. Through the Ministry of Public Services (MoPSs) and Information, the Eswatini Government has been funding incumbent professionals who are trained at different levels in the other countries.

The education and training of the ARM professionals outside the country has increased Eswatini's dependence on the external environment and has cemented and encouraged the impression that valuable training can only be received from foreign institutions. Another challenge is that of expense, as training outside the country requires a substantial budget from the government, thus limiting the number of ARM applicants from the ministries that may have access to scholarships at any given time.

As previously mentioned, the IDM is the only institution in the country that provides professional ARM training. However, the IDM on its own cannot meet the demands for a graduate ARM qualification, as many organisations have now come to realise the importance of having records management personnel distinguished from archivists. Since the ARM programme was launched at IDM in 2012 to help to fill the human resources gap in the industry, not a single person has graduated with a degree in ARM. This is partly attributed to the fact that most of the pioneer students are already employed by government ministries and in the private sector, making dedicated study time very difficult. The lack thereof is yet another challenge inhibiting the growth of the ARM profession in Eswatini.

The ARM education and training programmes in Eswatini have been criticised for not producing "industry-ready graduates." A previous study by Tsabedze and Ngoepe (2020, p. 7) shows that ARM education and training programmes in Eswatini have not significantly responded to changes in the industry by updating curricula in line with technological developments in the sector. IDM's ARM programme has been criticised by the MoPS, ENA and EHEC for failure to address the problems with regard to efficient records management experienced by the ministries and departments in the country. The ENA and the EHEC complained that the ARM programme was not addressing existing job market requirements adequately due to a shortage of lecturers, insufficient information communication technology (ICT) course content, the domination of the programme by irrelevant modules borrowed from other disciplines such as human resources and occupational health inadequate course duration and limited opportunities for industrial attachments (ARM internships or work-study).

The ENA has recommended a review and redesign of the curriculum in line with the demands of the job market and also suggested that since more organisations are increasingly moving towards digitising their business processes, it may be advisable for IDM to integrate a hands-on module on e-records management and digital preservation in the its curricula. It also recommended that students be allowed to have field attachments in the ARM sector as part of formal education through practical work (for example, experiential learning and service-learning). To address the challenge of availability of lecturers, ENA recommended that IDM should create partnerships with other ARM institutions such as the University of South Africa, the University of Namibia and the University of Botswana to promote teaching and learning. Essentially, the partnerships would focus on sharing and exchanging skills and knowledge. Thus, it involves skills, knowledge and techniques sharing and transfer. It also enables ARM visibility and through reliance on collective effort, may provide quick solutions to the challenges (Tsabedze, 2019).

On the other hand, MoPS complained that the ARM training programme did not sufficiently address current job market requirements due to inadequate teaching resources and inadequate field assignments for ARM students. The ARM programme's field assignments did not match the expectations of actual jobs in regard to proficiencies and competencies. It was also recommended that the curricula should be drastically overhauled to be in sync with market requirements (Tsabedze and Ngoepe, 2020).

The EHEC also raised concern over failure to involve the relevant stakeholders when the ARM programme was initially developed and an inability to re-conceptualise it to suit

the local context. It recommended that to overcome challenges, a curriculum review be re-aligned with job markets so as to enhance collaboration among stakeholders. The ENA also stated that in the present era of digital technologies and the implementation of e-government, higher education in ARM needed a stronger e-records management education component. It emphasised that the IDM must strike a balance between theory and practice; and maintain contact with the industry to remain relevant (EHEC, 2015) and ENA (2015). The rapid change in ARM has caused educators in Africa to propose a significant revision of course content and programme directions. The revision was so significant that some ARM institutions are introducing new degrees with topics such digital curation (Ngoepe, 2017, p. 9; Katuu, 2015, p. 11; Nengomasha, 2006, p. 13). ARM literature illustrates that considerable efforts are now underway to provide relevant curricula to educate ARM professionals.

Lack of adequate archives and records management educators

It is generally recognised that in our knowledge and technology-driven society, every country's economic and social well-being depends on its ability to harness its human resources through a dynamic and innovative educational system that thrives on and propels technological development. The required link between educational and technological development is particularly critical at the higher levels of the educational system, and especially university education. Unfortunately, ARM field lecturers at IDM Eswatini lack the requisite expertise as most of them (four) studied Library and Information Science and only a few (two) specialized in ARM (2) (Tsabedze, 2019, p. 6.).

Lack of an archives and records management professional body

Some effort has gone into the creation and implementation of international standards for archives and records management. This suggests that even at national levels, ARM educational programmes should be standardised. There is no professional body for ARM professionals in Eswatini.

ESARBICA is an allied professional regional body that brings together fourteen national archival institutions in Eastern and Southern Africa on matters of archives and records management. Its members include Angola, Kenya, Botswana, Lesotho, Malawi, Mozambique, Namibia, Seychelles, South Africa, Eswatini, Tanzania, Zambia, Zanzibar, Zimbabwe and South Sudan. This council is responsible for records and archives management issues in the region including research, training and continuous professional development. The council also assists its member states to better protect and digitize documentary heritage; and reinforce the capacities of archives and libraries to serve as centres of education, learning, research and information exchange (ICA, 2020).

ESARBICA is important to the region but has less of a reach than would a local association within Eswatini. Such a professional body would help to monitor the standards of ARM education and training. The absence of input from an ARM professional body has affected the quality of ARM programmes. Although the accreditation of all academic programmes in Eswatini is the responsibility of the EHEC, the involvement of an ARM professional body in the development of ARM programmes is vital to the growth of a community of practice at the individual and institutional levels.

Impact of archives and records management education on Eswatini Government ministries

Studies conducted in Eswatini government ministries and departments (Tsabedze and Ngoepe, 2020; Tsabedze, 2019; Tsabedze and Kalusopa, 2018; Msibi, 2015; Tsabedze *et al.*, 2012) over the last decade have revealed that there is no capacity for managing e-records

within the ministries and the ENA itself. Ngoepe *et al.* (2020) noted that the Eswatini National Archives (ENA) had limited professional staff and the situation was worsened by the fact that the country had limited capacity for archives and records management training.

The studies showed that Eswatini ministries did not have adequately trained records management staff. A majority of the registry staff do not have formal qualifications in ARM and are assigned at a level too low to be able to manage ministries' corporate memory. Registries are important in government ministries because they receive, store and process key documents relating to the daily transactions. It is important for staff to cooperate and collaborate across business functions because an organisation is like an eco-system in which all entities contribute to overall success. Registry staff manage records generated from both within and outside the organisation. The lack of capacity is also caused by the regular departure of experienced professional staff who go hunting for greener pastures in the private sector. Some members of the registry staff have applied for transfers to other functions such as human resource management, since the remuneration is better than that within the ARM profession; hence they leave behind more inexperienced colleagues. These studies also suggest that there is a huge gap in terms of registry staff numbers in the ministries in relation to other business functions and low competence in records management.

Similarly, Msibi (2015, p. 87) argues that Eswatini government reforms require registry staff and archivists to have a firmer grasp of recordkeeping so that they can conduct their responsibilities effectively and according to ENA standard practice. The need for archivists as keepers of evidence to be equipped with in-depth knowledge of e-records processes is evident in a statement made by the Director of ENA in 2016 (Tsabedze and Kalusopa, 2018, p. 8), which revealed a strong pressure to support multidisciplinary approaches and possibilities for cooperation between administrators, registry staff, archivists and IT officers, to work together to implement electronic document records management systems that support e-government initiatives (Tsabedze and Kalusopa, 2018, p. 6).

The introduction of e-government to the public service sector requires professionals who can "understand trends and developments in technology, keep up with changes in the field, and need enough expertise to communicate with technology experts" (Dearstyne and Barlow, 1999, p. 138). For many registry staff, this would entail a significant amount of re-learning which cannot be achieved through the short courses commonly used for professional development in Eswatini. There is an urgent need to develop education and training tailored to the needs of the archivist and registry staff. Most scholars still believe that lack of relevant training is a contributing factor to poor records management. ARM education needs should be analysed and evaluated to devise a practical ARM curriculum that deals with the problem of poor record-keeping in Eswatini (Tsabedze, 2019, p. 9).

The record-keeping challenges that Eswatini faces have resulted in poor governance and accountability structures within government ministries, which in turn result from the lack of a comprehensive ARM curriculum in its HEIs. To address this, Tsabedze (2019) recommended that a robust ARM curriculum for MOOCs be designed to cater for the needs of stakeholders. With respect to this context, Huang (2010) contends that MOOC can be regarded as an alternative to traditional instruction for students who want to enrol in a part-time postgraduate programme but are hindered because of job responsibilities and time factors. Therefore, MOOCs also provide opportunities for potential part-time students who may not have the chance to attend in-person an ARM programme, as a majority are already employed full-time. The 2019 study could guide academics in how to design and apply an

ARM course for MOOCs. During this process, they are also provided with guidance on how to render support to and communicate with multiple simultaneous learners.

Methodology

The study utilised an in-person interview methodology, since it is ideal for qualitative research because it will generate explanations, understanding, and help to explore the research subjects' opinions, behavior, experiences and phenomenon relating to how MOOCs can be utilised as a tool for intercontinental collaboration in ARM education in Eswatini. The researchers used a semi –structured interview consisting of 14 questions (*see* Appendix) provided to interviewees in advance interview appointments, which took place over a week. The study was anchored in the Interpretive Phenomenological Analysis paradigm, a leading qualitative research methodology in a number of academic disciplines. Its probes the lived experience of small numbers of participants (Tuffour, 2017) and is viewed as a qualitative research approach because of its emphasis on exploring and understanding the meanings assigned to human experiences (Creswell and Poth, 2016). Qualitative researchers emphasise the prominence of not only understanding the beliefs and theories that inform our research but also actively writing about them in their studies (Creswell and Poth, 2016). The authors contented that researchers adopt qualitative research design to generate understanding of the contexts or settings in which participants in a study address a problem or issue.

The study used maximum variation sampling to identify individuals to constitute the research sample. The rationale behind this sampling is to obtain participants with a shared experience within a phenomenon but who have some demographic variance (Maree, 2016).

The study sample consisted of 65 respondents drawn from Eswatini professionals, students and lecturers in ARM. A total of 60 respondents were interviewed out of an identified target of 65. In all, 60 interview responses were received, 32 (53%) from ARM professionals, 25 (42%) from ARM students and 3 (5%) from ARM lecturers. The poor response from ARM lecturers could be attributed to the fact that either they might not have seen the relevance of MOOCs to their activities or they had other business to prioritise.

Findings

The findings revealed that the majority of the respondents 43 (72%) were aware of MOOCs and of these, only one person (2%) cited participation in ICA ARM courses on MOOCs. A similar majority 43 (72%) held the view that MOOCs can make a difference to ARM education in Eswatini and help to overcome many of the barriers to study, such as geographical (38 or 63%) distance, inadequate ARM education and training institutions (40 or 67%), an inadequate number of ARM lecturers (43 or 72%) and poor infrastructure (25 or 42%). The latter challenge may be solved through promoting private–public partnerships with commercial and non-commercial internet service providers, among other stakeholders. These partnerships can help to leverage digital infrastructure to provide affordable internet connectivity and bridge the digital divide.

With regard to implementation, 29 (48 %) of the respondents felt that MOOCs would be best used to supplement the face-to-face methods of teaching, and 31 (52 %) felt that the flipped classroom mode of MOOCs would be most effective in ARM education in Eswatini.

These findings support Tsabedze's (2019) argument that HEIs in Eswatini need to accept and adopt MOOCs in a flipped classroom environment to deliver both theoretical and practical sessions, to avoid confusion and uncertainty among ARM students by offering supportive human interaction. The flipped classroom is a type of blended learning, wherein asynchronous instructional content in the form of video lectures, lecture notes and quizzes is

delivered online to students. After watching course material online, students then engage in activities in a physical classroom set-up, where a lecturer is available to clarify the online content (Sonwalkar, 2013, p. 68.). However, in the context of the COVID-2019 pandemic, there is a need to rethink and reconfigure learning space in sync with universal social distance rules. Chisita (2020) has highlighted the importance of digital classrooms and library services that are freed from the fetters of time and space.

About 49 (82%) of the respondents highlighted the subjects that relate to specific ARM software applications as key to the success of MOOC curriculum. Other subjects felt to be well-suited to this mode of delivery were "Electronic records management" and "Digital preservation" (47 or 78%) and "Research methods in information science (ARM)" (32 or 53%). Every respondent in this study thought that partnerships between departments or institutions in Eswatini and abroad to develop MOOCs would help to enhance the quality of local ARM education. Almost everyone (58 or 97%) felt that MOOCs would help students, lecturers and professionals in their continuous professional development education. With regards to making programme enrolment choices, 53 (88%) of the respondents would prefer to take a free course developed by an Eswatini ARM institution and 31 (52 %) would want an end-of-course completion certificate at no cost. Only 20 (33%) would opt for a fee-based course.

These results suggest that MOOCs would be popular and could add significant value to ARM education in Eswatini, but revealed that there are significant issues to consider within the local context. An ARM programme must be specifically designed to meet the needs of students in a rapidly changing environment and careful consideration must be given at every stage to:

- developing and delivering the programme;
- developing the infrastructure to provide support services; and
- designing the process of student assessment by certification and awards.

Recommendations for areas of intercontinental collaboration

Such challenges could best be met through a partnership with the HEIs outside Eswatini that already offer ARM programmes. A partnership to build and deliver MOOCs is possible at regional, national and international levels. Potential areas for the partnership include the following elements.

Developing courses using available platforms. While ARM institutions in a particular geographic region offer parallel types of courses, some of these HEIs still find it difficult to offer certain courses due a shortage of ARM lecturers, or their lack of appropriate skills. To mitigate this situation, ARM institutions can collaborate on building and conducting MOOCs to improve the quality of their programmes of study. Dasarathy *et al.* (2014, p. 16) noted the use of MOOCs as spaces for inter-institutional collaboration in the area of professional development or certification opportunities.

This will not only help through sharing expertise, but also enable students and even ARM lecturers to learn from other experts in the field, irrespective of geographical location. Before designing a course, themselves, ARM lecturers could take any of the available MOOCs to gain first-hand experience of the particularities of this educational medium. They could then make use of readily available platforms, already tried and tested, to develop and conduct the courses, either individually or in collaboration with others. Access to internet can be broadened if ARM institutions partner with internet services providers; for example, the Tertiary Education and Research Network of South Africa (TENET) extends its services

to Eswatini by connecting universities. However, for the ordinary locals, the digital divide still remains as an obstacle that can only be overcome if government works with all key stakeholders, including development partners and internet service providers.

Platforms such as course sites (Course Sites, 2015), Canvas network (Canvas, 2015) and Edx MOOC would then enable ARM lecturers to develop a course at little or no cost, which is ideal at the outset of the MOOC experiment. The ARM lecturers should be able to generate content as part of their work. The content generated by ARM lecturers will be determined by the needs of their students. ARM lecturers would have to use these platforms to deliver courses but this will imply that ARM institutions should be able to pay site licenses to use the platforms. By doing so, ARM lecturers (and their departments) can increase their credibility by reaching out to a greater number of ARM students, rather than having to limit the benefits of their expertise to students in a physical classroom set-up.

Collaboration through national research and education networks. MOOCs rely heavily on technology, such as basic computers, or a smart device and Internet connection, a browser to access the courses, video or audio recording, software speakers and microphones and/or cameras for successful completion. In addition, institutions need to invest in high quality hardware and software to enable students to download special software for undertaking ARM functions (Rai, 2018). Castillo *et al.* (2015) have highlighted the need to develop cutting-edge data transfer technologies in developing countries, such as the use of low-bandwidth intensive technologies for delivering MOOC contents via instant messaging applications in order to overcome the digital divide.

ARM institutions should work closely with NRENs (non-commercial internet service providers) to enable access to affordable internet connectivity. Currently Eswatini does not have a national NREN, but benefits from South Africa's TENET as highlighted in the previous sections. Such partnerships will lessen the dependence of ARM institutions on commercial internet service providers.

Providing local support and evaluation

The COVID-19 pandemic has forced ARM institutions in Southern Africa to deliver teaching and learning through online platforms. However, the pandemic has exposed a dichotomy between institutions that are resource endowed and those that are resource disadvantaged (Chisita, 2020). The online platforms either provide internal options or are usually paired with other applications such as Zoom or MS Teams, to offer lecturers the opportunity for one-to-one meetings with students (as well as for synchronous teaching). Students who enrol for ARM MOOCs courses have to work through users' forums or seek separate assistance from tutors (where available) when they encounter difficulties. ARM institutions, in partnership with other HEIs, could provide direct local support to students and also help assess learning outcomes by using online e-learning platforms.

Use of courses for the flipped classroom environment

ARM institutions may adopt MOOCs offered by different HEIs in a flipped classroom environment on their own site. In this context, ARM lecturers would assist students to prepare assignments and undertake practical work in the classroom. This would serve to enhance the academic capabilities of students and their lecturers. Students would have an opportunity to learn from the best lecturers at remotely located and prestigious universities; lecturers could make the best use of their time and their institutions and departments would benefit from the expertise and resources of other HEIs. Such steps may not require the approval of the university authorities, as

there would be no alteration to the curriculum currently offered by the ARM institutions.

Adopting courses for the choice-based credit system

The choice-based credit system (CBCS) is now being adopted in many HEIs to increase diversity, provide flexibility and help students benefit from courses offered in other subjects or disciplines. The CBCS provides students with an opportunity to select prescribed courses (core, elective or minor or soft skill modules) from among several options, providing greater flexibility in learning and teaching environments. In addition to the minimum prescribed credits in a two-year master's degree programme, candidates can opt for certificate/diploma/advanced diploma add-on courses in their respective subjects or proficiency certificate courses in other disciplines, provided they earn sufficient extra credits. MOOCs could be used very effectively to offer a wide range of non-core/elective/add-on courses in collaboration with any national or international ARM institutions.

Localisation and customisation of course content

Currently MOOCs in ARM are primarily offered by institutions in developed countries, and these may require some modification and customisation for local environments. A further issue is that MOOCs are mostly offered in the English language, and this may deter non-English language institutions from adopting the courses. In a 2014 conference report Libing Wang from UNESCO stressed the importance of localising and customising knowledge to suit the needs of students in developing countries, while supporting foreign MOOCs for joint study programmes (University of Pennsylvania, 2014, p. 12). ARM institutions in developing countries, in partnership with their counterparts in developed countries, or among themselves, may undertake joint studies or programmes to localise and customise courses to better suit the needs of a wider body of ARM potential students. This may help to advance the adoption of MOOCs and encourage ARM institutions and their students to learn from each other and share expertise.

Courses beyond archives and records management

Partnerships need not be confined to ARM institutions. Instead, they could be extended to other institutions specialising in allied subjects close or common to the domain of ARM. For example, in the digital world the volume of data generated by individuals and organisations is very high leading to serious problems in managing and archiving large volumes of information or data. Due to activities in computational or research data, very popular MOOCs on "Big Data" are offered by commonly computer science departments. Thus, it would make sense for ARM programs institutions to collaborate with such departments to develop joint courses. Similarly, partnerships to in develop a course on data security and privacy and on intellectual property rights with computer science and law departments, respectively, could also be initiated. This would benefit ARM students through learning from experts in allied domains and would help ARM institutions offer interdisciplinary courses that could attract a wider take-up.

Developing tutorials

Online tutorials hold the key to successful MOOCs and these should be integrated at the point of need, for users, as frequently as deemed necessary. This is another area where partnership with international HEIs would pay dividends in terms of cost and educational

effectiveness. The above-mentioned areas for partnership would bring greater diversity to courses taught at ARM institutions globally and prepare both ARM lecturers and students to meet the challenges posed by the knowledge society. Students in developing countries such as Eswatini would stand to gain hugely from such initiatives, which would usher in a new era in the local delivery of ARM education. The impact of MOOCs could include improvement in the overall quality of local ARM education, raising the profile of institutions, an increase the deployment of new technologies, development of modes of learning beyond the physical classroom (especially valuable for working professionals), the break down geographical barriers and a reduction in the cost of education for many potential students and professionals.

Conclusion

Though the concept of MOOCs is new to Eswatini, the ARM professionals who took part in this study were generally aware and supportive of the phenomenon. The adaption of MOOCs can revolutionise the delivery of ARM education, provided they are implemented in a blended form. For greatest success, partnership must be the mantra for ARM institutions, to increase diversity and the required knowledge and skills. This in turn will help enhance the reputation of lecturers and raise institutional profiles. The present digital era expects ARM professionals to have multiple skills sets. However, it is not possible for any single ARM institution to offer training on all the facets of ARM. This is especially true in Eswatini, where resources are limited. The partnership areas discussed may accelerate progress and enable the best training for ARM students so that they can overcome the challenges posed by recent developments within government ministries. The flipped classroom environment is well-suited to Eswatini and could help to achieve the effective adoption of MOOCs to improve ARM education. The success of this educational model will come when ARM lecturers are able to teach using the benefits of MOOCs and when the strategic implementation of knowledge imparted and gained through MOOCs is valued by ARM practitioners and the colleagues whom they support.

Note

1. Drawbacks to and limitations of MOOCs have also been explored in analyses by, among others, Reich and Ruipérez-Valiente (2019) and Schmid *et al.* (2015), p. 49

References

Al-Imarah, A.A. and Shields, R. (2019), "MOOCs, disruptive innovation and the future of higher education: a conceptual analysis", *Innovations in Education and Teaching International*, Vol. 56 No. 3, pp. 258-269.

Blackmon, S.J. (2016), "Through the MOOC glass: professors' perspectives on the future of MOOCs in higher education", *New Directions for Institutional Research*, Vol. 2015 No. 167, pp. 87-101.

Canvas (2015), "Canvas network", available at: www.canvas.net (accessed 20 October, 2019).

Castillo, N.M., Lee, J., Zahra, F.T. and Wagner, D.A. (2015), "MOOCS for development: trends, challenges, and opportunities", *Information Technologies and International Development*, Vol. 11 No. 2, pp. 35-42.

Chatterjee, P. and Nath, A. (2014), "Massive open online courses (MOOCs) in higher education – unleashing the potential in India", *2014 IEEE International Conference on MOOCs, Innovation and Technology in Education (IEEE MITE)*, Institute of Electrical and Electronics Engineers, (IEEE), pp. 256-260.

Chisita, C.T. (2020), "Libraries in the midst of the coronavirus (COVID-19): researchers experiences in dealing with the vexatious infodemic", *Library Hi Tech News*, Vol. 37 No. 6, pp. 11-14.

Chisita, C.T. and Rusero, A.M. (2016), "Towards parabiotic partnerships for access and discovery: leveraging access to e-content within the framework of library consortia in Zimbabwe", In *Proceedings and Report of the 9th UbuntuNet Alliance Annual Conference*, available at: https://repository.ubuntunet.net/bitstream/handle/10.20374/258/Proceedings%20and%20Report%20of%20the%209th%20UbuntuNet%20Alliance%20Annual%20Conference%20%20.pdf?sequence=1#page=45 (accessed 19 March 2021).

Cormier, D. (2008), "Rhizomatic education: community as curriculum", *Innovate: Journal of Online Education*, Vol. 4 No. 5, p. 2.

Course Sites (2015), "CourseSites", available at: www.coursesites.com (accessed 20 October, 2019).

Creswell, J.W. and Poth, C.N. (2016), *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, Sage Publications.

Dasarathy, B., Sullivan, K., Schmidt, D., Fisher, D. and Porter, A. (2014), "The past, present, and future of MOOCs and their relevance to software engineering", *FOSE 2014: Future of Software Engineering (FOSE) Proceedings, May 2014*, Association, pp. 212-224, doi: 10.1145/2593882.2593897.

Dearstyne, B.W. and Barlow, D.L. (1999), "Archives, records and information management: creating a dynamic curriculum for the next century", *Journal Education Library Information Science*, Vol. 4, pp. 70-88.

Dey, S. (2020), "COVID–19: (re)configurations of violent knowledge management, epistemic inferiorization and neo-colonial divisions", *First Appeared in Real Knowledge Management News/op-ed*, 22 March 2020, available at: www.convivialthinking.org/index.php/2020/03/24/covid-19-reconfigurations/ and https://realkm.com/2020/03/22/covid-19-reconfigurations-of-violent-knowledge-management-epistemic-inferiorization-and-neo-colonial-divisions/ (accessed 24 March, 2020).

Eswatini Higher Educational Council (2015), available at: www.www.shec.org.sz/ (accessed 21 June 2019).

Eswatini National Archives (2015), "Department of Eswatini national archives", *Report on the Review of Government Registries in Eswatini*, Government Printer, Mbabane.

Evans, F. (1988), "The organization and status of archival training: a historical perspective", *Archivum*, Vol. 34 No. 2, pp. 75-91.

Gore, H. (2014), "Massive open online courses (MOOCs) and their impact on academic library services: exploring the issues and challenges", *New Review of Academic Librarianship*, Vol. 20 No. 1, pp. 4-28, doi: 10.1080/13614533.2013.851609.

Huang, L.K. (2010), "Planning and implementation framework for a hybrid e-learning model: the context of a part-time LIS postgraduate programme", *Journal of Librarianship and Information Science*, Vol. 42 No. 1, pp. 45-69.

Hyman, P. (2012), "In the year of disruptive education", *Communications of the ACM*, Vol. 55 No. 12, pp. 20-23, doi: 10.1145/2380656.2380664.

Iniesto, F., McAndrew, P., Minocha, S. and Coughlan, T. (2020), "The current state of accessibility of MOOCs: what are the next steps?", *Open Education Global Conference 2016 [Proceedings]*, available at: https://conference.oeglobal.org/2016/wp-content/uploads/2016/01/OE_Global_2016Full_Paper_The-current-state-OEG2016.pdf (accessed 23 March 2020).

International Council of Archives (2020), available at: www.ica.org/en/about-rbica (accessed 5 February 2021).

InterPARES Trust – Team Africa (2018), "Report – AF01 curriculum alignments at institutions of higher learning in Africa: preparing professionals to manage records created in networked environments", available at: https://interparestrust.org/assets/public/dissemination/AF01-FinalReport_1.pdf (accessed 10 February 2019).

Katuu, S. (2015), "The development of archives and records management education and training in Africa – challenges and opportunities", *Archives and Manuscripts*, Vol. 43 No. 2, pp. 96-119.

Katuu, S. and Ngoepe, M. (2015), "Managing digital heritage: an analysis of the education and training curriculum for Africa's archives and records professionals", *Digital Heritage*, Vol. 2, pp. 191-194.

Katuu, S. and Ngoepe, M. (2017), *Education and Management Professionals in Africa*, UNESCO Newsletter, 1 (March), pp. 22-27.

Lobelle, M., Hounkonnou, N., Donadje, F. and Oyetola, V. (2015), "December. BJNet: another way to build a NREN", *International Conference on e-Infrastructure and e-Services for Developing Countries*, Springer, pp. 45-56, doi: 10.1007/978-3-319-43696-8_5.

Lowry, J. (2017), "A report on education and training in the international council on archives' Africa programme", *Education for Information*, Vol. 33 No. 2, pp. 107-119.

Macleod, H., Haywood, J., Woodgate, A. and Alkhatnai, M. (2015), "Emerging patterns in MOOCs: learners, course designs and directions", *TechTrends*, Vol. 59 No. 1, pp. 56-63.

Maree, K. (2016), *First Steps in Research*, 2nd ed., Van Schaik Publishers, Pretoria.

Moe, R. (2015), "The brief and expansive history (and future) of the MOOC: why two divergent models share the same name", *Current Issues in Emerging eLearning*, Vol. 2 No. 1, pp. 1-26.

Mosweu, O. and Rakemane, D. (2020), "The role of records management in ensuring good governance in Africa", *Journal of the South African Society of Archivists*, Vol. 53, pp. 103-123.

Msibi, N.M. (2015), "Preservation of public records and archives in Eswatini government ministries and department of eSwatini national archives", MA Dissertation, University of KwaZulu-Natal, Pietermaritzburg.

Nengomasha, C.T. (2006), "Training for the archival profession in Namibia", *Archival Science*, Vol. 6 No. 2, pp. 205-218.

Nengomasha, C.T. (2013), "The past, present and future of records and archives management in Sub-Saharan Africa", *Journal of the South African Society of Archivists*, Vol. 46, pp. 2-11.

Ngoepe, M. and Keakopa, S.M. (2011), "An assessment of the state of national archival and records systems in the ESARBICA region: a South Africa-Botswana comparison", *Records Management Journal*, Vol. 21 No. 2, pp. 145-160.

Ngoepe, M. (2017), "Training and education of archivists in Africa: an analysis of current conditions and issues", *ACARM Newsletter*, Vol. 57, pp. 9-14.

Ngoepe, M. and Saurombe, A. (2016), "Provisions for managing and preserving records created in networked environments in the archival legislative frameworks of selected member states of the Southern African development community", *Archives and Manuscripts*, Vol. 44 No. 1, pp. 24-41.

Ngoepe, M. and Van der Walt, T. (2009), "An exploration of records management trends in the South African public sector", *Mousaion*, Vol. 27 No. 1, pp. 116-136.

Ngoepe, M., Maseko, A. and Tsabedze, V. (2020), "So far we have travelled–are we there yet? An exploration of national archival expedition in Eswatini", *Information Development*, 0266666920966030.

Onyancha, O.B., Ngoepe, M. and Maluleka, J. (2015), "Trends, patterns, challenges and types of archival research in Sub-Saharan Africa", *African Journal of Library, Archives and Information Science*, Vol. 25 No. 2, pp. 145-159.

Rai, L. (2018), "Offline support model for low bandwidth users to survive in MOOCs", *International Journal of Emerging Technologies in Learning*, Vol. 13 No. 10.

Reich, J. and Ruipérez-Valiente, J.A. (2019), "The MOOC pivot", *Science*, Vol. 363 No. 6423, pp. 130-131, doi: 10.1126/science.aav7958.

Schmid, L., *et al.* (2015), "Fulfilling the promise: do MOOCs reach the educationally underserved?", *Educational Media International* , Vol. 52 No. 2, pp. 116-128, doi: 10.1080/09523987.2015.1053288.

Smith, W.I. (1976), "The Ica and technical assistance to developing countries", *The American Archivist*, Vol. 39 No. 3, pp. 343-351.

Sonwalkar, N. (2013), "The first adaptive MOOC: a case study on pedagogy framework and scalable cloud architecture – part I", *In MOOCs Forum 1(P)*, pp. 22-29, doi: 10.1089/mooc.2013.0007.

Tsabedze, V. (2019), "A framework for massive online open course in archives and records management in Eswatini", *Journal of the Southern African Society of Archivists*, Vol. 52, pp. 1-24.

Tsabedze, V. and Kalusopa, T. (2018), "Towards a framework for e-records readiness in support of e-government in Eswatini", *ESARBICA Journal*, Vol. 37, pp. 39-68.

Tsabedze, V., Mutula, S.M. and Jacobs, D. (2012), "Records management in the government of Swaziland", *ESARBICA Journal*, Vol. 31, pp. 47-61.

Tsabedze, V. and Ngoepe, M. (2020), "A framework for archives and records management education in an open distance e-learning environment in Eswatini", *Education for Information*, Vol. 36 No. 2, pp. 157-175.

Tuffour, I. (2017), "A critical overview of interpretative phenomenological analysis: a contemporary qualitative research approach", *Journal of Healthcare Communications*, Vol. 2 No. 4, p. 52.

University of Pennsylvania (2014), "MOOCS4D: potential at the bottom of the pyramid: conference report", available at: www.gse.upenn.edu/pdf/moocs4d/conference_report.pdf (accessed 18 October 2019).

Wamukoya, J. and Mutula, S. (2005), "Capacity-building requirements for e-records management: the case in east and Southern Africa", *Records Management Journal*, Vol. 15 No. 2, pp. 71-79.

Wang, X., Hall, A.H. and Wang, Q. (2019), "Investigating the implementation of accredited massive online open courses (MOOCs) in higher education: the boon and the bane", *Australasian Journal of Educational Technology*, Vol. 35 No. 3, doi: 10.14742/ajet.3896.

Zheng, J.F. (2020), "The application and perfection of law MOOC", *2019 3rd International Conference on Education, Economics and Management Research (ICEEMR 2019)*, Atlantis Press, pp. 431-434.

Further reading

Chisita, C. (2017), "NRENs, library consortia and government: helical nexus for democratizing access to scholarship in Zimbabwe in Ubuntu Net-Connect 2017", available at: https://events.ubuntunet.net/event/10/contributions/58/contribution.pdf (accessed 23 March 2020).

Appendix: interview

Dear Respondent,

The researchers Collence T. Chisita and Vusi Tsabetse are Postdoctorate Research Fellows with the University of South Africa's (UNISA) Department of Information Science. This interview is meant to generate data on the study on "**Massive Open Online Courses: A tool for intercontinental collaboration in archives and records management education in Eswatini**". The researchers guarantee to uphold ethical considerations with regards to consent, anonymity, confidentiality and privacy. The study is being conducted in line with the University Research Ethics (UREC) guidelines.

I wish to kindly request you to set aside some time (15–20 min) for interview, which will enable me obtain data that will address the research questions. Your response will be treated with strict confidentiality and used only for the current study.

Should you have questions about the research please contact me on (redacted).

Thanking you in advance for your time and cooperation.

Yours Faithfully

Vusi W. Tsabedze **(PhD)**

Date of Interview

Ministry

Designation

1. Have you used MOOCs before as part of ARM training?
Yes
NO
2. If your answer to the above is Yes, use the space below to indicate where and the nature of training?
.....
.....
.....
3. Do you think MOOCs can add value as a training platform for ARM programme?
Yes
NO
4. How can it add value?
.....
.....
.....
.....
.....
5. Use the space below to highlight your experiences with MOOCs
.....
.....
.....
.....
6. Which ARM subject do you thick can be well delivered through MOOCS?
.....
.....
.....
.....
.....
7. Do you think MOOC can be suitable for professional development for ARM professionals?
Yes
NO
8. How can MOOCs be used by ARM professionals to enhance the delivery of ARM education and training in Eswatini?
.....
.....
.....
.....
.....
.....
.....
9. Do you think partnerships between departments or institutions local and abroad through MOOC could help to enhance the quality of local ARM education?
Yes
NO
10. If your answer to the above is yes, can you explain the reasons?
.....
.....
.....

11. Would prefer to take a free course developed by an Eswatini ARM institution?
Yes
NO
12. If yes to the above, can you explain why?
.....
.....
13. If your answer to Q. 11 is No, justify your answer.
.....
.....
14. Using the space below, share with us any views on the potential of using MOOCs for enhancing collaboration in ARM education and training institutions in Eswatini.
.....
.....
.....
.....
.....
.....
.....

About the authors

Dr Collence Takaingenhamo Chisita is a Post-Doctoral fellow at UNISA in the Department of Information Sciences at the College of Human Sciences. He specialises in lecturing and researching on various subjects ranging from Use of Digital technologies for Information Management, Information Retrieval, Research, Knowledge Management, Records Management and Information Consultancy among others. Chisita is a member of CILIP, IFLA and Zimbabwe Library Association. Collence Takaingenhamo Chisita is the corresponding author and can be contacted at: chisitacollence@yahoo.com

Dr Vusi Wonderboy Tsabedze is a Post-doctoral Research fellow at the Department of Information Science, University of South Africa, Pretoria, South Africa. He holds PhD in Information Studies from University of Zululand; MBA in Management strategy with University of Namibia; Master's in information studies with University of Zululand; BA in Library Science with University of Namibia; Senior Management Development programme with University of Stellenbosch and Management Development Program with University of Stellenbosch. Dr Tsabedze has authored books on records management and numerous articles in learned journals. He has conducted a number of consultancy work in records and information management.